



ANSI/IES LM-79-19 TEST REPORT

Applicant's name	LED One Corporation
Address	12437 Belgrave Ave. Eastvale, CA 91752
Brand Name	LED One
Report No.	BTR66.181.23.0004.35
Product Name	Roadway Luminaires
Model Number	LOC-SPAL-MW(180/200/240/320)30KD-T2LV; LOC-SPAL-MW(180/200/240/320)40KD-T2LV; LOC-SPAL-MW(180/200/240/320)50KD-T2LV; LOC-SPAL-MW(180/200/240/320)30KD-T3LV; LOC-SPAL-MW(180/200/240/320)40KD-T3LV; LOC-SPAL-MW(180/200/240/320)50KD-T3LV; LOC-SPAL-MW(180/200/240/320)30KD-T4LV; LOC-SPAL-MW(180/200/240/320)40KD-T4LV; LOC-SPAL-MW(180/200/240/320)50KD-T4LV; LOC-SPAL-MW(180/200/240/320)30KD-T5LV; LOC-SPAL-MW(180/200/240/320)40KD-T5LV; LOC-SPAL-MW(180/200/240/320)50KD-T5LV
Tested by (printed name and signature)	Xia Zeng 
Title	Test Engineer
Approved by (printed name and signature)	Junia Zhang 
Title	Approved By
Date of issue	Jun 02, 2023
Testing Laboratory Name	BEST Test Service Shenzhen Co., Ltd. 1 st Floor, 1 st Building, Weitai Industrial Park, Yingrenshi, Shiyan, Baoan, Shenzhen, China
Address	Tel: +86-755-28236006, Email: service@bestcert.cn
Accreditation	DLC/Lighting Facts/UL/ETL/ELI/CEC/EPA/DOE NVLAP Testing Lab Code: 200770-0
Test specification	
Standard	ANSI/IES LM-79-19
Test procedure/method	ANSI/IES LM-79-19 Test Procedure
Non-standard test method	No
Test Report Form No.	BEST_LM-79-19
TRF originator	BEST Test Service Shenzhen Co., Ltd. Mr Tseng
Master TRF	BEST_LM-79-19.doc

Note:

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Description:					
The date of sampling	N/A				
The date of receipt of the test sample / requirement /item(s)	May 11, 2023				
Test date.....	May 11, 2023 to May 16, 2023				
Model Number	LOC-SPAL-MW(180/200/240/320)30KD-T2LV; LOC-SPAL-MW(180/200/240/320)40KD-T2LV; LOC-SPAL-MW(180/200/240/320)50KD-T2LV; LOC-SPAL-MW(180/200/240/320)30KD-T3LV; LOC-SPAL-MW(180/200/240/320)40KD-T3LV; LOC-SPAL-MW(180/200/240/320)50KD-T3LV; LOC-SPAL-MW(180/200/240/320)30KD-T4LV; LOC-SPAL-MW(180/200/240/320)40KD-T4LV; LOC-SPAL-MW(180/200/240/320)50KD-T4LV; LOC-SPAL-MW(180/200/240/320)30KD-T5LV; LOC-SPAL-MW(180/200/240/320)40KD-T5LV; LOC-SPAL-MW(180/200/240/320)50KD-T5LV				
Note	Declared by the applicant that these models are just different in CCT and/or lens, there are four types of roadway luminaire lens, such as T2/T3/T4/T5.				
The condition of the item	N/A				
Sampling method.....	Provided by Applicant				
Sample Quantity	5 unit				
SKU	N/A				
Rating(s) (V; Hz).....	AC 347V-488V; 60Hz				
Test Voltage(V; Hz)	AC 347V/488V; 60HZ				
Nominal Power	180W-200W-240W-320W				
Nominal Power Factor	N/A				
Nominal Lumen Output.....	/	180W	200W	240W	320W
	3000K models	25200lm	28000lm	33600lm	42000lm
	4000K models	27000lm	30000lm	36000lm	45000lm
	5000K models	27000lm	30000lm	36000lm	45000lm
Nominal CCT	3000K; 4000K; 5000K				
Note	This product is wattage adjustable, tested at 320W setting specified by applicant.				
Nominal CRI(Ra)	80				
Number of hours operated prior to measurement.....	0H				
Total operating time of the product for measurements including stabilization:	3.5H				
Ambient temperature	24.7°C				
Orientation (burning position) of SSL product during test.....	Lighting Surface Down or Base Up				
Stabilization time	1.5 H				
Photometric method	Sphere-spectroradiometer+ Goniophotometer				
Calibration standard lamp used	DC 24V 100W Omni-Directional Halogen Calibrated by NIM China (Sphere) DC 120V 500W Omni-Directional Halogen Calibrated by NIM China (Goniophotometer)				
Correction factors applied.....	Self absorbing applied				
Photometric measurement conditions	See test method description below				
Bandwidth of spectroradiometer	1nm				
Statement of uncertainties	3.1%				

LED Light engine monitoring temperature °C	N/A
Deviation.....	None

Note: The test data in this report shares with report No. BTR66.181.23.0002.05

Photometric and Electrical Measurement

Total light output (luminous flux) for the 25°C ± 1°C ambient temperature conditions was measured using a ø2.0m 4π geometry integrating sphere. Temperature was measured at a position inside the sphere. Spectral radiant flux was measured using the photo detector built in the integrating sphere. Each lamp was operated at rated voltage in its designated orientation. Each lamp was in a stable state before measurements are done as below:

Step 1 Take 3 measurements of the lamp light output at 10 minutes interval (total time=20mintues.), the pre-burning time is not included in the formal testing time period.

Step 2 Calculate the difference in percentage between the maximum measured value and the minimum measured value with the three consecutive measurements.

Step 3 If the value calculated in Step 2 does not exceed 0.5 percent, the lamp is considered stable.

Luminous flux, chromaticity coordinates, correlated color temperature and color rendering index for each lamp were calculated from the spectral radiant flux measurements taken at 1 nm increment over the range of 380 to 780 nm. The calibration of the sphere photometer-spectrometer system can be traced back to the NIM. Lamp efficacy (lumens per watt) for each lamp model was computed based on the luminous flux result revised taking the self-absorbing correction factor into consideration. Electrical measurements including voltage, current, power and power factor were measured using the digital power meter.

Luminous Intensity

A goniophotometer was used to measure the intensity distribution at each angle, Luminous intensity (cd) was measured within each vertical plane at a 22.5° vertical angle increment (maximum) from 0° to 360°, measurements were repeated in vertical planes about the lamp (polar) axis in an increment of 1° from 0° to 180°, and the intensity data were exported to a file in excel format.



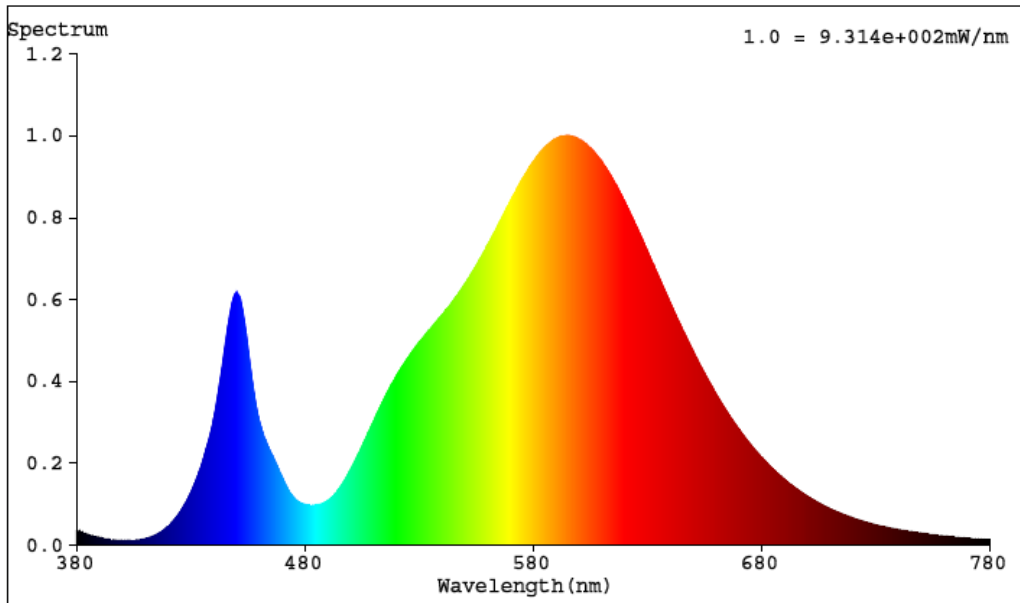
Photometric and Electrical Test Data

Model Number	Input Voltage (V)	Frequency (Hz)	Input Current (A)	ITHD	Input Power (W)	Power Factor	Lumen Output (Lumens)	Efficiency (Lumen/W)
LOC-SPAL-MW(180/200/240/320)30KD-T2LV	347.07	60.0	0.9071	6.7%	309.00	0.9815	45078.00	145.90
LOC-SPAL-MW(180/200/240/320)30KD-T2LV	480.06	60.0	0.6795	12.5%	306.90	0.9408	44890.00	146.25
LOC-SPAL-MW(180/200/240/320)50KD-T2LV	347.08	60.0	0.8917	6.3%	309.50	0.9819	46170.00	149.17
LOC-SPAL-MW(180/200/240/320)50KD-T2LV	480.08	60.0	0.6391	11.7%	306.80	0.9409	46000.00	149.93
LOC-SPAL-MW(180/200/240/320)30KD-T3LV	347.07	60.0	0.9088	/	308.91	0.9794	46104.90	149.25
LOC-SPAL-MW(180/200/240/320)30KD-T4LV	347.05	60.0	0.9086	/	308.75	0.9791	46052.70	149.16
LOC-SPAL-MW(180/200/240/320)30KD-T5LV	347.01	60.0	0.9091	/	308.93	0.9793	46528.50	150.61
Model Number	CCT (K)	CRI (Ra)	R9	x CIE1931	y CIE1931	u' CIE1976	v' CIE1976	Duv CIE1976
LOC-SPAL-MW(180/200/240/320)30KD-T2LV (347V)	3019	72.3	-29	0.4351	0.4027	0.2500	0.5206	-0.0003
LOC-SPAL-MW(180/200/240/320)30KD-T2LV (480V)	3025	72.3	-29	0.4346	0.4021	0.2499	0.5203	-0.0004
LOC-SPAL-MW(180/200/240/320)50KD-T2LV (347V)	5125	73.1	-23	0.3418	0.3506	0.2096	0.4837	0.0009
LOC-SPAL-MW(180/200/240/320)50KD-T2LV (480V)	5130	73.1	-23	0.3417	0.3504	0.2096	0.4836	0.0008

Spectrum Plots

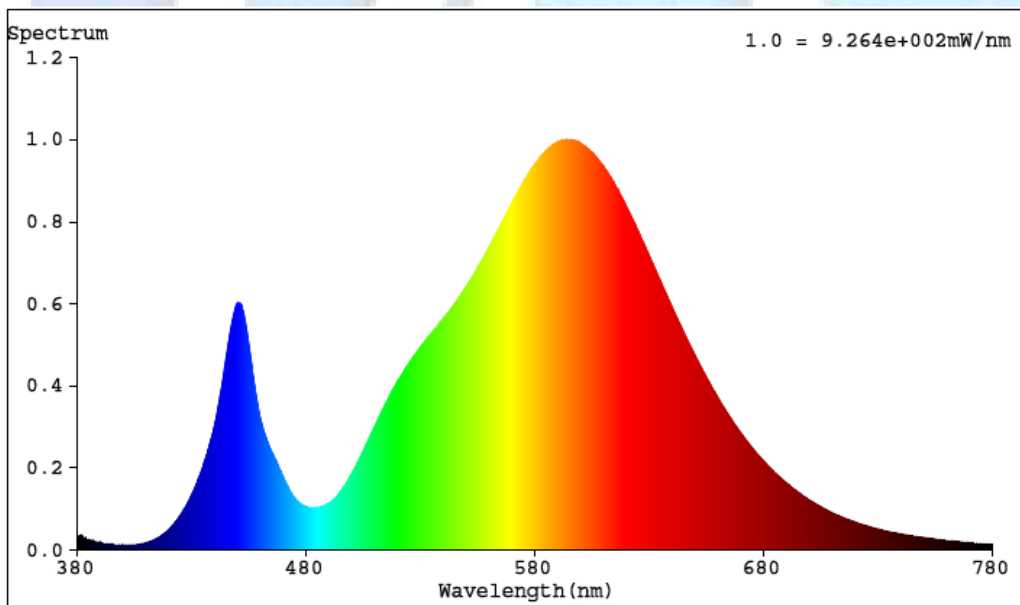
LOC-SPAL-MW(180/200/240/320)30KD-T2LV

347V



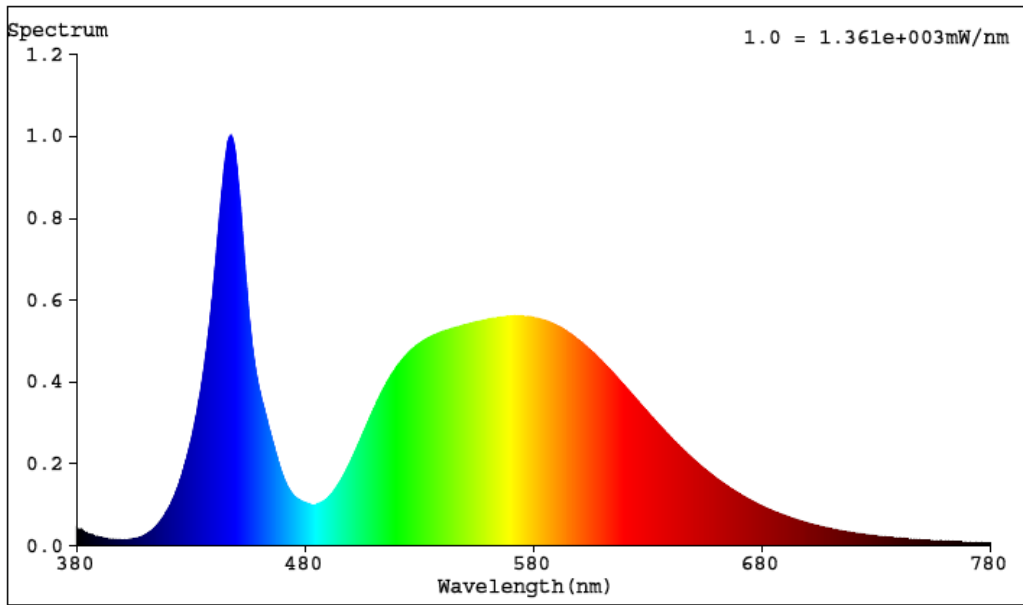
LOC-SPAL-MW(180/200/240/320)30KD-T2LV

480V

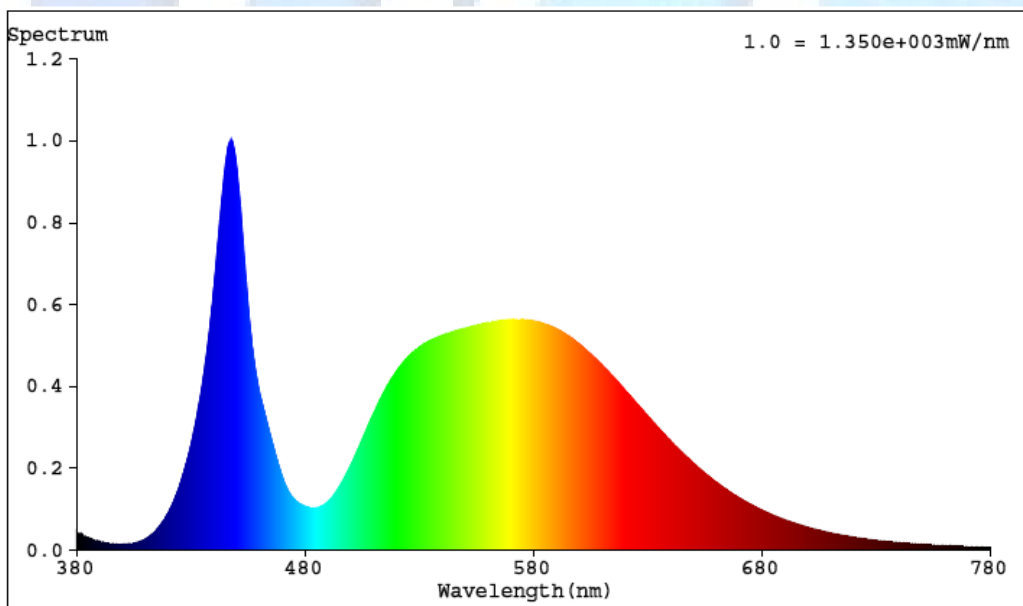


LOC-SPAL-MW(180/200/240/320)50KD-T2LV

347V

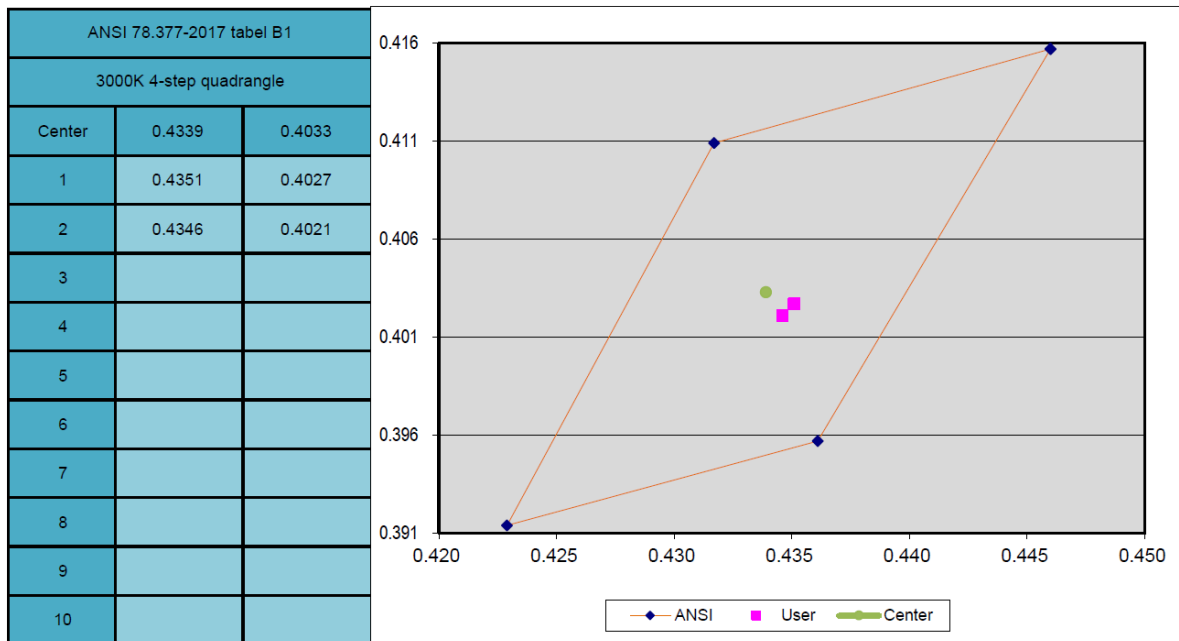


480V

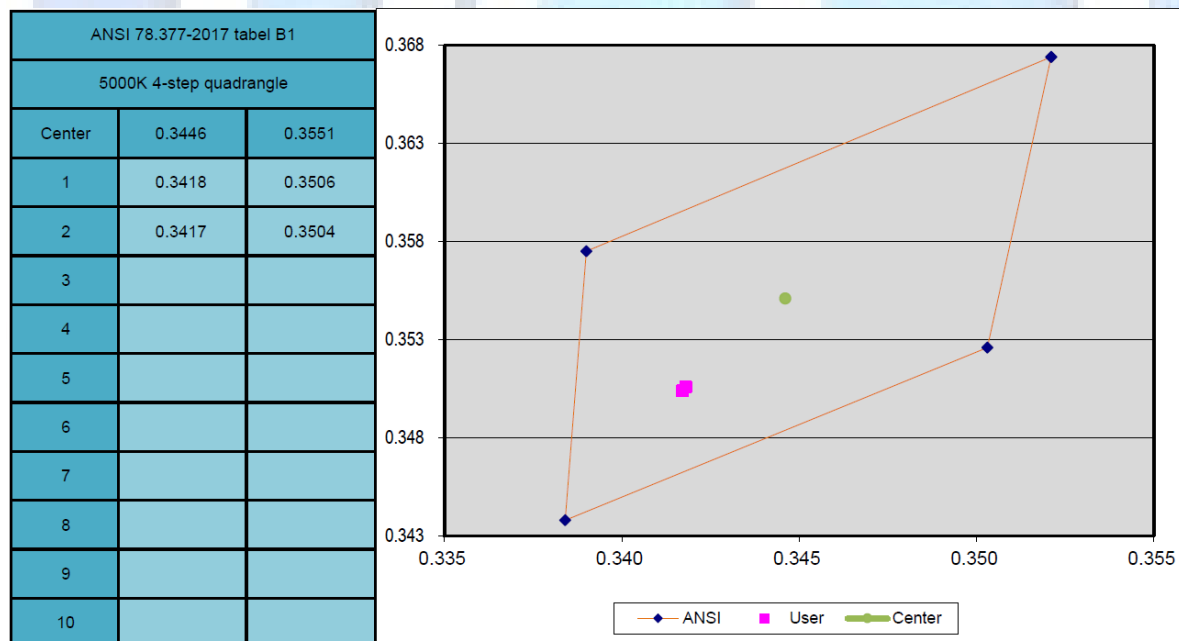


4-step quadrangle of ANSI 78.377-2017

LOC-SPAL-MW(180/200/240/320)30KD-T2LV



LOC-SPAL-MW(180/200/240/320)50KD-T2LV



Spectral Energy Distribution(LOC-SPAL-MW(180/200/240/320)30KD-T2LV)

347V

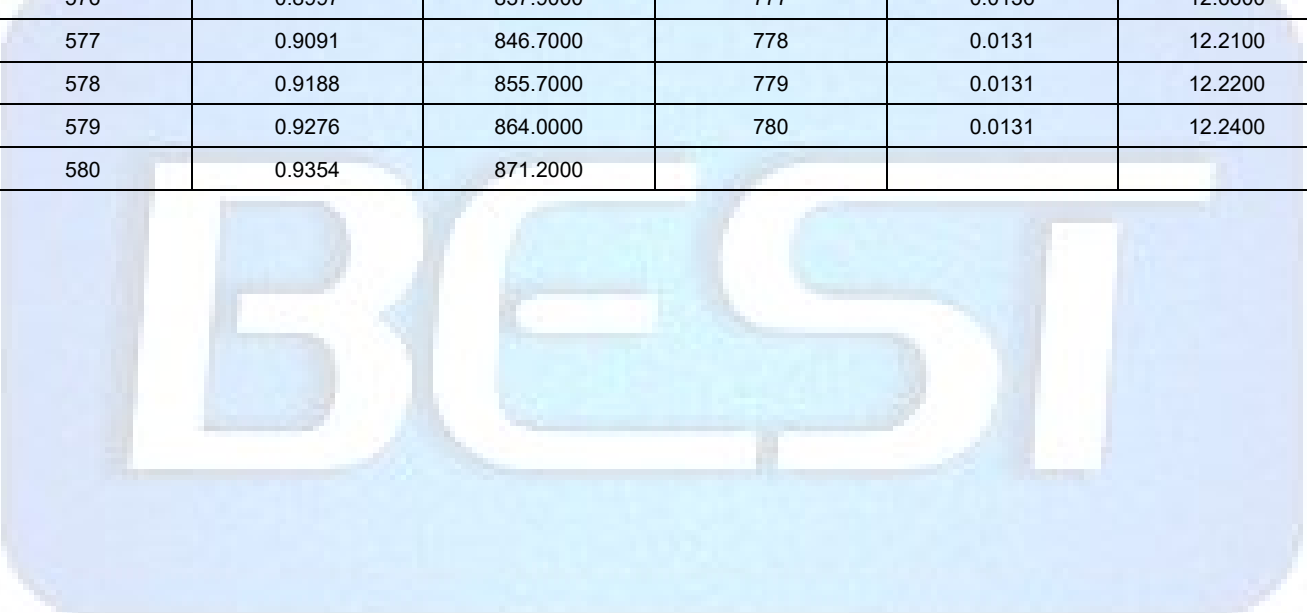
WL (nm)	Spectrum	Spectrum	WL (nm)	Spectrum	Spectrum
380	0.0342	31.8500	581	0.9425	877.8000
381	0.0337	31.4100	582	0.9507	885.5000
382	0.0311	29.0100	583	0.9580	892.3000
383	0.0278	25.9400	584	0.9644	898.2000
384	0.0260	24.2200	585	0.9700	903.4000
385	0.0252	23.5000	586	0.9756	908.7000
386	0.0234	21.8000	587	0.9804	913.1000
387	0.0217	20.1900	588	0.9853	917.7000
388	0.0188	17.4700	589	0.9896	921.7000
389	0.0188	17.5100	590	0.9927	924.5000
390	0.0172	16.0500	591	0.9949	926.7000
391	0.0163	15.1500	592	0.9978	929.3000
392	0.0148	13.8100	593	0.9986	930.0000
393	0.0143	13.3600	594	0.9995	930.9000
394	0.0135	12.6000	595	0.9985	930.0000
395	0.0126	11.7200	596	0.9991	930.6000
396	0.0125	11.6200	597	0.9982	929.7000
397	0.0118	10.9600	598	0.9971	928.6000
398	0.0113	10.5000	599	0.9943	926.0000
399	0.0108	10.0900	600	0.9909	922.9000
400	0.0109	10.1400	601	0.9888	920.9000
401	0.0112	10.3900	602	0.9844	916.8000
402	0.0104	9.6760	603	0.9801	912.8000
403	0.0102	9.5100	604	0.9744	907.5000
404	0.0107	10.0100	605	0.9697	903.1000
405	0.0107	9.9810	606	0.9641	897.9000
406	0.0115	10.7000	607	0.9576	891.9000
407	0.0122	11.3400	608	0.9507	885.5000
408	0.0126	11.7000	609	0.9439	879.1000
409	0.0135	12.6000	610	0.9368	872.5000
410	0.0152	14.1400	611	0.9282	864.5000
411	0.0168	15.6400	612	0.9198	856.7000
412	0.0184	17.1100	613	0.9106	848.1000
413	0.0202	18.8500	614	0.9018	839.9000
414	0.0226	21.0000	615	0.8919	830.7000
415	0.0249	23.1700	616	0.8816	821.1000
416	0.0283	26.3900	617	0.8714	811.6000
417	0.0319	29.7400	618	0.8617	802.5000
418	0.0360	33.5600	619	0.8506	792.2000
419	0.0404	37.6100	620	0.8393	781.7000
420	0.0450	41.9200	621	0.8277	770.9000
421	0.0503	46.8900	622	0.8165	760.5000

422	0.0563	52.4600	623	0.8041	748.9000
423	0.0627	58.3500	624	0.7923	737.9000
424	0.0700	65.1500	625	0.7803	726.7000
425	0.0776	72.2500	626	0.7682	715.4000
426	0.0861	80.1800	627	0.7561	704.2000
427	0.0952	88.6700	628	0.7435	692.5000
428	0.1052	98.0200	629	0.7313	681.1000
429	0.1154	107.5000	630	0.7178	668.6000
430	0.1269	118.2000	631	0.7054	657.0000
431	0.1395	129.9000	632	0.6920	644.5000
432	0.1530	142.5000	633	0.6806	633.8000
433	0.1677	156.2000	634	0.6672	621.4000
434	0.1828	170.2000	635	0.6548	609.8000
435	0.1994	185.7000	636	0.6421	598.0000
436	0.2182	203.2000	637	0.6293	586.1000
437	0.2376	221.2000	638	0.6169	574.6000
438	0.2591	241.3000	639	0.6045	563.0000
439	0.2824	263.0000	640	0.5915	550.9000
440	0.3091	287.9000	641	0.5797	539.9000
441	0.3384	315.2000	642	0.5667	527.8000
442	0.3719	346.4000	643	0.5543	516.2000
443	0.4077	379.7000	644	0.5431	505.8000
444	0.4454	414.8000	645	0.5309	494.5000
445	0.4857	452.4000	646	0.5189	483.3000
446	0.5246	488.6000	647	0.5075	472.7000
447	0.5596	521.2000	648	0.4962	462.1000
448	0.5885	548.1000	649	0.4848	451.5000
449	0.6063	564.7000	650	0.4739	441.4000
450	0.6158	573.5000	651	0.4619	430.2000
451	0.6093	567.5000	652	0.4516	420.6000
452	0.5928	552.1000	653	0.4406	410.4000
453	0.5632	524.5000	654	0.4302	400.6000
454	0.5253	489.3000	655	0.4198	390.9000
455	0.4833	450.1000	656	0.4092	381.1000
456	0.4392	409.1000	657	0.3992	371.8000
457	0.3981	370.8000	658	0.3893	362.6000
458	0.3610	336.2000	659	0.3796	353.5000
459	0.3293	306.7000	660	0.3699	344.5000
460	0.3029	282.1000	661	0.3602	335.5000
461	0.2819	262.5000	662	0.3512	327.1000
462	0.2646	246.4000	663	0.3421	318.7000
463	0.2514	234.1000	664	0.3332	310.3000
464	0.2382	221.9000	665	0.3242	302.0000
465	0.2253	209.9000	666	0.3155	293.9000
466	0.2145	199.8000	667	0.3074	286.3000
467	0.2022	188.3000	668	0.2991	278.5000

468	0.1901	177.0000	669	0.2909	271.0000
469	0.1766	164.5000	670	0.2833	263.8000
470	0.1646	153.3000	671	0.2756	256.7000
471	0.1524	142.0000	672	0.2680	249.6000
472	0.1413	131.6000	673	0.2607	242.8000
473	0.1315	122.4000	674	0.2535	236.1000
474	0.1233	114.8000	675	0.2468	229.9000
475	0.1159	108.0000	676	0.2399	223.4000
476	0.1103	102.7000	677	0.2331	217.1000
477	0.1060	98.7500	678	0.2269	211.3000
478	0.1027	95.6800	679	0.2201	205.0000
479	0.1002	93.3000	680	0.2140	199.3000
480	0.0991	92.2700	681	0.2078	193.5000
481	0.0978	91.0400	682	0.2023	188.4000
482	0.0974	90.7200	683	0.1966	183.1000
483	0.0972	90.4900	684	0.1911	178.0000
484	0.0971	90.4000	685	0.1857	173.0000
485	0.0978	91.0700	686	0.1806	168.2000
486	0.0988	92.0400	687	0.1752	163.2000
487	0.1000	93.1500	688	0.1704	158.7000
488	0.1023	95.3000	689	0.1654	154.1000
489	0.1049	97.6600	690	0.1608	149.8000
490	0.1083	100.9000	691	0.1562	145.4000
491	0.1126	104.9000	692	0.1517	141.2000
492	0.1175	109.5000	693	0.1471	137.0000
493	0.1233	114.9000	694	0.1431	133.3000
494	0.1297	120.8000	695	0.1389	129.3000
495	0.1372	127.7000	696	0.1349	125.6000
496	0.1451	135.2000	697	0.1308	121.8000
497	0.1539	143.4000	698	0.1267	118.0000
498	0.1631	151.9000	699	0.1234	114.9000
499	0.1734	161.5000	700	0.1194	111.2000
500	0.1834	170.8000	701	0.1162	108.2000
501	0.1940	180.7000	702	0.1125	104.8000
502	0.2050	190.9000	703	0.1092	101.7000
503	0.2165	201.7000	704	0.1060	98.7000
504	0.2279	212.3000	705	0.1029	95.8400
505	0.2395	223.0000	706	0.0998	92.9400
506	0.2518	234.5000	707	0.0967	90.0900
507	0.2639	245.8000	708	0.0939	87.4400
508	0.2768	257.8000	709	0.0912	84.9500
509	0.2884	268.6000	710	0.0883	82.2400
510	0.3002	279.6000	711	0.0860	80.0500
511	0.3129	291.4000	712	0.0834	77.6800
512	0.3245	302.2000	713	0.0810	75.4200
513	0.3364	313.3000	714	0.0785	73.1300

514	0.3484	324.4000	715	0.0764	71.1900
515	0.3595	334.8000	716	0.0741	68.9800
516	0.3705	345.0000	717	0.0720	67.0400
517	0.3810	354.8000	718	0.0702	65.4100
518	0.3920	365.1000	719	0.0681	63.4000
519	0.4012	373.6000	720	0.0660	61.4600
520	0.4117	383.4000	721	0.0638	59.4500
521	0.4214	392.4000	722	0.0620	57.7400
522	0.4302	400.7000	723	0.0603	56.1400
523	0.4387	408.6000	724	0.0585	54.5100
524	0.4471	416.4000	725	0.0569	52.9600
525	0.4556	424.3000	726	0.0555	51.6900
526	0.4635	431.7000	727	0.0536	49.9500
527	0.4717	439.3000	728	0.0518	48.2700
528	0.4794	446.5000	729	0.0506	47.1400
529	0.4863	452.9000	730	0.0492	45.8500
530	0.4938	459.9000	731	0.0478	44.5000
531	0.5005	466.2000	732	0.0463	43.0900
532	0.5071	472.3000	733	0.0450	41.9600
533	0.5143	479.0000	734	0.0440	40.9800
534	0.5217	485.9000	735	0.0428	39.8500
535	0.5273	491.1000	736	0.0417	38.7900
536	0.5341	497.4000	737	0.0408	37.9900
537	0.5411	503.9000	738	0.0395	36.7900
538	0.5476	510.1000	739	0.0386	35.9600
539	0.5543	516.3000	740	0.0375	34.9400
540	0.5609	522.4000	741	0.0364	33.9300
541	0.5676	528.6000	742	0.0358	33.3000
542	0.5753	535.9000	743	0.0347	32.3200
543	0.5810	541.1000	744	0.0338	31.5100
544	0.5885	548.1000	745	0.0330	30.7400
545	0.5962	555.3000	746	0.0322	29.9800
546	0.6040	562.6000	747	0.0312	29.0900
547	0.6113	569.4000	748	0.0305	28.3900
548	0.6197	577.1000	749	0.0297	27.6500
549	0.6280	584.9000	750	0.0289	26.9300
550	0.6363	592.6000	751	0.0281	26.1900
551	0.6444	600.2000	752	0.0274	25.5600
552	0.6534	608.5000	753	0.0267	24.8500
553	0.6624	616.9000	754	0.0259	24.1400
554	0.6719	625.8000	755	0.0254	23.6200
555	0.6816	634.8000	756	0.0247	23.0100
556	0.6912	643.8000	757	0.0240	22.4000
557	0.7002	652.1000	758	0.0232	21.6200
558	0.7107	661.9000	759	0.0229	21.3200
559	0.7203	670.9000	760	0.0223	20.7900

560	0.7317	681.4000	761	0.0217	20.2000
561	0.7411	690.2000	762	0.0210	19.6000
562	0.7520	700.4000	763	0.0205	19.0600
563	0.7622	709.9000	764	0.0200	18.6700
564	0.7730	720.0000	765	0.0193	18.0100
565	0.7847	730.8000	766	0.0188	17.4700
566	0.7952	740.7000	767	0.0181	16.8700
567	0.8058	750.5000	768	0.0177	16.4500
568	0.8173	761.2000	769	0.0170	15.8600
569	0.8279	771.0000	770	0.0166	15.4900
570	0.8388	781.2000	771	0.0163	15.2100
571	0.8503	791.9000	772	0.0157	14.6400
572	0.8596	800.6000	773	0.0152	14.1300
573	0.8705	810.8000	774	0.0148	13.7800
574	0.8809	820.4000	775	0.0144	13.4300
575	0.8912	830.0000	776	0.0141	13.1500
576	0.8997	837.9000	777	0.0136	12.6600
577	0.9091	846.7000	778	0.0131	12.2100
578	0.9188	855.7000	779	0.0131	12.2200
579	0.9276	864.0000	780	0.0131	12.2400
580	0.9354	871.2000			



Spectral Energy Distribution(LOC-SPAL-MW(180/200/240/320)30KD-T2LV)

480V

WL (nm)	Spectrum	Spectrum	WL (nm)	Spectrum	Spectrum
380	0.0347	32.1500	581	0.9447	875.1000
381	0.0334	30.9200	582	0.9523	882.2000
382	0.0332	30.7800	583	0.9598	889.1000
383	0.0283	26.2100	584	0.9650	894.0000
384	0.0268	24.8700	585	0.9711	899.6000
385	0.0247	22.8400	586	0.9773	905.3000
386	0.0237	21.9300	587	0.9812	909.0000
387	0.0221	20.4400	588	0.9863	913.6000
388	0.0195	18.1100	589	0.9905	917.6000
389	0.0187	17.3600	590	0.9927	919.6000
390	0.0172	15.9700	591	0.9953	922.1000
391	0.0160	14.8300	592	0.9979	924.5000
392	0.0150	13.9200	593	0.9986	925.1000
393	0.0146	13.5100	594	0.9994	925.8000
394	0.0140	12.9300	595	0.9988	925.3000
395	0.0132	12.2200	596	0.9989	925.3000
396	0.0123	11.4300	597	0.9983	924.8000
397	0.0118	10.9500	598	0.9967	923.3000
398	0.0110	10.2200	599	0.9939	920.7000
399	0.0111	10.2700	600	0.9905	917.6000
400	0.0119	11.0600	601	0.9875	914.8000
401	0.0116	10.7200	602	0.9835	911.1000
402	0.0111	10.2900	603	0.9790	907.0000
403	0.0112	10.3300	604	0.9740	902.3000
404	0.0115	10.6700	605	0.9690	897.6000
405	0.0119	11.0000	606	0.9631	892.2000
406	0.0124	11.5200	607	0.9562	885.8000
407	0.0129	11.9900	608	0.9489	879.0000
408	0.0138	12.8100	609	0.9425	873.1000
409	0.0149	13.8500	610	0.9357	866.8000
410	0.0165	15.3100	611	0.9266	858.3000
411	0.0181	16.7900	612	0.9185	850.9000
412	0.0200	18.5000	613	0.9095	842.6000
413	0.0221	20.4600	614	0.8999	833.6000
414	0.0246	22.8300	615	0.8907	825.2000
415	0.0274	25.3500	616	0.8807	815.9000
416	0.0305	28.2400	617	0.8706	806.5000
417	0.0348	32.2800	618	0.8598	796.5000
418	0.0391	36.1900	619	0.8490	786.5000
419	0.0433	40.0800	620	0.8382	776.4000
420	0.0481	44.5200	621	0.8263	765.5000
421	0.0539	49.9200	622	0.8151	755.1000
422	0.0597	55.3200	623	0.8032	744.1000

423	0.0664	61.5300	624	0.7915	733.2000
424	0.0733	67.9300	625	0.7794	722.0000
425	0.0812	75.2400	626	0.7670	710.5000
426	0.0897	83.1100	627	0.7542	698.7000
427	0.0993	91.9800	628	0.7429	688.2000
428	0.1083	100.3000	629	0.7305	676.7000
429	0.1187	110.0000	630	0.7178	664.9000
430	0.1303	120.7000	631	0.7050	653.1000
431	0.1424	131.9000	632	0.6922	641.3000
432	0.1554	144.0000	633	0.6798	629.8000
433	0.1700	157.5000	634	0.6668	617.7000
434	0.1844	170.8000	635	0.6548	606.6000
435	0.1998	185.1000	636	0.6411	593.9000
436	0.2175	201.5000	637	0.6294	583.1000
437	0.2351	217.8000	638	0.6171	571.7000
438	0.2548	236.0000	639	0.6042	559.7000
439	0.2756	255.3000	640	0.5918	548.2000
440	0.2994	277.3000	641	0.5798	537.1000
441	0.3253	301.4000	642	0.5672	525.4000
442	0.3556	329.4000	643	0.5551	514.2000
443	0.3872	358.7000	644	0.5440	503.9000
444	0.4217	390.6000	645	0.5313	492.2000
445	0.4592	425.4000	646	0.5199	481.6000
446	0.4953	458.8000	647	0.5082	470.7000
447	0.5297	490.7000	648	0.4967	460.1000
448	0.5603	519.1000	649	0.4858	450.0000
449	0.5823	539.4000	650	0.4747	439.8000
450	0.5976	553.6000	651	0.4633	429.2000
451	0.6005	556.3000	652	0.4528	419.5000
452	0.5933	549.6000	653	0.4421	409.5000
453	0.5726	530.5000	654	0.4315	399.8000
454	0.5415	501.6000	655	0.4208	389.9000
455	0.5057	468.5000	656	0.4113	381.0000
456	0.4670	432.6000	657	0.4009	371.4000
457	0.4255	394.2000	658	0.3908	362.0000
458	0.3879	359.4000	659	0.3814	353.3000
459	0.3550	328.8000	660	0.3723	344.8000
460	0.3258	301.8000	661	0.3621	335.5000
461	0.3019	279.7000	662	0.3528	326.8000
462	0.2822	261.4000	663	0.3443	319.0000
463	0.2671	247.4000	664	0.3351	310.4000
464	0.2526	234.0000	665	0.3266	302.5000
465	0.2393	221.7000	666	0.3179	294.5000
466	0.2276	210.8000	667	0.3093	286.5000
467	0.2163	200.4000	668	0.3011	278.9000
468	0.2034	188.4000	669	0.2934	271.8000

469	0.1911	177.0000	670	0.2857	264.7000
470	0.1785	165.4000	671	0.2776	257.1000
471	0.1660	153.8000	672	0.2704	250.5000
472	0.1545	143.2000	673	0.2630	243.7000
473	0.1443	133.7000	674	0.2560	237.1000
474	0.1349	125.0000	675	0.2491	230.7000
475	0.1266	117.3000	676	0.2422	224.4000
476	0.1205	111.6000	677	0.2356	218.2000
477	0.1148	106.4000	678	0.2291	212.2000
478	0.1107	102.6000	679	0.2228	206.4000
479	0.1076	99.6600	680	0.2165	200.5000
480	0.1055	97.7600	681	0.2108	195.3000
481	0.1039	96.2400	682	0.2044	189.4000
482	0.1034	95.7800	683	0.1990	184.4000
483	0.1025	94.9200	684	0.1933	179.1000
484	0.1028	95.2000	685	0.1876	173.8000
485	0.1031	95.5500	686	0.1828	169.3000
486	0.1040	96.3300	687	0.1777	164.6000
487	0.1054	97.6500	688	0.1726	159.9000
488	0.1069	99.0700	689	0.1676	155.3000
489	0.1095	101.5000	690	0.1628	150.8000
490	0.1126	104.3000	691	0.1584	146.7000
491	0.1162	107.7000	692	0.1537	142.4000
492	0.1205	111.7000	693	0.1495	138.5000
493	0.1263	117.0000	694	0.1453	134.6000
494	0.1324	122.7000	695	0.1410	130.6000
495	0.1393	129.1000	696	0.1368	126.8000
496	0.1467	135.9000	697	0.1326	122.9000
497	0.1550	143.6000	698	0.1291	119.6000
498	0.1638	151.8000	699	0.1251	115.9000
499	0.1733	160.5000	700	0.1213	112.4000
500	0.1832	169.7000	701	0.1183	109.6000
501	0.1937	179.5000	702	0.1149	106.5000
502	0.2041	189.1000	703	0.1112	103.0000
503	0.2150	199.2000	704	0.1079	99.9800
504	0.2264	209.7000	705	0.1048	97.1200
505	0.2380	220.4000	706	0.1016	94.0900
506	0.2497	231.3000	707	0.0989	91.6400
507	0.2617	242.4000	708	0.0960	88.9200
508	0.2738	253.7000	709	0.0931	86.2300
509	0.2854	264.4000	710	0.0902	83.6000
510	0.2970	275.1000	711	0.0875	81.0900
511	0.3095	286.7000	712	0.0851	78.8300
512	0.3209	297.2000	713	0.0827	76.6300
513	0.3329	308.4000	714	0.0804	74.4800
514	0.3445	319.1000	715	0.0778	72.0700

515	0.3555	329.3000	716	0.0757	70.1200
516	0.3663	339.3000	717	0.0735	68.0500
517	0.3769	349.1000	718	0.0715	66.2500
518	0.3877	359.2000	719	0.0697	64.6100
519	0.3976	368.4000	720	0.0676	62.6400
520	0.4080	377.9000	721	0.0655	60.6900
521	0.4170	386.3000	722	0.0633	58.6000
522	0.4263	394.9000	723	0.0620	57.3900
523	0.4352	403.1000	724	0.0600	55.6000
524	0.4450	412.2000	725	0.0584	54.1200
525	0.4526	419.3000	726	0.0568	52.6500
526	0.4607	426.7000	727	0.0550	50.9700
527	0.4692	434.7000	728	0.0534	49.4900
528	0.4761	441.1000	729	0.0519	48.0700
529	0.4835	447.9000	730	0.0503	46.6300
530	0.4916	455.4000	731	0.0490	45.3800
531	0.4992	462.5000	732	0.0477	44.1600
532	0.5058	468.6000	733	0.0464	42.9600
533	0.5131	475.4000	734	0.0452	41.8600
534	0.5200	481.7000	735	0.0441	40.8200
535	0.5267	487.9000	736	0.0428	39.6200
536	0.5337	494.4000	737	0.0418	38.6900
537	0.5403	500.5000	738	0.0408	37.8200
538	0.5472	506.9000	739	0.0397	36.8200
539	0.5544	513.5000	740	0.0387	35.8400
540	0.5613	519.9000	741	0.0377	34.9300
541	0.5678	526.0000	742	0.0367	33.9700
542	0.5759	533.5000	743	0.0357	33.0900
543	0.5819	539.1000	744	0.0349	32.3300
544	0.5899	546.4000	745	0.0340	31.5100
545	0.5981	554.1000	746	0.0330	30.6100
546	0.6055	560.9000	747	0.0324	29.9700
547	0.6132	568.0000	748	0.0314	29.0700
548	0.6216	575.9000	749	0.0305	28.2800
549	0.6300	583.7000	750	0.0297	27.5300
550	0.6387	591.7000	751	0.0288	26.6900
551	0.6472	599.6000	752	0.0283	26.2400
552	0.6562	607.9000	753	0.0277	25.6200
553	0.6653	616.3000	754	0.0269	24.9600
554	0.6752	625.5000	755	0.0262	24.2600
555	0.6851	634.6000	756	0.0254	23.5000
556	0.6953	644.1000	757	0.0248	22.9600
557	0.7039	652.1000	758	0.0240	22.2400
558	0.7140	661.5000	759	0.0236	21.8200
559	0.7237	670.4000	760	0.0231	21.3800
560	0.7344	680.3000	761	0.0225	20.8600

561	0.7451	690.2000	762	0.0218	20.1600
562	0.7562	700.6000	763	0.0212	19.6800
563	0.7661	709.7000	764	0.0207	19.1500
564	0.7775	720.3000	765	0.0200	18.4800
565	0.7888	730.7000	766	0.0195	18.0400
566	0.7990	740.2000	767	0.0187	17.3700
567	0.8096	750.0000	768	0.0182	16.8700
568	0.8212	760.7000	769	0.0178	16.4700
569	0.8319	770.7000	770	0.0172	15.9500
570	0.8421	780.1000	771	0.0166	15.3900
571	0.8534	790.5000	772	0.0163	15.0800
572	0.8633	799.7000	773	0.0158	14.6700
573	0.8737	809.4000	774	0.0154	14.2500
574	0.8837	818.6000	775	0.0149	13.8200
575	0.8941	828.2000	776	0.0145	13.4100
576	0.9022	835.8000	777	0.0141	13.0600
577	0.9119	844.8000	778	0.0137	12.6600
578	0.9212	853.3000	779	0.0137	12.6700
579	0.9303	861.8000	780	0.0137	12.7000
580	0.9372	868.2000			

A large, stylized logo for 'BEST' is centered on the page. The letters are white with a blue outline and are set against a light blue, rounded rectangular background. The font is bold and sans-serif.

Spectral Energy Distribution(LOC-SPAL-MW(180/200/240/320)50KD-T2LV)

347V

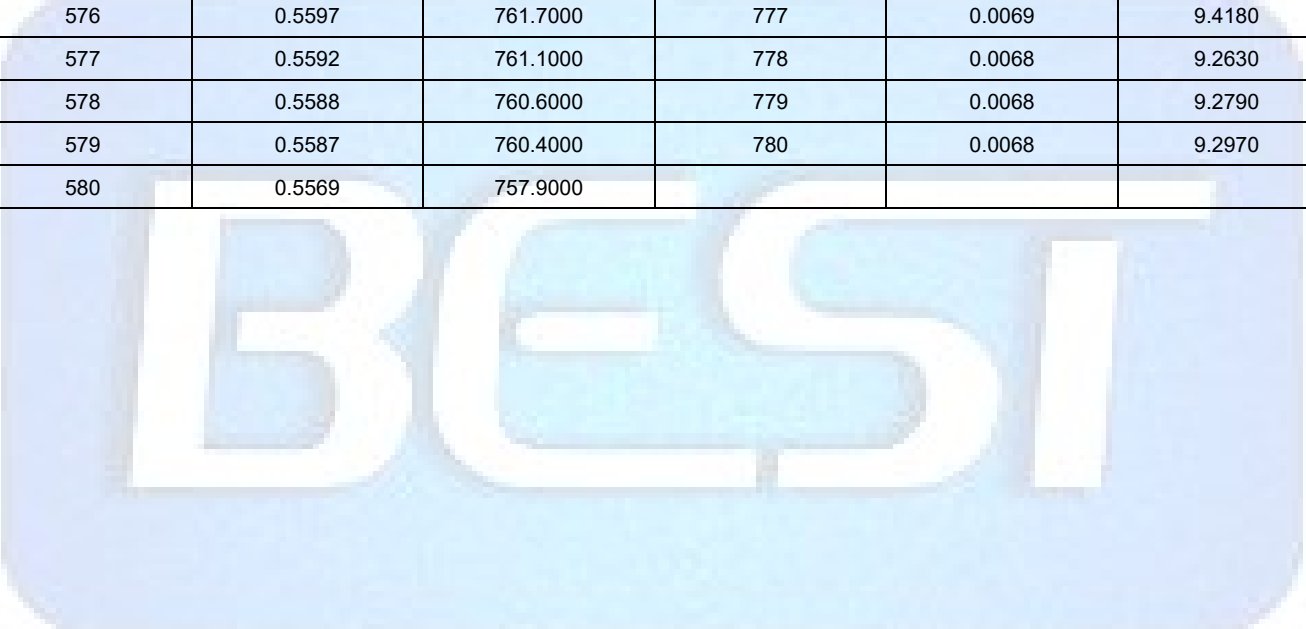
WL (nm)	Spectrum	Spectrum	WL (nm)	Spectrum	Spectrum
380	0.0429	58.4200	581	0.5557	756.4000
381	0.0382	51.9400	582	0.5543	754.4000
382	0.0385	52.4400	583	0.5529	752.5000
383	0.0340	46.2900	584	0.5512	750.2000
384	0.0315	42.8300	585	0.5491	747.4000
385	0.0287	39.0000	586	0.5474	745.0000
386	0.0272	37.0400	587	0.5455	742.4000
387	0.0258	35.1700	588	0.5429	738.9000
388	0.0226	30.8200	589	0.5406	735.8000
389	0.0220	29.9500	590	0.5377	731.8000
390	0.0202	27.4400	591	0.5350	728.1000
391	0.0190	25.8300	592	0.5323	724.5000
392	0.0180	24.4800	593	0.5288	719.8000
393	0.0169	22.9600	594	0.5247	714.1000
394	0.0161	21.9100	595	0.5209	708.9000
395	0.0151	20.5800	596	0.5176	704.5000
396	0.0148	20.1900	597	0.5136	699.0000
397	0.0143	19.5100	598	0.5097	693.7000
398	0.0141	19.1800	599	0.5049	687.3000
399	0.0135	18.3800	600	0.5006	681.4000
400	0.0137	18.6700	601	0.4965	675.8000
401	0.0142	19.3600	602	0.4914	668.8000
402	0.0139	18.9300	603	0.4864	662.0000
403	0.0143	19.4900	604	0.4811	654.8000
404	0.0153	20.8200	605	0.4766	648.7000
405	0.0161	21.9300	606	0.4714	641.6000
406	0.0174	23.6400	607	0.4662	634.6000
407	0.0189	25.7500	608	0.4609	627.3000
408	0.0206	28.0900	609	0.4549	619.2000
409	0.0228	31.0300	610	0.4494	611.7000
410	0.0261	35.5100	611	0.4438	604.0000
411	0.0293	39.8400	612	0.4379	596.0000
412	0.0330	44.9800	613	0.4322	588.3000
413	0.0373	50.8300	614	0.4260	579.8000
414	0.0423	57.6000	615	0.4202	571.9000
415	0.0478	65.0700	616	0.4141	563.6000
416	0.0542	73.7900	617	0.4076	554.8000
417	0.0618	84.0600	618	0.4016	546.6000
418	0.0697	94.8900	619	0.3953	538.1000
419	0.0789	107.4000	620	0.3889	529.3000
420	0.0885	120.4000	621	0.3826	520.8000
421	0.0986	134.2000	622	0.3763	512.2000

422	0.1107	150.7000	623	0.3700	503.6000
423	0.1234	167.9000	624	0.3634	494.6000
424	0.1380	187.8000	625	0.3573	486.4000
425	0.1536	209.0000	626	0.3509	477.6000
426	0.1698	231.1000	627	0.3443	468.7000
427	0.1891	257.4000	628	0.3381	460.1000
428	0.2094	285.0000	629	0.3318	451.6000
429	0.2316	315.2000	630	0.3254	442.9000
430	0.2537	345.3000	631	0.3190	434.2000
431	0.2803	381.5000	632	0.3129	425.8000
432	0.3081	419.3000	633	0.3068	417.5000
433	0.3375	459.3000	634	0.3004	408.8000
434	0.3690	502.3000	635	0.2944	400.7000
435	0.4049	551.1000	636	0.2884	392.5000
436	0.4431	603.1000	637	0.2826	384.7000
437	0.4856	660.9000	638	0.2762	375.9000
438	0.5328	725.2000	639	0.2705	368.2000
439	0.5850	796.2000	640	0.2647	360.3000
440	0.6418	873.5000	641	0.2590	352.5000
441	0.7021	955.7000	642	0.2533	344.7000
442	0.7658	1042.0000	643	0.2474	336.8000
443	0.8297	1129.0000	644	0.2424	329.9000
444	0.8872	1207.0000	645	0.2370	322.6000
445	0.9395	1279.0000	646	0.2313	314.8000
446	0.9789	1332.0000	647	0.2262	307.8000
447	0.9982	1359.0000	648	0.2209	300.6000
448	0.9973	1357.0000	649	0.2160	294.0000
449	0.9749	1327.0000	650	0.2106	286.7000
450	0.9327	1269.0000	651	0.2054	279.6000
451	0.8741	1190.0000	652	0.2007	273.1000
452	0.8060	1097.0000	653	0.1961	267.0000
453	0.7308	994.7000	654	0.1913	260.4000
454	0.6571	894.4000	655	0.1866	254.0000
455	0.5897	802.6000	656	0.1820	247.7000
456	0.5327	725.0000	657	0.1775	241.5000
457	0.4822	656.3000	658	0.1732	235.8000
458	0.4418	601.3000	659	0.1689	229.8000
459	0.4091	556.8000	660	0.1646	224.0000
460	0.3803	517.6000	661	0.1603	218.2000
461	0.3566	485.4000	662	0.1564	212.9000
462	0.3340	454.6000	663	0.1523	207.2000
463	0.3133	426.5000	664	0.1486	202.3000
464	0.2912	396.3000	665	0.1446	196.8000
465	0.2696	366.9000	666	0.1410	191.9000
466	0.2484	338.0000	667	0.1372	186.7000
467	0.2285	311.1000	668	0.1336	181.8000

468	0.2082	283.4000	669	0.1301	177.1000
469	0.1898	258.3000	670	0.1266	172.3000
470	0.1738	236.6000	671	0.1232	167.7000
471	0.1591	216.5000	672	0.1200	163.3000
472	0.1465	199.5000	673	0.1168	159.0000
473	0.1370	186.5000	674	0.1138	154.9000
474	0.1286	175.1000	675	0.1108	150.8000
475	0.1217	165.6000	676	0.1079	146.8000
476	0.1169	159.2000	677	0.1047	142.6000
477	0.1126	153.2000	678	0.1019	138.6000
478	0.1096	149.2000	679	0.0991	134.9000
479	0.1067	145.3000	680	0.0966	131.5000
480	0.1048	142.6000	681	0.0939	127.7000
481	0.1028	139.9000	682	0.0912	124.1000
482	0.1019	138.7000	683	0.0889	121.0000
483	0.1011	137.6000	684	0.0863	117.4000
484	0.1008	137.2000	685	0.0839	114.2000
485	0.1013	137.8000	686	0.0815	111.0000
486	0.1028	139.9000	687	0.0795	108.2000
487	0.1050	143.0000	688	0.0772	105.1000
488	0.1078	146.7000	689	0.0752	102.3000
489	0.1116	151.8000	690	0.0732	99.6400
490	0.1162	158.2000	691	0.0710	96.6500
491	0.1221	166.2000	692	0.0691	94.0500
492	0.1284	174.8000	693	0.0671	91.3000
493	0.1357	184.8000	694	0.0653	88.8500
494	0.1438	195.7000	695	0.0634	86.2500
495	0.1527	207.8000	696	0.0617	83.9900
496	0.1619	220.3000	697	0.0599	81.5800
497	0.1723	234.5000	698	0.0582	79.1500
498	0.1829	249.0000	699	0.0564	76.8200
499	0.1940	264.1000	700	0.0549	74.7500
500	0.2051	279.1000	701	0.0534	72.6600
501	0.2172	295.6000	702	0.0519	70.6000
502	0.2295	312.4000	703	0.0504	68.5600
503	0.2422	329.7000	704	0.0490	66.7300
504	0.2550	347.1000	705	0.0475	64.6500
505	0.2677	364.3000	706	0.0462	62.8700
506	0.2802	381.3000	707	0.0449	61.1600
507	0.2931	399.0000	708	0.0436	59.3700
508	0.3062	416.8000	709	0.0424	57.7800
509	0.3188	433.8000	710	0.0412	56.1100
510	0.3316	451.3000	711	0.0400	54.4800
511	0.3434	467.4000	712	0.0389	53.0100
512	0.3551	483.4000	713	0.0378	51.4300
513	0.3670	499.4000	714	0.0368	50.0200

514	0.3780	514.6000	715	0.0358	48.7700
515	0.3882	528.4000	716	0.0347	47.2200
516	0.3987	542.7000	717	0.0338	46.0200
517	0.4083	555.8000	718	0.0330	44.9100
518	0.4177	568.5000	719	0.0321	43.6900
519	0.4259	579.6000	720	0.0312	42.5200
520	0.4347	591.7000	721	0.0301	41.0000
521	0.4424	602.1000	722	0.0294	40.0800
522	0.4495	611.9000	723	0.0287	39.0100
523	0.4564	621.2000	724	0.0278	37.8500
524	0.4626	629.7000	725	0.0270	36.8000
525	0.4687	637.9000	726	0.0263	35.8400
526	0.4744	645.6000	727	0.0256	34.7900
527	0.4798	653.0000	728	0.0248	33.7300
528	0.4840	658.7000	729	0.0242	32.8700
529	0.4887	665.2000	730	0.0235	31.9400
530	0.4931	671.2000	731	0.0228	31.0200
531	0.4973	676.8000	732	0.0222	30.2600
532	0.5007	681.5000	733	0.0216	29.3600
533	0.5038	685.7000	734	0.0212	28.8200
534	0.5069	689.9000	735	0.0206	27.9800
535	0.5098	693.8000	736	0.0200	27.2100
536	0.5126	697.6000	737	0.0196	26.7200
537	0.5150	701.0000	738	0.0191	25.9800
538	0.5173	704.1000	739	0.0187	25.3900
539	0.5198	707.5000	740	0.0183	24.9500
540	0.5216	710.0000	741	0.0177	24.0500
541	0.5236	712.7000	742	0.0173	23.5800
542	0.5257	715.5000	743	0.0169	22.9400
543	0.5266	716.8000	744	0.0165	22.4500
544	0.5294	720.5000	745	0.0161	21.8500
545	0.5309	722.6000	746	0.0157	21.4300
546	0.5324	724.7000	747	0.0153	20.7600
547	0.5340	726.8000	748	0.0149	20.2200
548	0.5355	728.8000	749	0.0145	19.7100
549	0.5369	730.8000	750	0.0142	19.3800
550	0.5390	733.6000	751	0.0138	18.7300
551	0.5404	735.5000	752	0.0134	18.2200
552	0.5419	737.6000	753	0.0131	17.8600
553	0.5429	739.0000	754	0.0128	17.4100
554	0.5452	742.0000	755	0.0124	16.8400
555	0.5460	743.2000	756	0.0121	16.5100
556	0.5472	744.7000	757	0.0118	16.0900
557	0.5484	746.4000	758	0.0114	15.5500
558	0.5501	748.7000	759	0.0113	15.3300
559	0.5505	749.3000	760	0.0110	14.9800

560	0.5524	751.9000	761	0.0108	14.7100
561	0.5531	752.8000	762	0.0105	14.2400
562	0.5545	754.7000	763	0.0102	13.9100
563	0.5550	755.5000	764	0.0099	13.4900
564	0.5561	756.9000	765	0.0097	13.1700
565	0.5571	758.2000	766	0.0094	12.8200
566	0.5578	759.2000	767	0.0090	12.3100
567	0.5581	759.6000	768	0.0088	11.9800
568	0.5592	761.1000	769	0.0085	11.6100
569	0.5598	761.9000	770	0.0084	11.3900
570	0.5602	762.4000	771	0.0082	11.1300
571	0.5602	762.5000	772	0.0079	10.8100
572	0.5603	762.6000	773	0.0077	10.4800
573	0.5605	762.9000	774	0.0075	10.2700
574	0.5606	763.0000	775	0.0074	10.0100
575	0.5607	763.2000	776	0.0071	9.6250
576	0.5597	761.7000	777	0.0069	9.4180
577	0.5592	761.1000	778	0.0068	9.2630
578	0.5588	760.6000	779	0.0068	9.2790
579	0.5587	760.4000	780	0.0068	9.2970
580	0.5569	757.9000			



Spectral Energy Distribution(LOC-SPAL-MW(180/200/240/320)50KD-T2LV)

480V

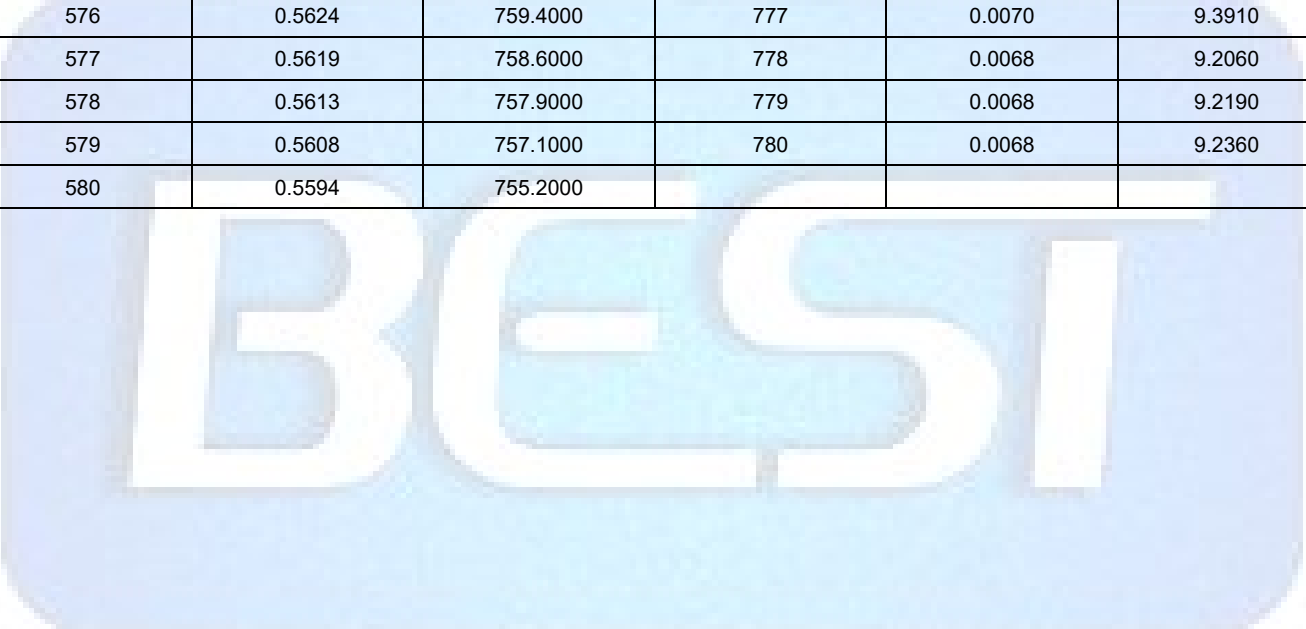
WL (nm)	Spectrum	Spectrum	WL (nm)	Spectrum	Spectrum
380	0.0437	59.0000	581	0.5580	753.4000
381	0.0382	51.5700	582	0.5570	752.1000
382	0.0388	52.4400	583	0.5557	750.3000
383	0.0335	45.2600	584	0.5538	747.7000
384	0.0320	43.1400	585	0.5514	744.5000
385	0.0296	40.0100	586	0.5498	742.4000
386	0.0282	38.0900	587	0.5480	739.8000
387	0.0254	34.2400	588	0.5457	736.8000
388	0.0229	30.9000	589	0.5431	733.2000
389	0.0226	30.5300	590	0.5403	729.4000
390	0.0202	27.2400	591	0.5371	725.1000
391	0.0195	26.2700	592	0.5343	721.4000
392	0.0179	24.1900	593	0.5311	717.0000
393	0.0173	23.3600	594	0.5275	712.2000
394	0.0164	22.1900	595	0.5235	706.8000
395	0.0153	20.6200	596	0.5199	701.9000
396	0.0154	20.7500	597	0.5165	697.4000
397	0.0144	19.4600	598	0.5118	691.0000
398	0.0138	18.6000	599	0.5074	685.1000
399	0.0135	18.2300	600	0.5029	679.0000
400	0.0141	19.0100	601	0.4984	672.9000
401	0.0144	19.3900	602	0.4932	665.9000
402	0.0141	19.0400	603	0.4884	659.5000
403	0.0147	19.8200	604	0.4831	652.3000
404	0.0155	20.9800	605	0.4785	646.0000
405	0.0163	22.0100	606	0.4734	639.1000
406	0.0176	23.7400	607	0.4682	632.2000
407	0.0192	25.9600	608	0.4624	624.3000
408	0.0213	28.7200	609	0.4569	616.9000
409	0.0235	31.7700	610	0.4514	609.5000
410	0.0266	35.8800	611	0.4452	601.1000
411	0.0297	40.0700	612	0.4400	594.0000
412	0.0337	45.4400	613	0.4340	585.9000
413	0.0382	51.6000	614	0.4277	577.4000
414	0.0430	58.0100	615	0.4219	569.7000
415	0.0486	65.5500	616	0.4156	561.1000
416	0.0556	75.0200	617	0.4096	553.0000
417	0.0631	85.1600	618	0.4035	544.8000
418	0.0709	95.6900	619	0.3971	536.1000
419	0.0799	107.8000	620	0.3904	527.1000
420	0.0896	121.0000	621	0.3841	518.6000
421	0.1006	135.8000	622	0.3779	510.2000

422	0.1121	151.4000	623	0.3714	501.4000
423	0.1252	169.0000	624	0.3651	492.9000
424	0.1396	188.5000	625	0.3593	485.1000
425	0.1553	209.7000	626	0.3525	476.0000
426	0.1721	232.4000	627	0.3462	467.4000
427	0.1907	257.5000	628	0.3400	459.1000
428	0.2108	284.6000	629	0.3332	449.8000
429	0.2332	314.8000	630	0.3270	441.4000
430	0.2563	346.1000	631	0.3206	432.9000
431	0.2827	381.6000	632	0.3142	424.3000
432	0.3089	417.0000	633	0.3084	416.3000
433	0.3400	459.1000	634	0.3017	407.3000
434	0.3702	499.8000	635	0.2961	399.8000
435	0.4051	546.9000	636	0.2896	391.1000
436	0.4436	598.9000	637	0.2838	383.1000
437	0.4854	655.3000	638	0.2779	375.2000
438	0.5312	717.2000	639	0.2719	367.1000
439	0.5835	787.8000	640	0.2663	359.5000
440	0.6387	862.4000	641	0.2603	351.4000
441	0.6986	943.2000	642	0.2543	343.4000
442	0.7606	1027.0000	643	0.2490	336.2000
443	0.8235	1112.0000	644	0.2435	328.7000
444	0.8815	1190.0000	645	0.2380	321.4000
445	0.9349	1262.0000	646	0.2324	313.7000
446	0.9747	1316.0000	647	0.2274	307.1000
447	0.9964	1345.0000	648	0.2222	300.0000
448	0.9982	1348.0000	649	0.2170	293.0000
449	0.9780	1320.0000	650	0.2118	286.0000
450	0.9388	1268.0000	651	0.2070	279.5000
451	0.8816	1190.0000	652	0.2018	272.4000
452	0.8153	1101.0000	653	0.1971	266.2000
453	0.7412	1001.0000	654	0.1921	259.4000
454	0.6684	902.4000	655	0.1878	253.5000
455	0.6008	811.1000	656	0.1831	247.3000
456	0.5420	731.8000	657	0.1786	241.2000
457	0.4911	663.1000	658	0.1742	235.2000
458	0.4498	607.3000	659	0.1698	229.3000
459	0.4160	561.7000	660	0.1658	223.8000
460	0.3868	522.2000	661	0.1613	217.8000
461	0.3614	487.9000	662	0.1573	212.4000
462	0.3397	458.6000	663	0.1532	206.8000
463	0.3183	429.8000	664	0.1494	201.7000
464	0.2963	400.0000	665	0.1455	196.5000
465	0.2743	370.4000	666	0.1417	191.3000
466	0.2532	341.9000	667	0.1381	186.5000
467	0.2327	314.2000	668	0.1343	181.4000

468	0.2130	287.5000	669	0.1308	176.6000
469	0.1946	262.7000	670	0.1275	172.2000
470	0.1778	240.1000	671	0.1241	167.6000
471	0.1627	219.6000	672	0.1208	163.0000
472	0.1502	202.7000	673	0.1176	158.7000
473	0.1401	189.2000	674	0.1146	154.7000
474	0.1315	177.5000	675	0.1116	150.6000
475	0.1251	168.9000	676	0.1086	146.6000
476	0.1192	160.9000	677	0.1055	142.4000
477	0.1148	155.1000	678	0.1025	138.4000
478	0.1114	150.4000	679	0.1000	135.0000
479	0.1087	146.7000	680	0.0971	131.1000
480	0.1063	143.5000	681	0.0946	127.7000
481	0.1048	141.5000	682	0.0918	124.0000
482	0.1034	139.6000	683	0.0896	121.0000
483	0.1028	138.8000	684	0.0869	117.3000
484	0.1026	138.5000	685	0.0844	114.0000
485	0.1032	139.3000	686	0.0822	111.0000
486	0.1042	140.7000	687	0.0801	108.1000
487	0.1067	144.0000	688	0.0778	105.1000
488	0.1093	147.5000	689	0.0756	102.0000
489	0.1130	152.6000	690	0.0736	99.3600
490	0.1174	158.5000	691	0.0717	96.7900
491	0.1232	166.4000	692	0.0697	94.1100
492	0.1294	174.8000	693	0.0676	91.2700
493	0.1368	184.7000	694	0.0659	89.0300
494	0.1450	195.7000	695	0.0641	86.5300
495	0.1537	207.5000	696	0.0622	84.0000
496	0.1627	219.7000	697	0.0603	81.4100
497	0.1729	233.4000	698	0.0587	79.2200
498	0.1837	248.1000	699	0.0571	77.0300
499	0.1950	263.3000	700	0.0555	75.0000
500	0.2061	278.2000	701	0.0539	72.7800
501	0.2179	294.3000	702	0.0523	70.6600
502	0.2302	310.8000	703	0.0509	68.7600
503	0.2429	328.0000	704	0.0495	66.8600
504	0.2555	345.0000	705	0.0480	64.8000
505	0.2682	362.1000	706	0.0466	62.9300
506	0.2811	379.5000	707	0.0453	61.1800
507	0.2938	396.6000	708	0.0440	59.4500
508	0.3071	414.7000	709	0.0428	57.7700
509	0.3198	431.8000	710	0.0416	56.2100
510	0.3319	448.1000	711	0.0403	54.4200
511	0.3440	464.5000	712	0.0393	53.0000
512	0.3557	480.2000	713	0.0382	51.6000
513	0.3675	496.2000	714	0.0371	50.1400

514	0.3788	511.4000	715	0.0361	48.7500
515	0.3891	525.3000	716	0.0351	47.4100
516	0.3999	539.9000	717	0.0342	46.1400
517	0.4090	552.2000	718	0.0333	44.9400
518	0.4187	565.3000	719	0.0324	43.7100
519	0.4267	576.2000	720	0.0314	42.3600
520	0.4359	588.6000	721	0.0305	41.2000
521	0.4437	599.1000	722	0.0296	39.9900
522	0.4507	608.5000	723	0.0288	38.9300
523	0.4572	617.2000	724	0.0281	37.9900
524	0.4645	627.1000	725	0.0273	36.9100
525	0.4698	634.4000	726	0.0265	35.8200
526	0.4760	642.7000	727	0.0258	34.8400
527	0.4811	649.5000	728	0.0251	33.8600
528	0.4855	655.6000	729	0.0243	32.8600
529	0.4899	661.5000	730	0.0237	32.0000
530	0.4945	667.7000	731	0.0230	31.0700
531	0.4988	673.4000	732	0.0225	30.3700
532	0.5027	678.8000	733	0.0219	29.5100
533	0.5054	682.4000	734	0.0213	28.7600
534	0.5090	687.3000	735	0.0208	28.1100
535	0.5119	691.2000	736	0.0203	27.4000
536	0.5139	693.9000	737	0.0197	26.6600
537	0.5169	697.9000	738	0.0193	26.0100
538	0.5190	700.8000	739	0.0189	25.5100
539	0.5218	704.5000	740	0.0183	24.7200
540	0.5236	706.9000	741	0.0179	24.1700
541	0.5255	709.6000	742	0.0175	23.6600
542	0.5281	713.0000	743	0.0171	23.0900
543	0.5291	714.4000	744	0.0167	22.5000
544	0.5310	716.9000	745	0.0162	21.8700
545	0.5332	719.9000	746	0.0158	21.3400
546	0.5351	722.5000	747	0.0155	20.9500
547	0.5361	723.8000	748	0.0150	20.2800
548	0.5377	726.0000	749	0.0147	19.7800
549	0.5398	728.7000	750	0.0143	19.3100
550	0.5415	731.0000	751	0.0139	18.7500
551	0.5428	732.8000	752	0.0136	18.3300
552	0.5443	734.9000	753	0.0132	17.8700
553	0.5457	736.8000	754	0.0129	17.4300
554	0.5478	739.7000	755	0.0126	16.9900
555	0.5487	740.8000	756	0.0123	16.6100
556	0.5505	743.3000	757	0.0119	16.1100
557	0.5514	744.4000	758	0.0116	15.7100
558	0.5526	746.1000	759	0.0114	15.4600
559	0.5533	747.0000	760	0.0111	15.0000

560	0.5548	749.0000	761	0.0108	14.6300
561	0.5557	750.3000	762	0.0106	14.2600
562	0.5572	752.3000	763	0.0103	13.9100
563	0.5573	752.5000	764	0.0100	13.5300
564	0.5589	754.6000	765	0.0098	13.2400
565	0.5599	756.0000	766	0.0095	12.7800
566	0.5605	756.8000	767	0.0092	12.3900
567	0.5610	757.4000	768	0.0090	12.1100
568	0.5616	758.3000	769	0.0087	11.7600
569	0.5624	759.3000	770	0.0084	11.3200
570	0.5632	760.4000	771	0.0082	11.1200
571	0.5632	760.4000	772	0.0080	10.8600
572	0.5630	760.1000	773	0.0078	10.5100
573	0.5629	760.0000	774	0.0076	10.2900
574	0.5632	760.4000	775	0.0074	9.9600
575	0.5635	760.7000	776	0.0072	9.6970
576	0.5624	759.4000	777	0.0070	9.3910
577	0.5619	758.6000	778	0.0068	9.2060
578	0.5613	757.9000	779	0.0068	9.2190
579	0.5608	757.1000	780	0.0068	9.2360
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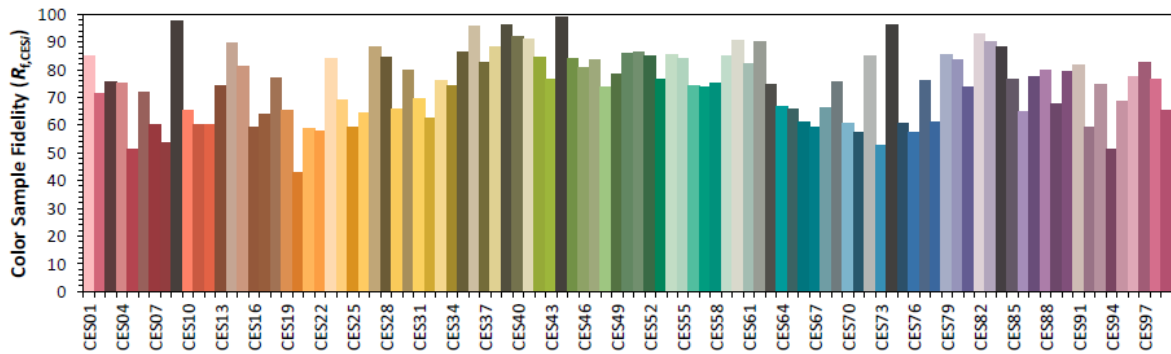
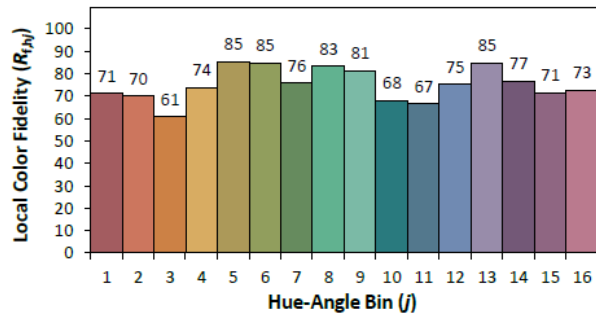
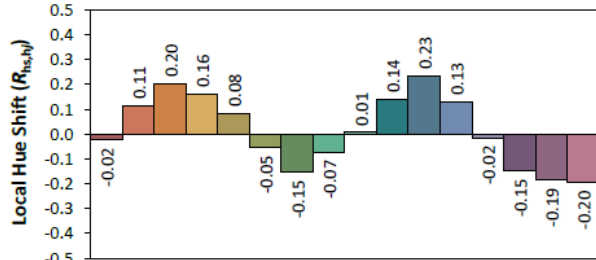
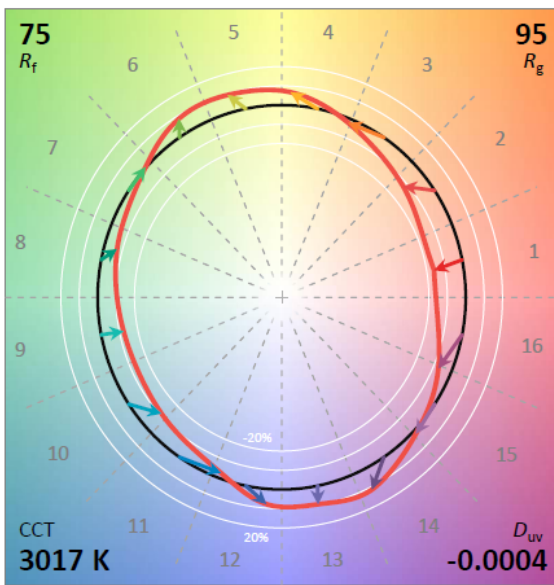
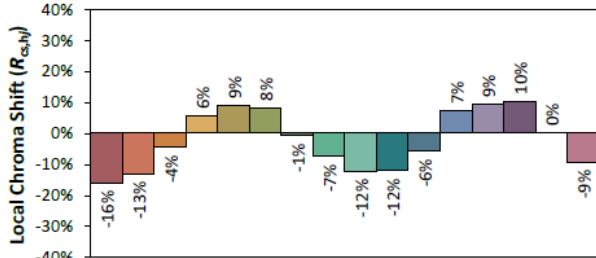
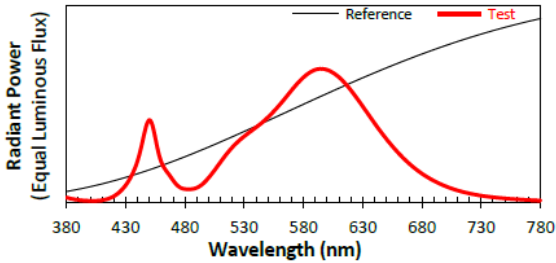
IES-TM-30-18 Report

347V

ANSI/IES TM-30-18 Color Rendition Report

Source: Roadway Luminaires
 Date:

Manufacturer: LED One Corporation
 Model: LOC-SPAL-MW(180/200/240/320)30KD-T2LV



Notes: This is a recommended method for displaying ANSI/IES TM-30-18 information.

x 0.4351
 y 0.4025
 u' 0.2501
 v' 0.5205

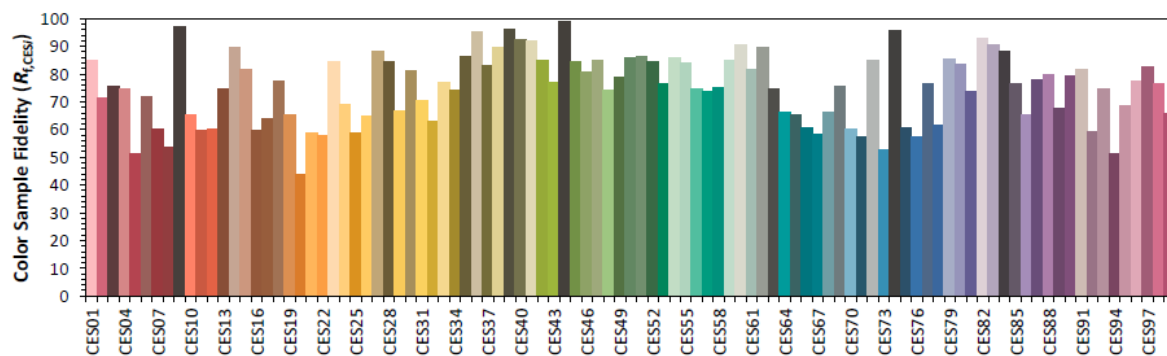
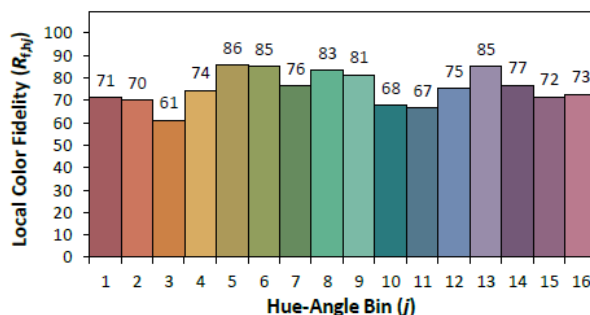
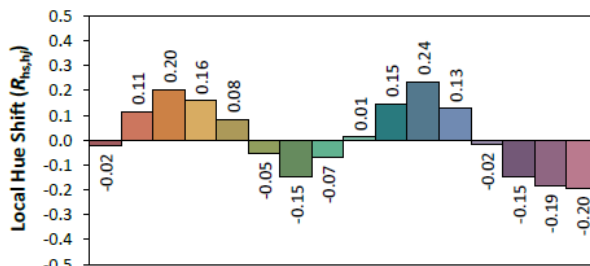
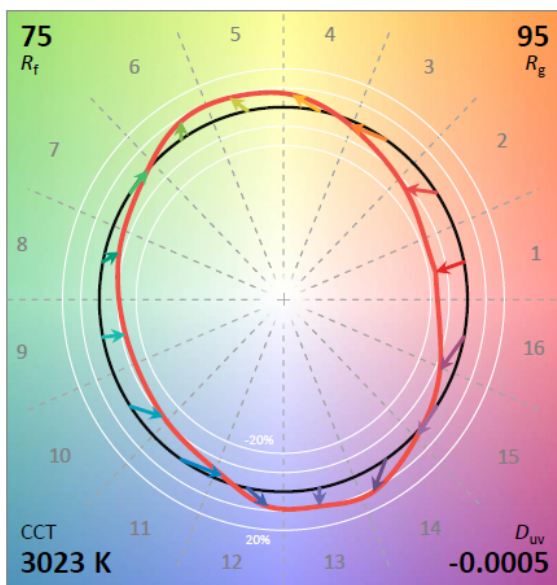
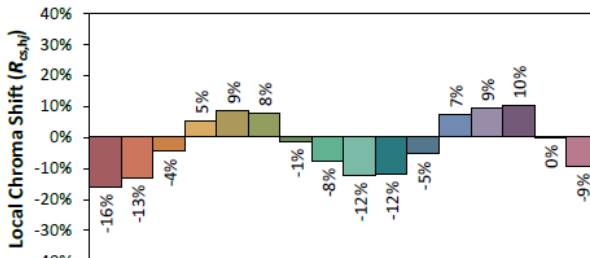
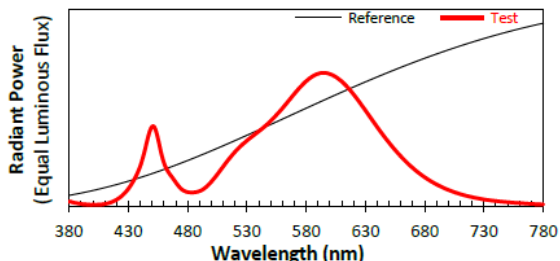
CIE 13.3-1995 (CRI)	
R_a	72
R_g	-29

480V

ANSI/IES TM-30-18 Color Rendition Report

Source: Roadway Luminaires
 Date:

Manufacturer: LED One Corporation
 Model: LOC-SPAL-MW(180/200/240/320)30KD-T2LV



Notes: This is a recommended method for displaying ANSI/IES TM-30-18 information.

x 0.4346
 y 0.4020
 u' 0.2499
 v' 0.5202

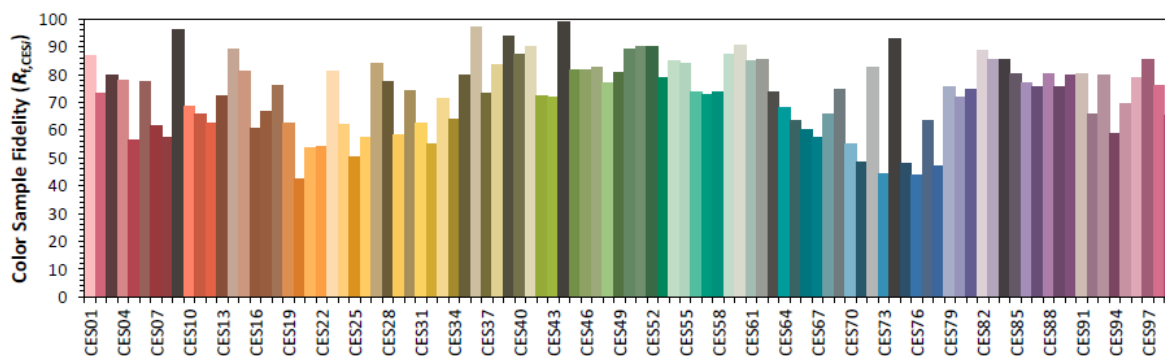
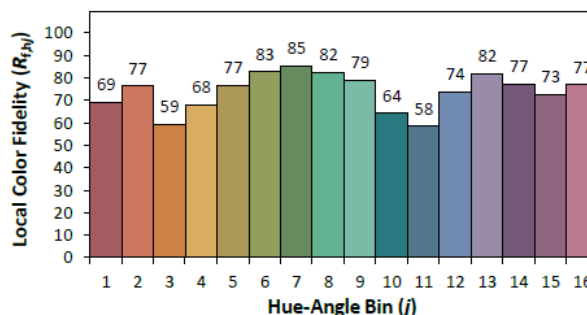
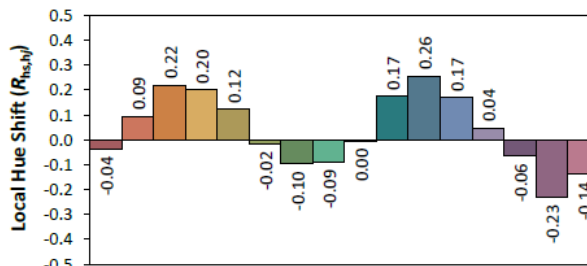
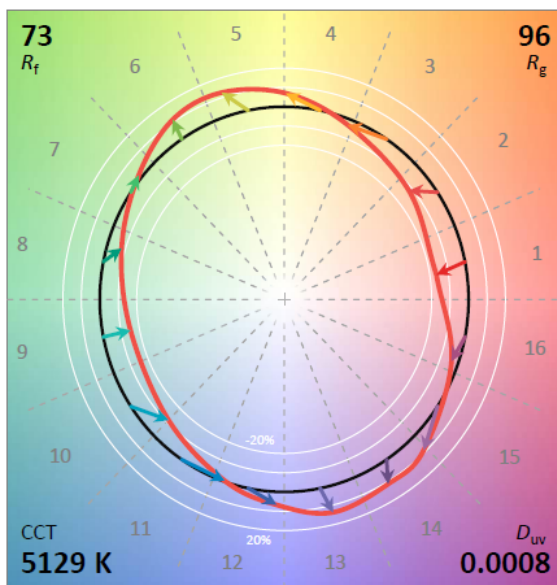
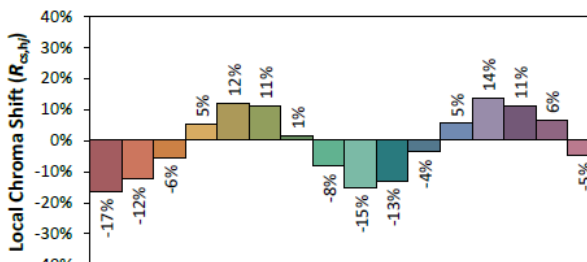
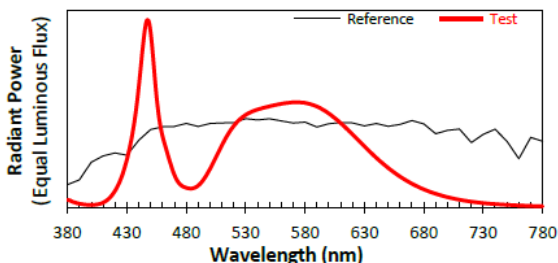
CIE 13.3-1995 (CRI)	
R_a	72
R_g	-29

347V

ANSI/IES TM-30-18 Color Rendition Report

Source: Roadway Luminaires
 Date:

Manufacturer: LED One Corporation
 Model: LOC-SPAL-MW(180/200/240/320)50KD-T2LV



Notes: This is a recommended method for displaying ANSI/IES TM-30-18 information.

x 0.3417
 y 0.3504
 u' 0.2096
 v' 0.4836

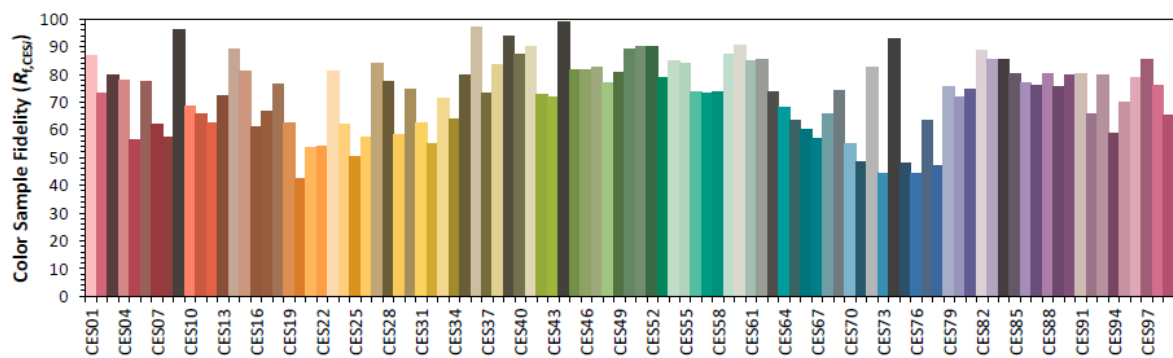
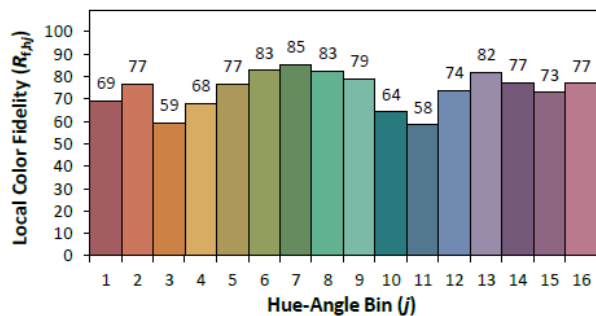
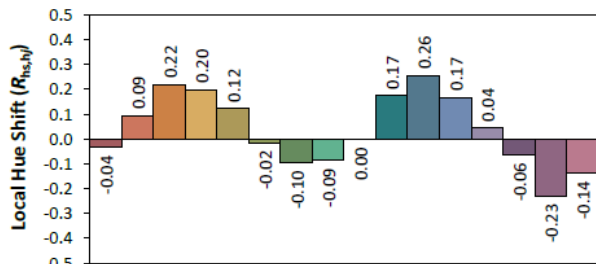
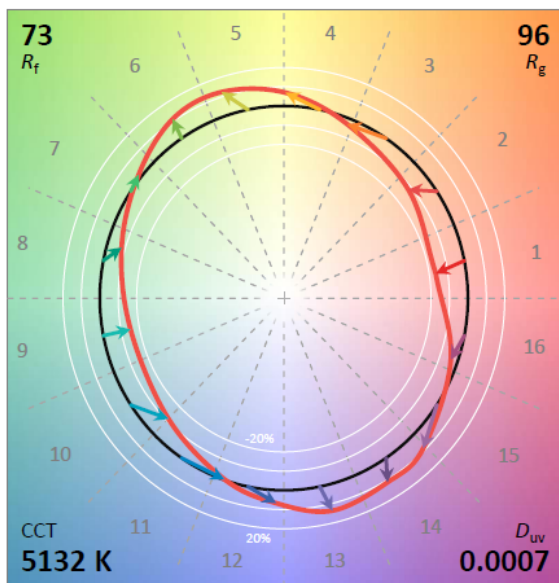
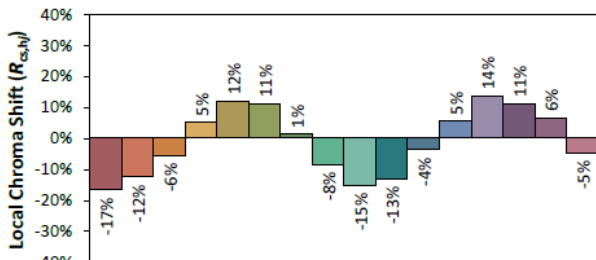
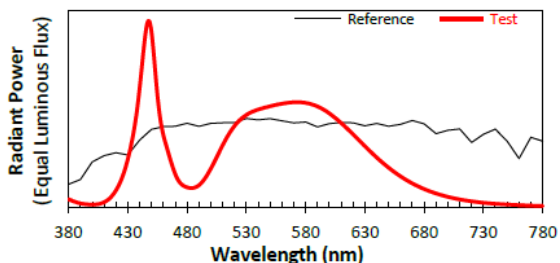
CIE 13.3-1995 (CRI)
 R_a 73
 R_g -23

480V

ANSI/IES TM-30-18 Color Rendition Report

Source: Roadway Luminaires
 Date:

Manufacturer: LED One Corporation
 Model: LOC-SPAL-MW(180/200/240/320)50KD-T2LV

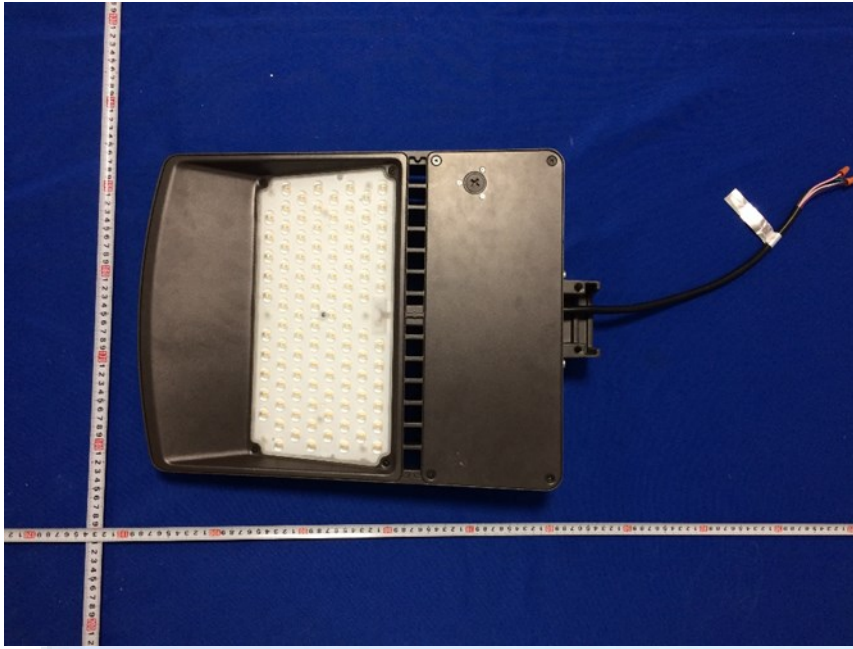


Notes: This is a recommended method for displaying ANSI/IES TM-30-18 information.

x 0.3416
 y 0.3502
 u' 0.2096
 v' 0.4835

CIE 13.3-1995 (CRI)	
R_a	73
R_g	-23

EUT Photo



Equipment list			
B187	Aux Lamp DC Source	N/A	N/A
B073	Standard Light Source	2019/8/26	Every 50 hours life
B186	Digital CC&CV DC Power Supply	2022/7/15	2023/7/14
B059	Second Meter	2022/7/18	2023/7/17
B178	Spectroradio Meter	Calibrated before measurement	N/A
B174	Integral Sphere	Calibrated before measurement	N/A
B188	AC Source	Calibrated before measurement	N/A
B087	Digital Power Meter	2022/7/15	2023/7/14
B161	Temperature Meter	2022/7/15	2023/7/14
B184	Aux Lamp DC Source	N/A	N/A
B045	Temperature Meter	2022/7/15	2023/7/14
B015	AC Power Source	Calibrated before measurement	N/A
B133	Goniophotometer	Calibrated before measurement	N/A
B181	Spectroradio Meter	Calibrated before measurement	N/A
B084	Digital Power Meter	2022/7/15	2023/7/14
B232	Standard Light Source	2017/4/13	Every 50hours life
B144	Digital CC&CV DC Power Supply	2022/7/15	2023/7/14
B250	Air Flow Meter	2022/7/23	2023/7/22

Uncertainty of Measure item		
NO.	Measure item	Uncertainty
1	Temperature	±0.4℃
2	AC Voltage	±0.1%
3	AC Current	±0.14%
4	Power≥1W	±0.17%
5	Power < 1W	±0.02W
6	luminous flux(ϕ)	±1.6%
7	CCT	±15K
8	CRI(Ra)	±0.2
9	Beam Angle	±1°
10	DC Voltage	±0.07%
11	DC Current	±0.03%
12	Starting Time	±0.005ms
13	Life Time	±0.2h

Annex

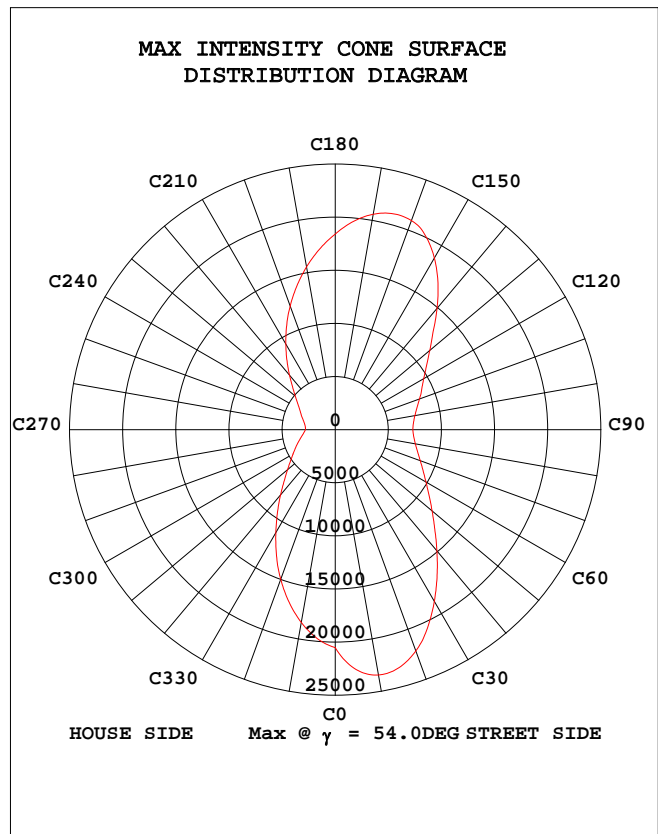
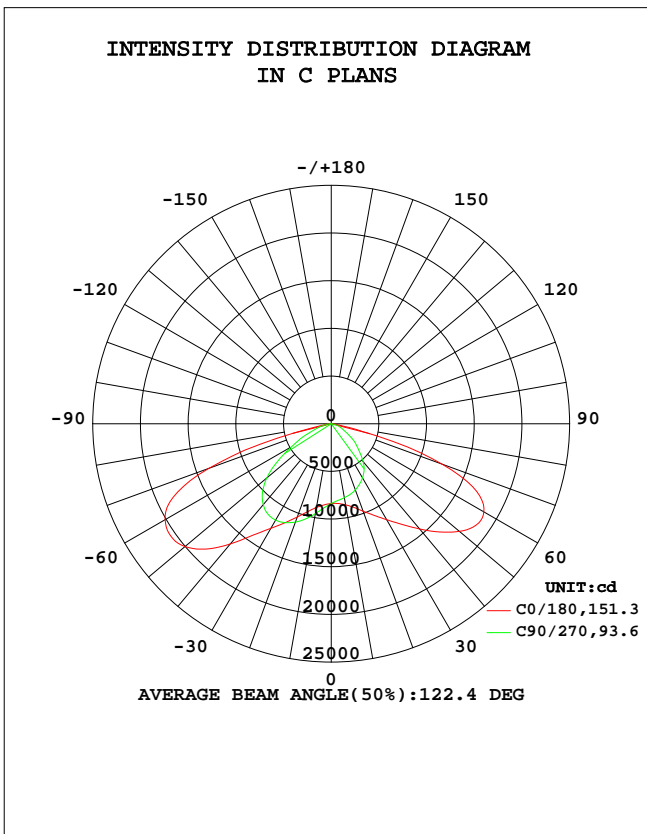
Please see the next page for the luminous intensity test data

-----END-----

STREETLIGHT PHOTOMETRIC TEST REPORT

Test:U:347.02V I:0.9069A P:308.99W PF:0.9818 Freq:60.00Hz Lamp Flux:45095.2x1 lm		
NAME: Roadway Luminaires	TYPE: LOC-SPAL-MW(180/200/240/320)30KD-T2LV	OVERSIZE: 0.0000
SPEC.: 320.0W 42000 lm	DIM.: L=0.526,W=0.376	SERIAL No.: N/A
MFR.: LED One Corporation	SUR.: 0.16*0.33	Shielding Angle: N/A

DATA OF LAMP		PHOTOMETRIC DATA Eff: 145.94 lm/W			
MODEL	LOC-SPAL-MW(180/200/240/320)30KD-T2LV	Imax(cd)	21454	η street_up(%)	0.0
NOMINAL POWER(W)	320.0	LOR(%)	100.0	η street_down(%)	61.4
RATED VOLTAGE(V)	347	TOTAL FLUX(lm)	45095	η house_up(%)	0.0
NOMINAL FLUX(lm)	45095.2	MAXIMUM @(C, γ)	23,54.0	η house_down(%)	38.6
LAMPS INSIDE	1	η up(%)	0.0	76 FLASHAREA(m2)	0.00100
TEST VOLTAGE(V)	347	η down(%)	100.0	SLI	21.051

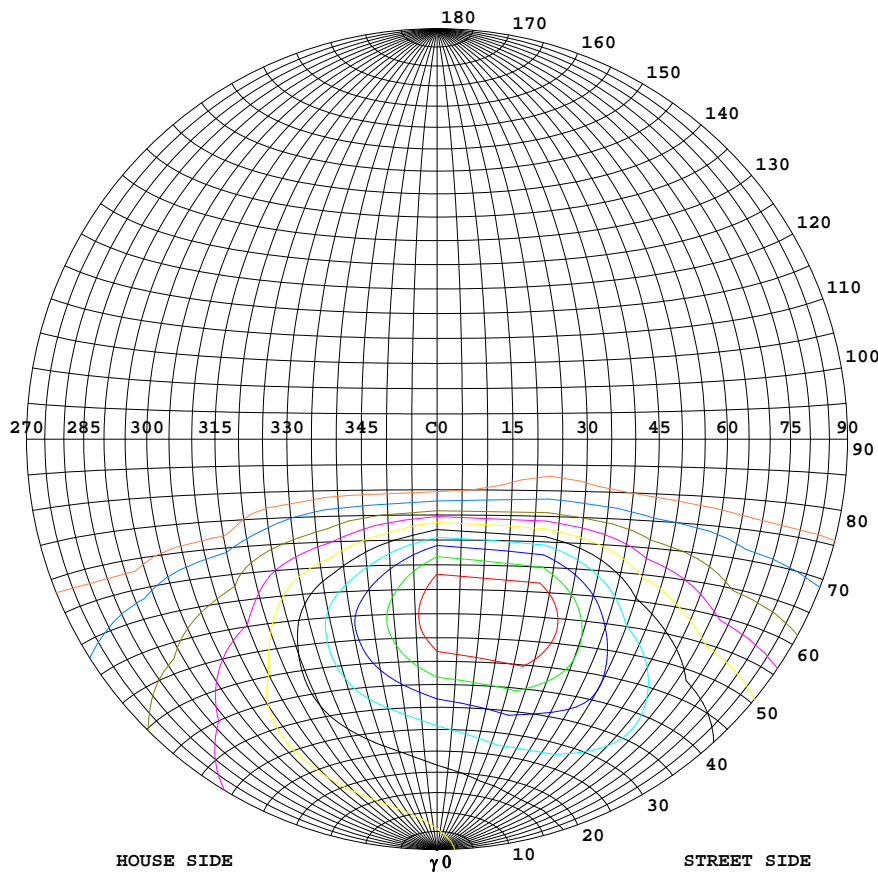


C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: Jonathan
 Test Date: 2023-05-15

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-R5000_V2 SYSTEM V2.00.444
 Humidity: 65.0%
 Test Distance: 2.554m [K=1.0000]
 Remarks:

STREETLIGHT ISOCANDELA DIAGRAM

Test:U:347.02V I:0.9069A P:308.99W PF:0.9818 Freq:60.00Hz Lamp Flux:45095.2x1 lm		
NAME: Roadway Luminaires	TYPE: LOC-SPAL-MW(180/200/240)E2H130KD-27ZLVkg	
SPEC.: 320.0W 42000 lm	DIM.: L=0.526,W=0.376	SERIAL No.: N/A
MFR.: LED One Corporation	SUR.: 0.16*0.33	Shielding Angle: N/A



Classification:

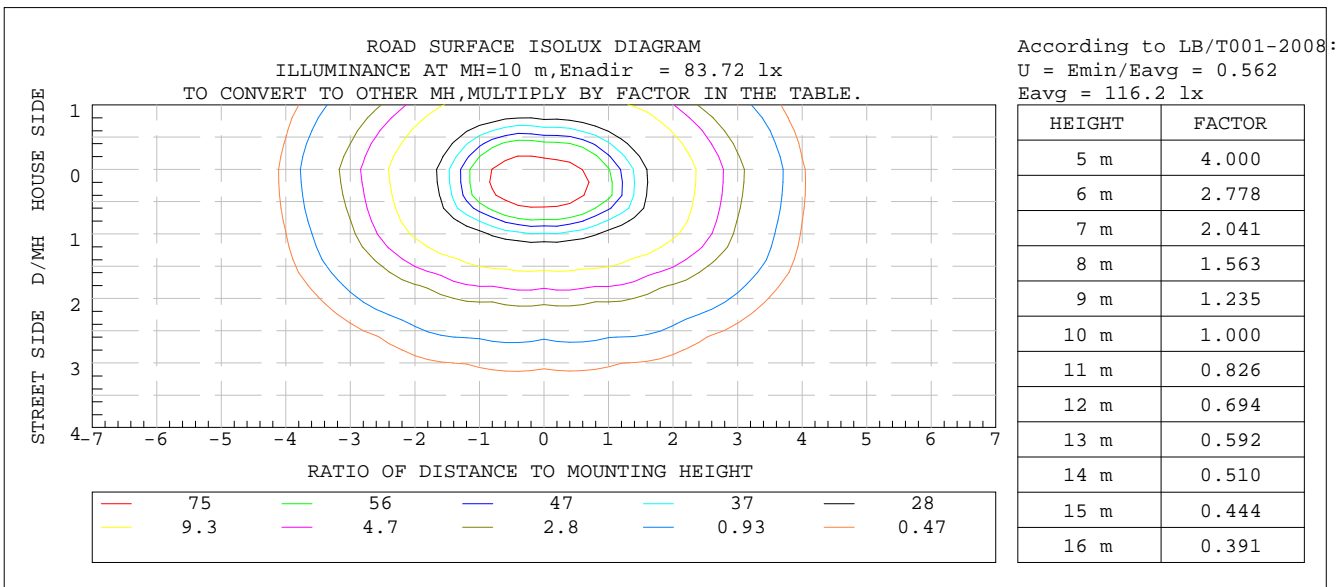
IES:Type II - Short
 CIE:Narrow - Short
 IES:Full cut-off
 CIE:Semi-cut-off
 Max.At80:31.44cd/klm
 Max.At90:0cd/klm
 Max.80-90:31.44cd/klm
 NRB 5101:Limited[8.7%]

ISOCANDELA DIAGRAM	
UNIT	cd
Imax=100%	21454
90%	19308
80%	17163
70%	15018
60%	12872
50%	10727
40%	8582
30%	6436
20%	4291
10%	2145
5%	1073

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:Jonathan
 Test Date:2023-05-15

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.444
 Humidity:65.0%
 Test Distance:2.554m [K=1.0000]
 Remarks:

COEFFICIENT OF UTILIZATION CURVE
AND ISOLUX DIAGRAM



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: Jonathan
Test Date: 2023-05-15

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System: EVERFINE GO-R5000_V2 SYSTEM V2.00.444
Humidity: 65.0%
Test Distance: 2.554m [K=1.0000]
Remarks:

ZONAL FLUX DIAGRAM

Test:U:347.02V I:0.9069A P:308.99W PF:0.9818 Freq:60.00Hz Lamp Flux:45095.2x1 lm		
NAME: Roadway Luminaires	TYPE: LOC-SPAL-MW(180/200/240)E27H130KD-27ZLVkg	
SPEC.: 320.0W 42000 lm	DIM.: L=0.526,W=0.376	SERIAL No.: N/A
MFR.: LED One Corporation	SUR.: 0.16*0.33	Shielding Angle: N/A

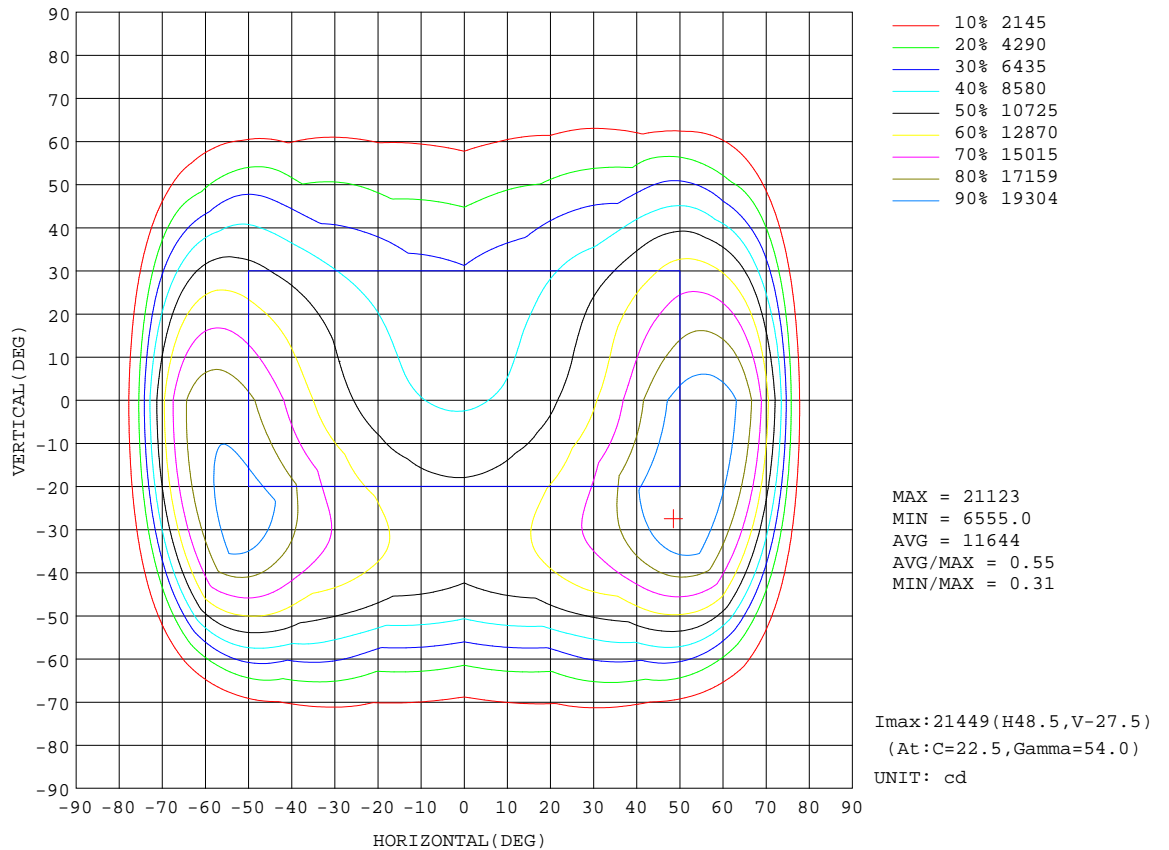
γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	λlamp
10	892.1	945.8	956.0	927.3	863.0	807.9	788.0	827.2	0- 10	817.9	817.9	1.81
20	1039	1131	1097	1095	975.4	825.5	739.1	867.1	10- 20	2624	3442	7.63
30	1266	1334	1168	1286	1162	850.0	655.5	919.2	20- 30	4764	8206	18.2
40	1644	1494	1109	1441	1440	812.3	521.3	915.7	30- 40	7129	15335	34
50	2004	1433	880.5	1397	1756	661.0	342.2	774.0	40- 50	9208	24544	54.4
60	2012	1096	477.0	1103	1848	413.5	179.1	503.7	50- 60	9854	34397	76.3
70	1361	519.3	189.5	512.3	1233	135.3	93.85	181.7	60- 70	7749	42146	93.5
80	91.11	95.71	51.42	99.12	83.82	22.77	14.83	29.01	70- 80	2701	44847	99.4
90	0	0	0	0	0	0	0	0	80- 90	248.6	45095	100
100	0	0	0	0	0	0	0	0	90-100	0	45095	100
110	0	0	0	0	0	0	0	0	100-110	0	45095	100
120	0	0	0	0	0	0	0	0	110-120	0	45095	100
130	0	0	0	0	0	0	0	0	120-130	0	45095	100
140	0	0	0	0	0	0	0	0	130-140	0	45095	100
150	0	0	0	0	0	0	0	0	140-150	0	45095	100
160	0	0	0	0	0	0	0	0	150-160	0	45095	100
170	0	0	0	0	0	0	0	0	160-170	0	45095	100
180	0	0	0	0	0	0	0	0	170-180	0	45095	100
DEG	LUMINOUS INTENSITY:×10cd									UNIT:lm		

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:Jonathan
 Test Date:2023-05-15

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.444
 Humidity:65.0%
 Test Distance:2.554m [K=1.0000]
 Remarks:

ISOCANDELA DIAGRAM

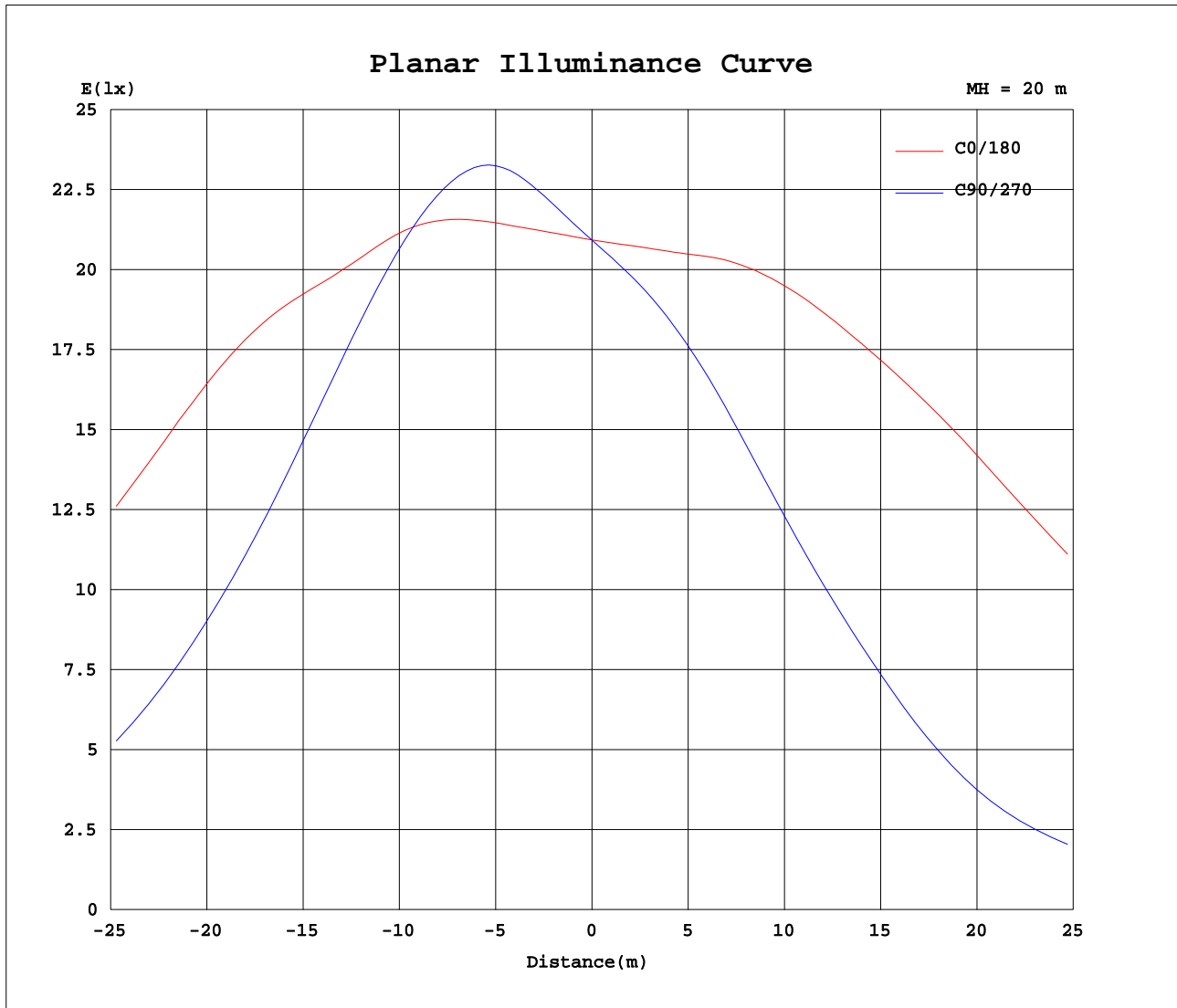
Test:U:347.02V I:0.9069A P:308.99W PF:0.9818 Freq:60.00Hz Lamp Flux:45095.2x1 lm		
NAME: Roadway Luminaires	TYPE: LOC-SPAL-MW(180/200/240)E2H130KD-27ZLvg	WEIGHT: 3.0kg
SPEC.: 320.0W 42000 lm	DIM.: L=0.526,W=0.376	SERIAL No.: N/A
MFR.: LED One Corporation	SUR.: 0.16*0.33	Shielding Angle: N/A



C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: Jonathan
 Test Date: 2023-05-15

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-R5000_V2 SYSTEM V2.00.444
 Humidity: 65.0%
 Test Distance: 2.554m [K=1.0000]
 Remarks:

Planar Illuminance Curve



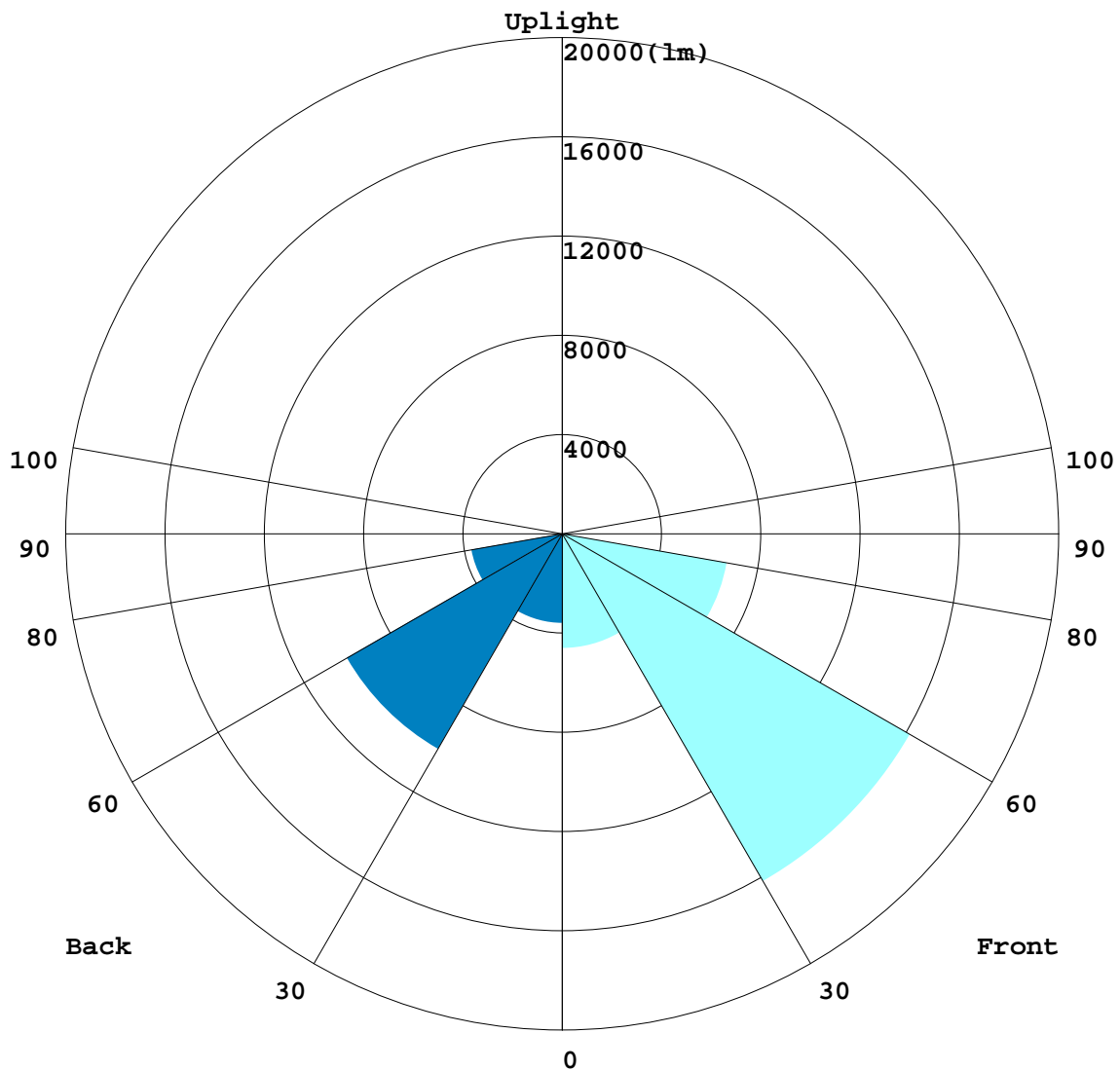
C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: Jonathan
 Test Date: 2023-05-15

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-R5000_V2 SYSTEM V2.00.444
 Humidity: 65.0%
 Test Distance: 2.554m [K=1.0000]
 Remarks:

LCS REPORT

Test:U:347.02V I:0.9069A P:308.99W PF:0.9818 Freq:60.00Hz		
Lamp Flux:45095.2x1 lm		
NAME: Roadway Luminaires	TYPE: LOC-SPAL-MW(180/200/240)E32H130KD-27ZLVkg	
SPEC.: 320.0W 42000 lm	DIM.: L=0.526,W=0.376	SERIAL No.: N/A
MFR.: LED One Corporation	SUR.: 0.16*0.33	Shielding Angle: N/A

LUMINAIRE CLASSIFICATION SYSTEM(LCS) GRAPH



C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:Jonathan
 Test Date:2023-05-15

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.444
 Humidity:65.0%
 Test Distance:2.554m [K=1.0000]
 Remarks:

BUG REPORT

Test:U:347.02V I:0.9069A P:308.99W PF:0.9818 Freq:60.00Hz Lamp Flux:45095.2x1 lm		
NAME: Roadway Luminaires	TYPE: LOC-SPAL-MW(180/200/240V)30K/27ZL/kg	OVERHEAD
SPEC.: 320.0W 42000 lm	DIM.: L=0.526,W=0.376	SERIAL No.: N/A
MFR.: LED One Corporation	SUR.: 0.16*0.33	Shielding Angle: N/A

IESNA Luminaire Flux Distribution Table:

Zone	Lumens	Luminaire %
FL - Front-Low(0-30)	4606.1	10.2
FM - Front-Medium(30-60)	16173	35.9
FH - Front-High(60-80)	6736.1	14.9
FVH - Front-Very High(80-90)	165.17	0.4
Total Forward Light	27680	61.4

BL - Back-Low(0-30)	3600	8.0
BM - Back-Medium(30-60)	10018	22.2
BH - Back-High(60-80)	3713.4	8.2
BVH - Back-Very High(80-90)	83.464	0.2
Total Back Light	17415	38.6

UL - Uplight-Low(90-100)	0	0.0
UH - Uplight-High(100-180)	0	0.0
Total Up Light	0	0.0

BUG(Back,Up,Glare) Rating	B5-U0-G4
---------------------------	----------

Zone	Downward Lumens	Upward Lumens	Total Lumens
House Side	17415	0	17415
Street Side	27680	0	27680

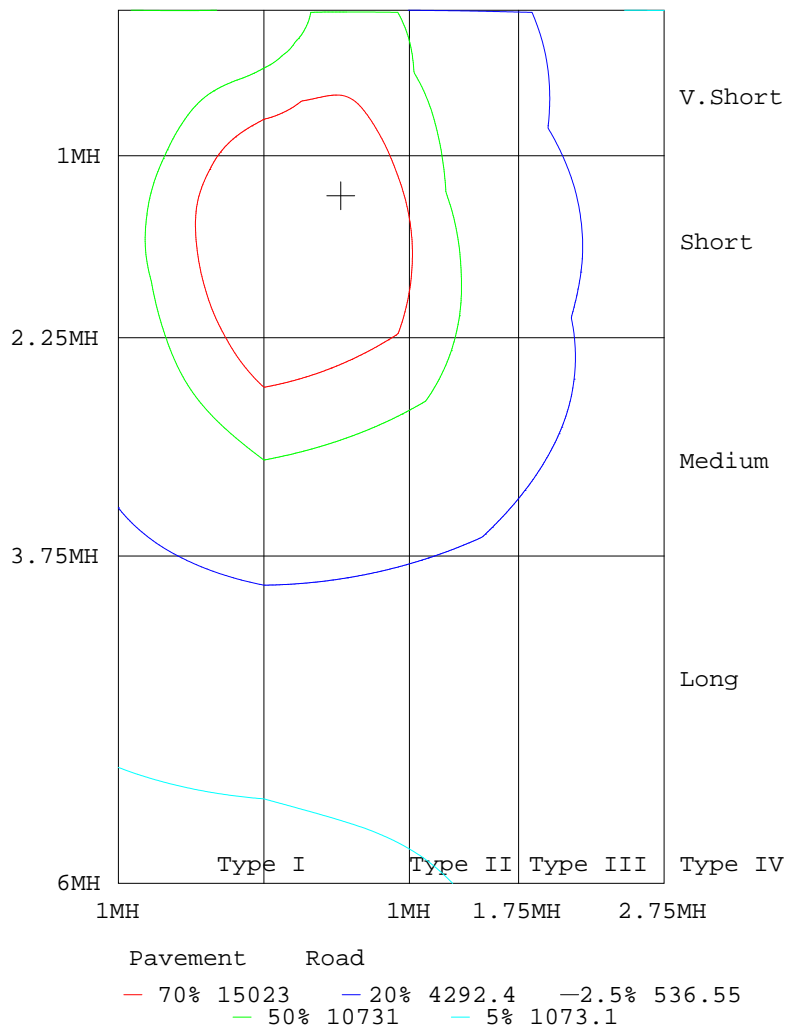
C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Jonathan
Test Date:2023-05-15

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.444
Humidity:65.0%
Test Distance:2.554m [K=1.0000]
Remarks:

ROAD ISOCANDELA REPORT

Test:U:347.02V I:0.9069A P:308.99W PF:0.9818 Freq:60.00Hz Lamp Flux:45095.2x1 lm		
NAME: Roadway Luminaires	TYPE: LOC-SPAL-MW(180/200/240V)30K-272L/kg	
SPEC.: 320.0W 42000 lm	DIM.: L=0.526,W=0.376	SERIAL No.: N/A
MFR.: LED One Corporation	SUR.: 0.16*0.33	Shielding Angle: N/A

ROAD SURFACE ISOCANDELA DIAGRAM



C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:Jonathan
 Test Date:2023-05-15

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.444
 Humidity:65.0%
 Test Distance:2.554m [K=1.0000]
 Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:347.02V I:0.9069A P:308.99W PF:0.9818 Freq:60.00Hz Lamp Flux:45095.2x1 lm		
NAME: Roadway Luminaires	TYPE: LOC-SPAL-MW(180/200/240)E320H30KD-27ZLVkg	
SPEC.: 320.0W 42000 lm	DIM.: L=0.526,W=0.376	SERIAL No.: N/A
MFR.: LED One Corporation	SUR.: 0.16*0.33	Shielding Angle: N/A

Table--1

UNIT: x10cd

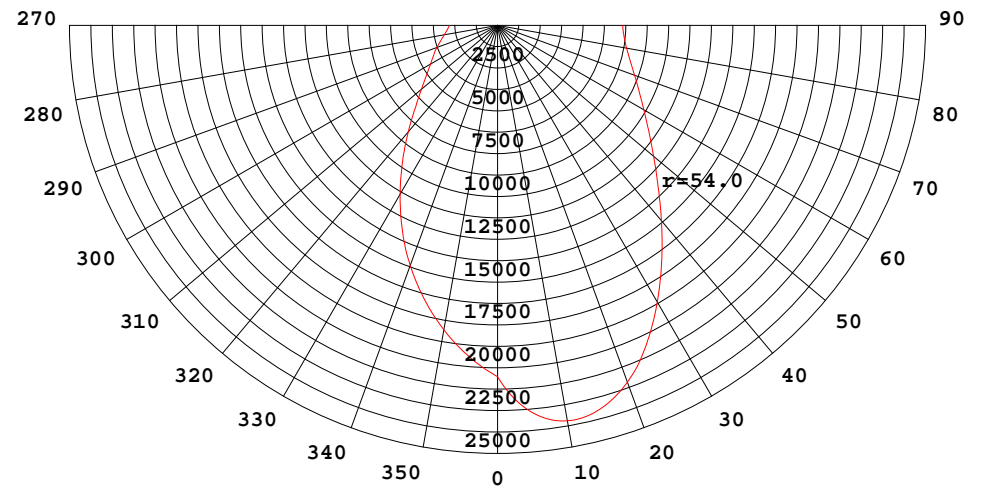
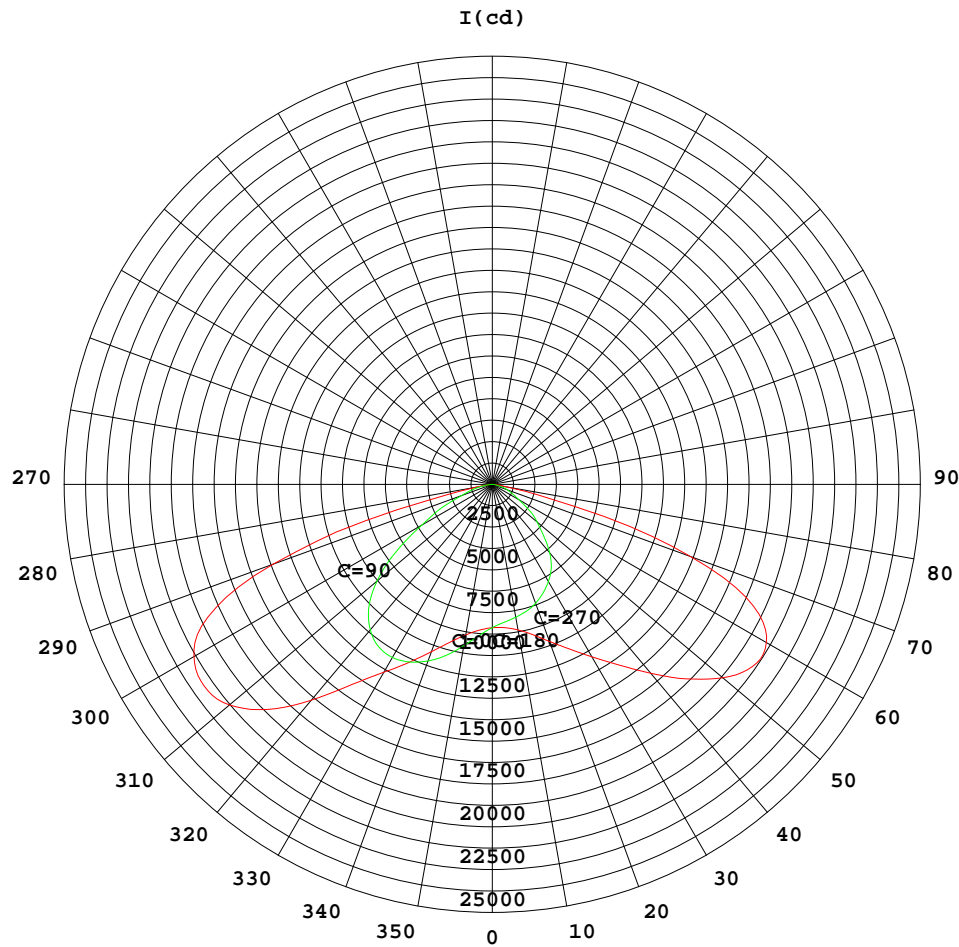
C(DEG) γ (DEG)	0	22.5	45	67.5	90	112.5	135	157.5	180	202.5	225	247.5	270	292.5	315	337.5			
0	837	837	837	837	837	837	837	837	837	837	837	837	837	837	837	837			
5	854	868	879	885	886	881	870	856	840	826	815	809	808	813	824	838			
10	892	923	946	956	956	947	927	898	863	833	808	792	788	801	827	858			
15	954	1002	1033	1037	1033	1024	1004	963	908	859	812	777	767	793	843	899			
20	1039	1105	1131	1112	1097	1096	1095	1050	975	904	826	759	739	783	867	957			
25	1145	1227	1232	1174	1144	1158	1189	1158	1060	961	841	733	701	765	893	1029			
30	1266	1366	1334	1221	1168	1205	1286	1283	1162	1028	850	700	656	739	919	1115			
35	1425	1537	1431	1244	1158	1230	1377	1427	1287	1094	843	657	600	701	931	1211			
40	1644	1739	1494	1221	1109	1211	1441	1603	1440	1149	812	595	521	643	916	1301			
45	1859	1943	1496	1145	1020	1133	1451	1806	1606	1183	752	504	424	569	862	1374			
50	2004	2091	1433	1021	881	1008	1397	1983	1756	1184	661	409	342	476	774	1411			
55	2054	2144	1291	841	688	833	1273	2077	1854	1153	544	329	264	376	652	1397			
60	2012	2024	1096	616	477	616	1103	2010	1848	1060	413	244	179	276	504	1261			
65	1833	1716	833	417	329	415	848	1737	1683	850	289	151	131	178	368	990			
70	1361	1210	519	261	190	255	512	1256	1233	510	135	79.8	93.9	80.6	182	625			
75	581	513	238	140	116	136	234	521	498	215	50.2	40.4	58.7	40.4	59.3	285			
80	91.1	142	95.7	60.8	51.4	54.7	99.1	128	83.8	85.2	22.8	16.1	14.8	16.8	29.0	91.0			
85	20.6	50.0	15.4	7.31	6.58	6.04	13.1	40.9	20.8	13.4	3.39	0.38	0.25	0.40	5.61	39.5			
90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
100	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
105	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
110	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
115	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
120	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
125	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
130	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
135	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
140	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
145	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
150	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
155	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
160	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
165	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
170	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
175	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
180	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:Jonathan
 Test Date:2023-05-15

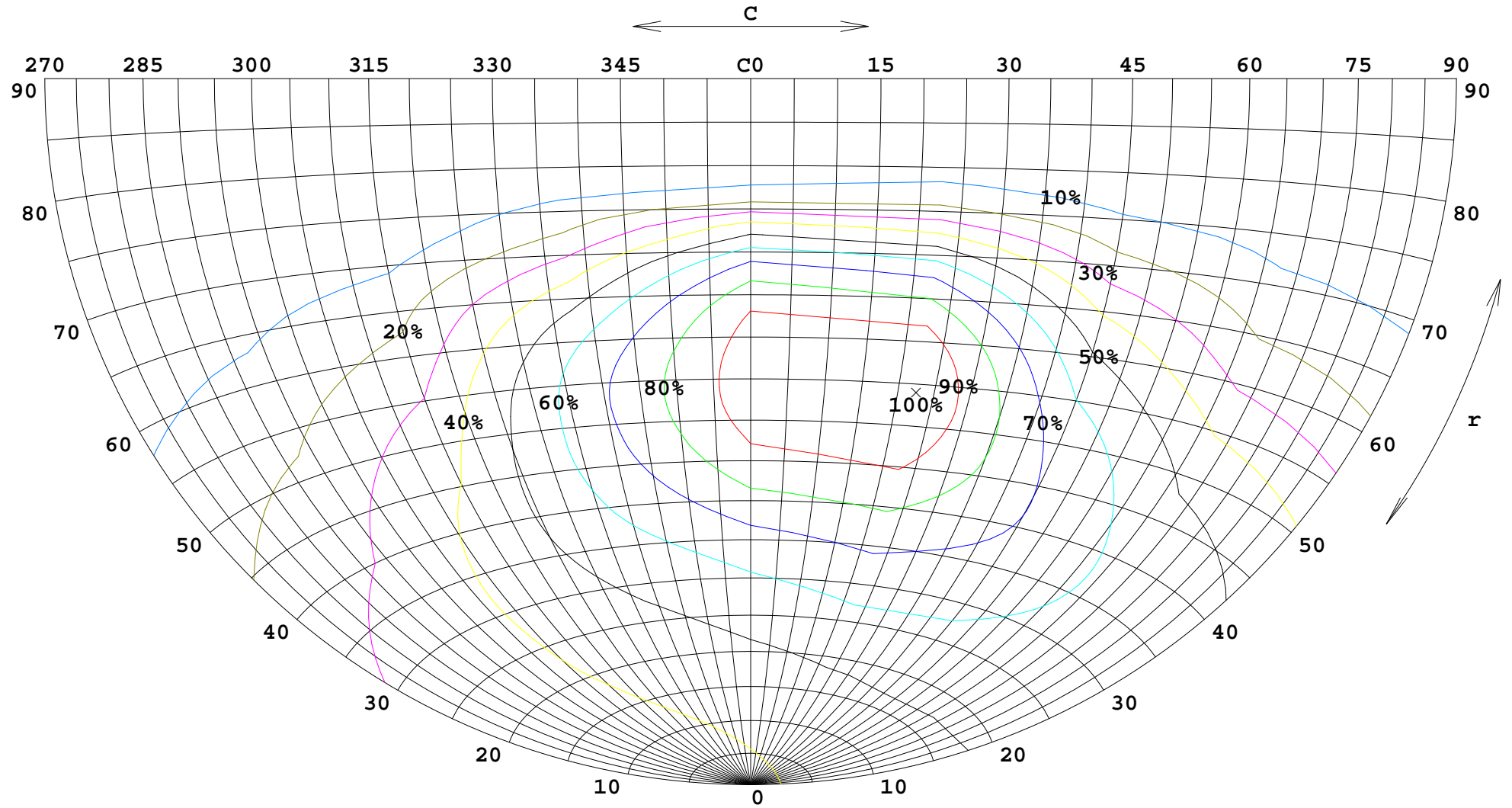
γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.444
 Humidity:65.0%
 Test Distance:2.554m [K=1.0000]
 Remarks:

FLUX DATA:

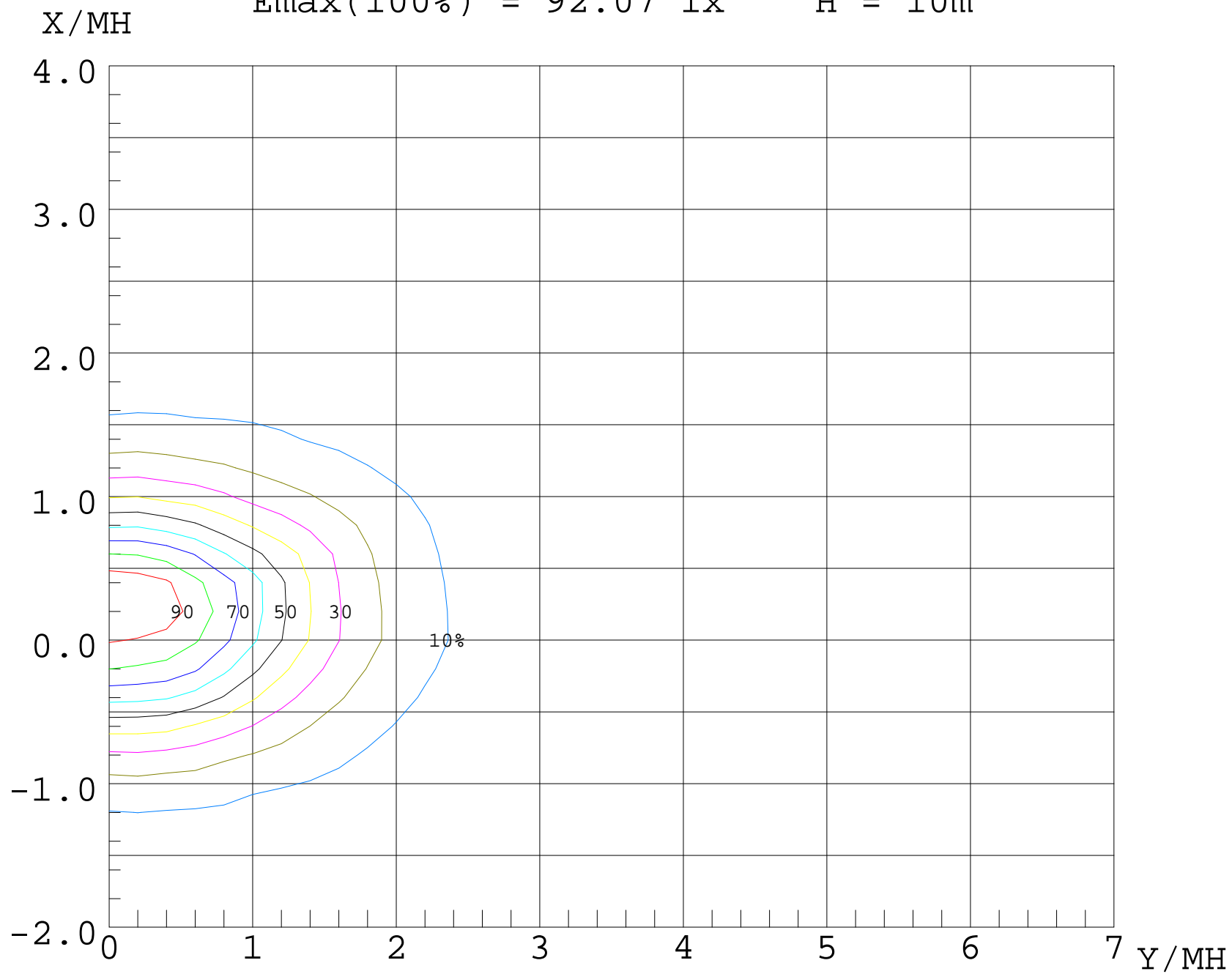
LOR: 100.0 %
 STREET DOWN: 27680 lm
 STREET UP: 0 lm
 HOUSE DOWN: 17415 lm
 HOUSE UP: 0 lm



$$I_{\max}(100\%) = 21454 \text{ cd}$$



$E_{\max}(100\%) = 92.07 \text{ lx}$ $H = 10\text{m}$



UF (%)

80

70

60

50

40

30

20

10

0

-2

-1

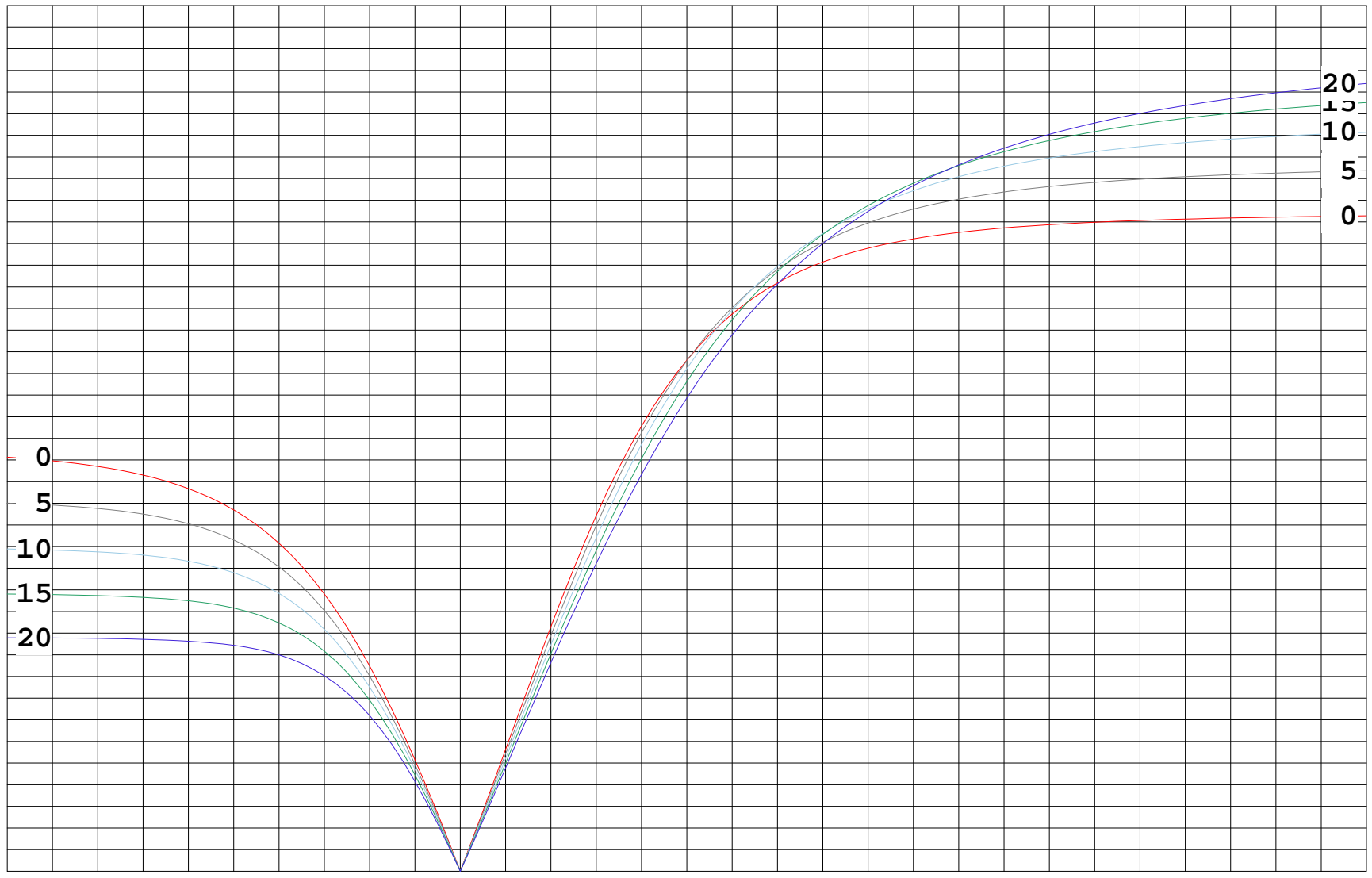
0

1

2

3

4 X/MH



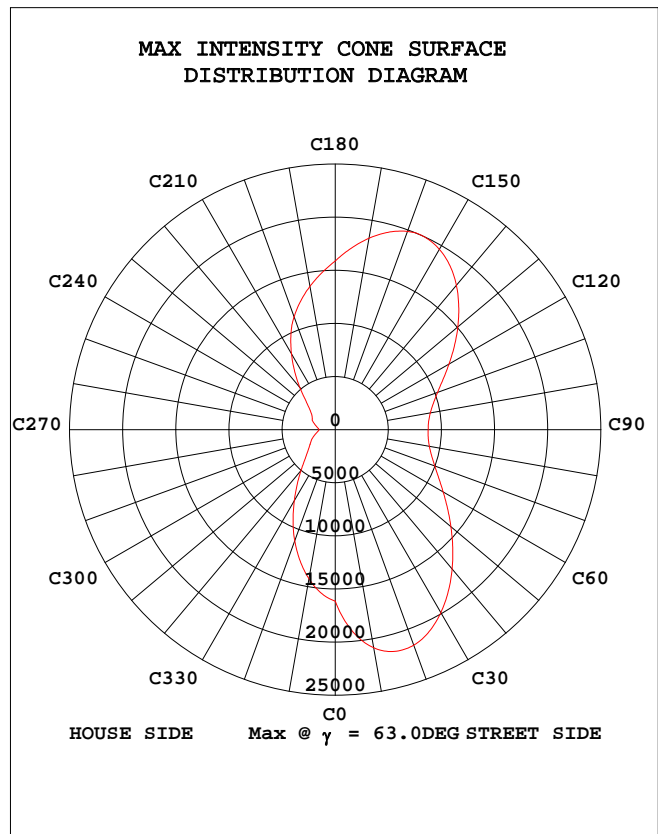
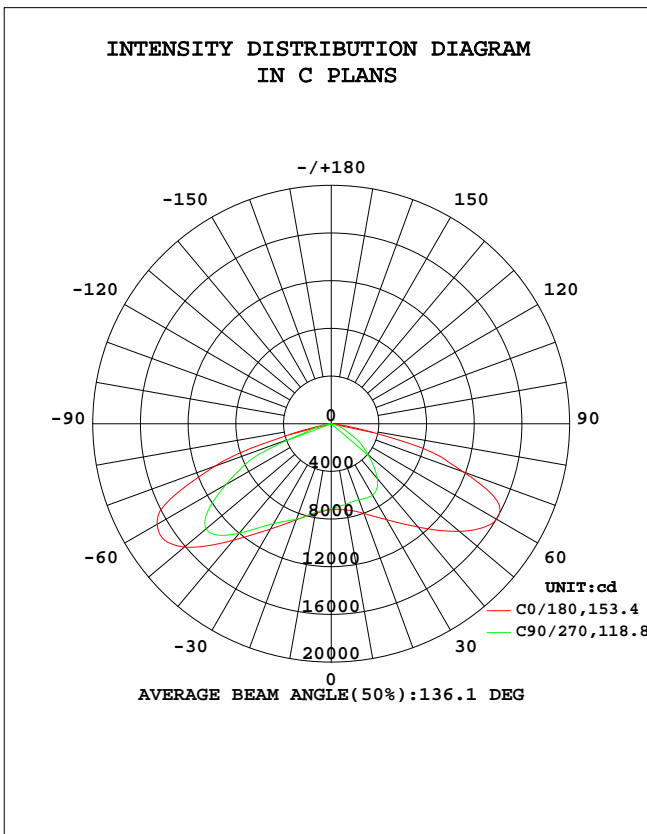
20
15
10
5
0

0
5
10
15
20

STREETLIGHT PHOTOMETRIC TEST REPORT

Test:U:347.07V I:0.9088A P:308.91W PF:0.9794 Freq:60.00Hz Lamp Flux:46104.9x1 lm		
NAME: Roadway Luminaires	TYPE: LOC-SPAL-MW(180/200/240/320)30KD-T3LV	OVERSIZE: 0.0000
SPEC.: 320.0W 42000lm	DIM.: L=0.526,W=0.376	SERIAL No.: N/A
MFR.: LED One Corporation	SUR.: 0.16*0.33	Shielding Angle: N/A

DATA OF LAMP		PHOTOMETRIC DATA Eff: 149.25 lm/W			
MODEL	LOC-SPAL-MW(180/200/240/320)30KD-T3LV	Imax(cd)	21342	η street_up(%)	0.0
NOMINAL POWER(W)	320.0	LOR(%)	100.0	η street_down(%)	63.8
RATED VOLTAGE(V)	347	TOTAL FLUX(lm)	46105	η house_up(%)	0.0
NOMINAL FLUX(lm)	46104.9	MAXIMUM @(C, γ)	23,63.0	η house_down(%)	36.2
LAMPS INSIDE	1	η up(%)	0.0	76 FLASHAREA(m2)	0.00100
TEST VOLTAGE(V)	347	η down(%)	100.0	SLI	21.115

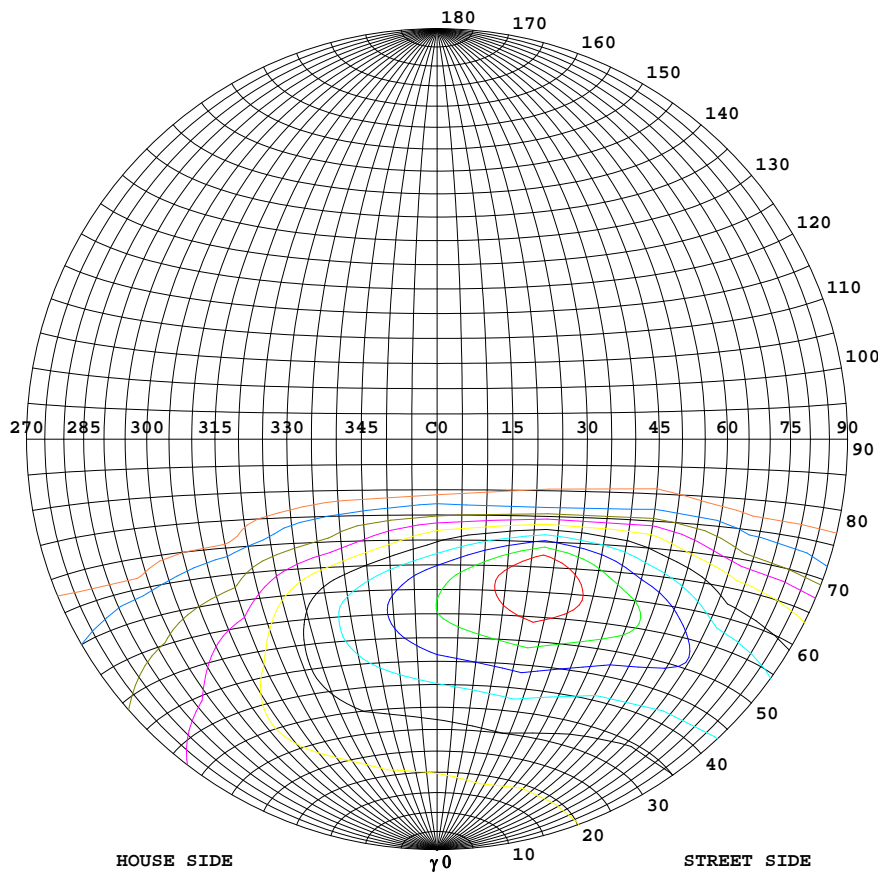


C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: Jonathan
 Test Date: 2023-05-16

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-R5000_V2 SYSTEM V2.00.444
 Humidity: 65.0%
 Test Distance: 2.554m [K=1.0000]
 Remarks:

STREETLIGHT ISOCANDELA DIAGRAM

Test:U:347.07V I:0.9088A P:308.91W PF:0.9794 Freq:60.00Hz Lamp Flux:46104.9x1 lm		
NAME: Roadway Luminaires	TYPE: LOC-SPAL-MW(180/200/240)VERTICAL-2731W	
SPEC.: 320.0W 42000lm	DIM.: L=0.526,W=0.376	SERIAL No.: N/A
MFR.: LED One Corporation	SUR.: 0.16*0.33	Shielding Angle: N/A



Classification:

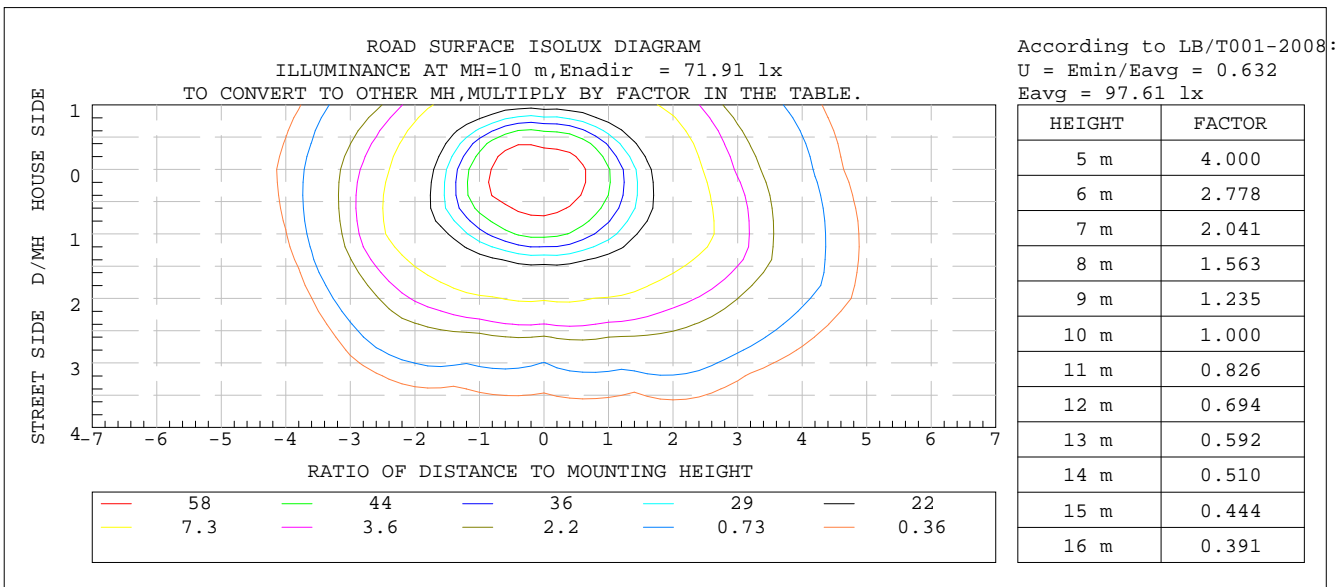
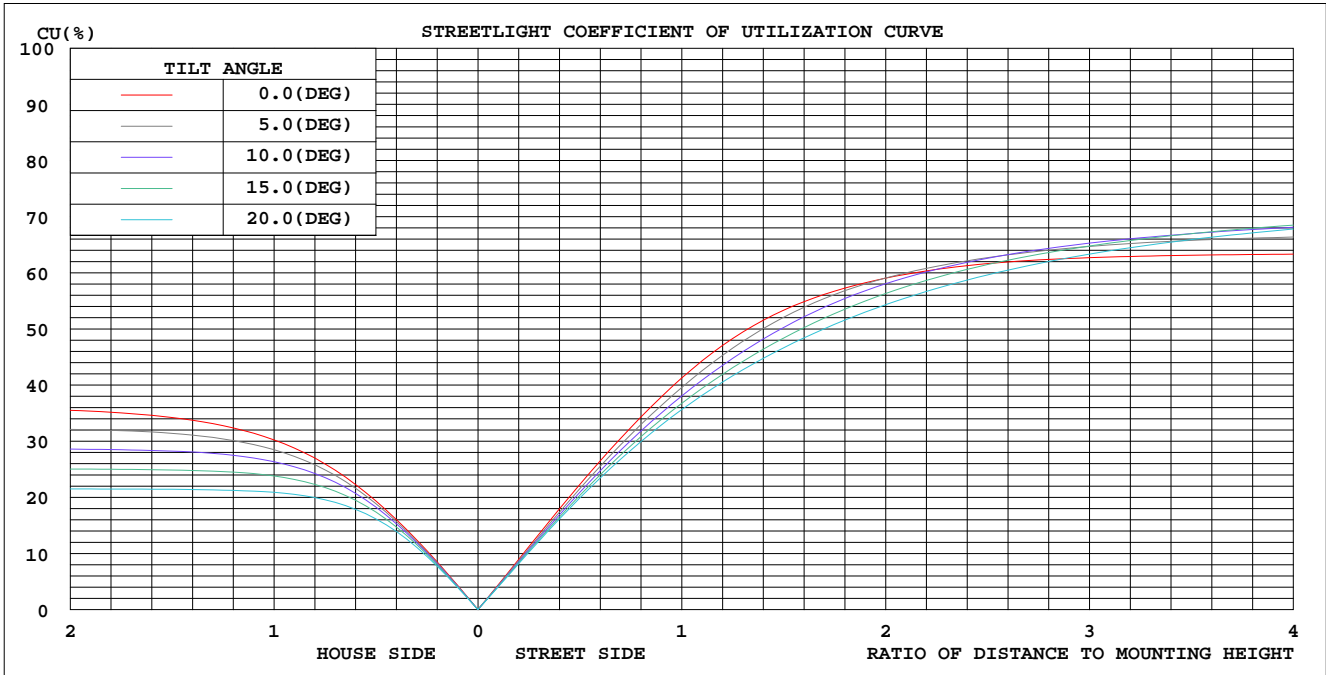
IES:Type III - Short
 CIE:Average - Intermediate
 IES:Full cut-off
 CIE:Semi-cut-off
 Max.At80:67.33cd/klm
 Max.At90:0cd/klm
 Max.80-90:67.33cd/klm
 NRB 5101:Semi limited[21.4%]

ISOCANDELA DIAGRAM	
UNIT	cd
Imax=100%	21342
90%	19208
80%	17073
70%	14939
60%	12805
50%	10671
40%	8537
30%	6403
20%	4268
10%	2134
5%	1067

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:Jonathan
 Test Date:2023-05-16

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.444
 Humidity:65.0%
 Test Distance:2.554m [K=1.0000]
 Remarks:

COEFFICIENT OF UTILIZATION CURVE
AND ISOLUX DIAGRAM



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: Jonathan
Test Date: 2023-05-16

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System: EVERFINE GO-R5000_V2 SYSTEM V2.00.444
Humidity: 65.0%
Test Distance: 2.554m [K=1.0000]
Remarks:

ZONAL FLUX DIAGRAM

Test:U:347.07V I:0.9088A P:308.91W PF:0.9794 Freq:60.00Hz Lamp Flux:46104.9x1 lm		
NAME: Roadway Luminaires	TYPE: LOC-SPAL-MW(180/200/240)E27H130KD-27W14g	
SPEC.: 320.0W 42000lm	DIM.: L=0.526,W=0.376	SERIAL No.: N/A
MFR.: LED One Corporation	SUR.: 0.16*0.33	Shielding Angle: N/A

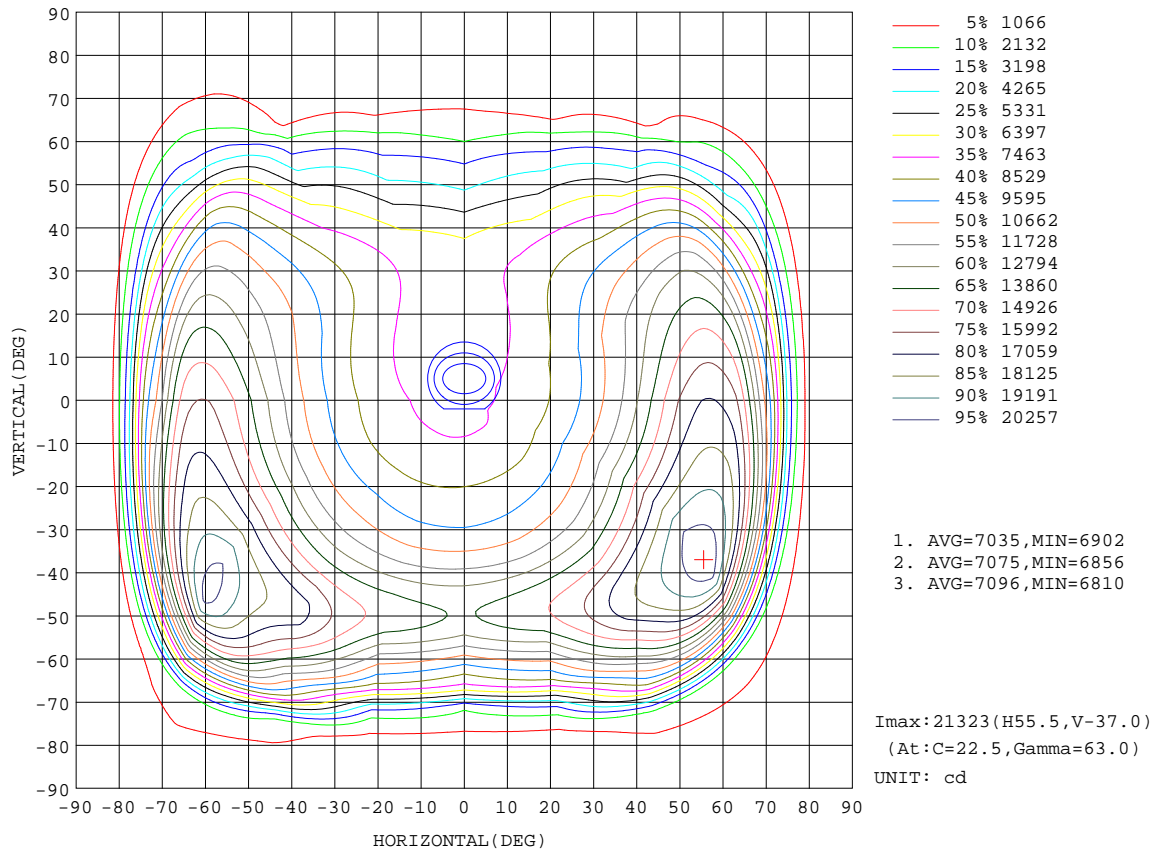
γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	λlamp
10	763.3	762.9	756.7	746.6	735.7	701.8	687.5	730.2	0- 10	693.4	693.4	1.5
20	857.4	864.8	852.2	826.7	801.0	728.8	678.7	780.2	10- 20	2173	2867	6.22
30	1020	1021	967.2	969.1	929.9	804.3	691.3	871.6	20- 30	3957	6824	14.8
40	1275	1253	1198	1167	1131	835.9	601.8	912.2	30- 40	6170	12994	28.2
50	1609	1598	1371	1479	1403	742.1	401.3	810.3	40- 50	8729	21723	47.1
60	1687	1708	1021	1728	1601	496.9	213.2	524.1	50- 60	10685	32408	70.3
70	1037	1067	340.6	1213	1175	144.1	89.11	137.5	60- 70	9587	41995	91.1
80	83.16	121.0	58.80	130.8	205.1	20.28	10.64	15.14	70- 80	3833	45828	99.4
90	0	0	0	0	0	0	0	0	80- 90	277.1	46105	100
100	0	0	0	0	0	0	0	0	90-100	0	46105	100
110	0	0	0	0	0	0	0	0	100-110	0	46105	100
120	0	0	0	0	0	0	0	0	110-120	0	46105	100
130	0	0	0	0	0	0	0	0	120-130	0	46105	100
140	0	0	0	0	0	0	0	0	130-140	0	46105	100
150	0	0	0	0	0	0	0	0	140-150	0	46105	100
160	0	0	0	0	0	0	0	0	150-160	0	46105	100
170	0	0	0	0	0	0	0	0	160-170	0	46105	100
180	0	0	0	0	0	0	0	0	170-180	0	46105	100
DEG	LUMINOUS INTENSITY:×10cd									UNIT:lm		

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:Jonathan
 Test Date:2023-05-16

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.444
 Humidity:65.0%
 Test Distance:2.554m [K=1.0000]
 Remarks:

ISOCANDELA DIAGRAM

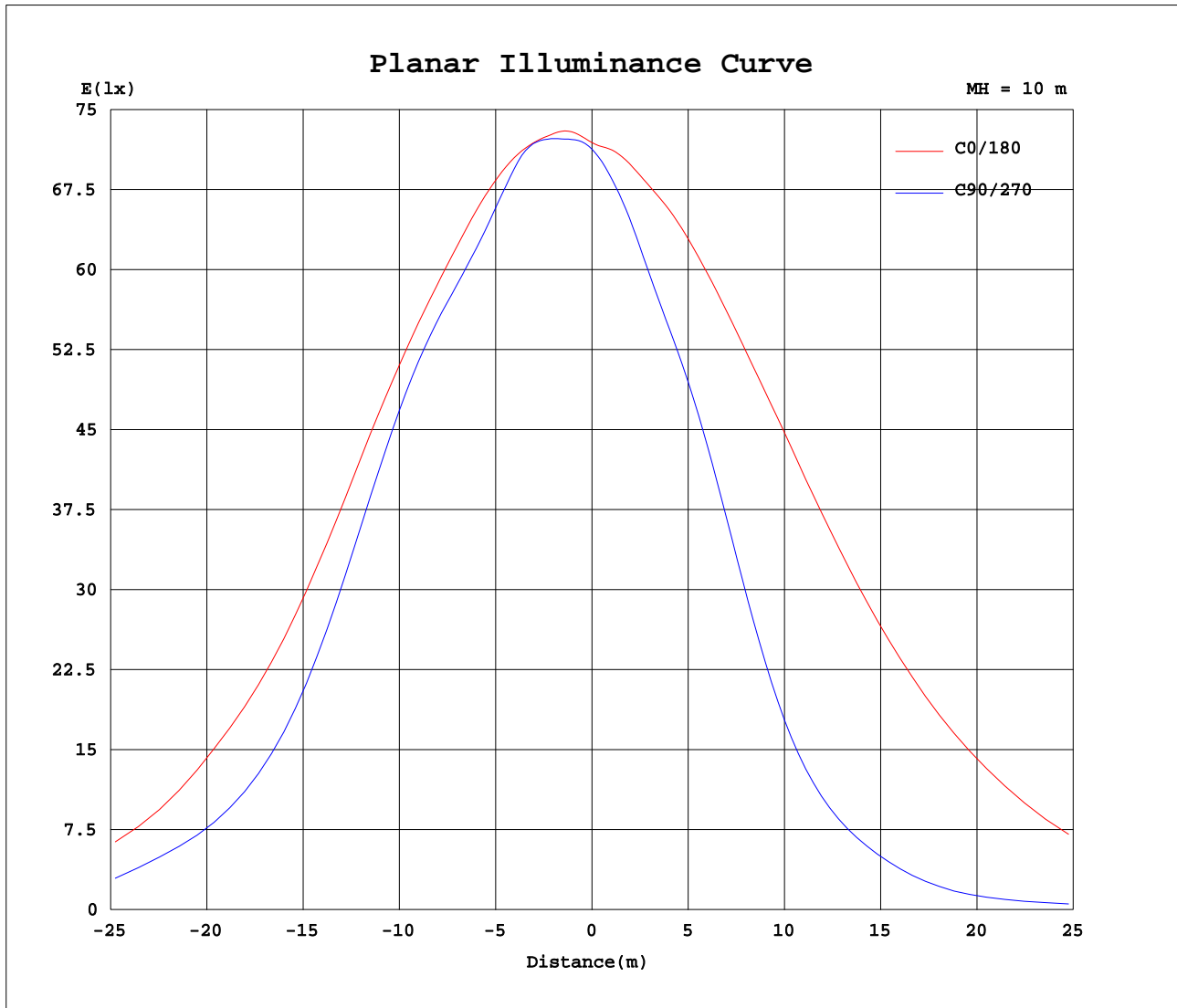
Test:U:347.07V I:0.9088A P:308.91W PF:0.9794 Freq:60.00Hz Lamp Flux:46104.9x1 lm		
NAME: Roadway Luminaires	TYPE: LOC-SPAL-MW(180/200/240) 2700K-2700lm	OVERSIZE: 0.00
SPEC.: 320.0W 42000lm	DIM.: L=0.526,W=0.376	SERIAL No.: N/A
MFR.: LED One Corporation	SUR.: 0.16*0.33	Shielding Angle: N/A



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: Jonathan
Test Date: 2023-05-16

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System: EVERFINE GO-R5000_V2 SYSTEM V2.00.444
Humidity: 65.0%
Test Distance: 2.554m [K=1.0000]
Remarks:

Planar Illuminance Curve



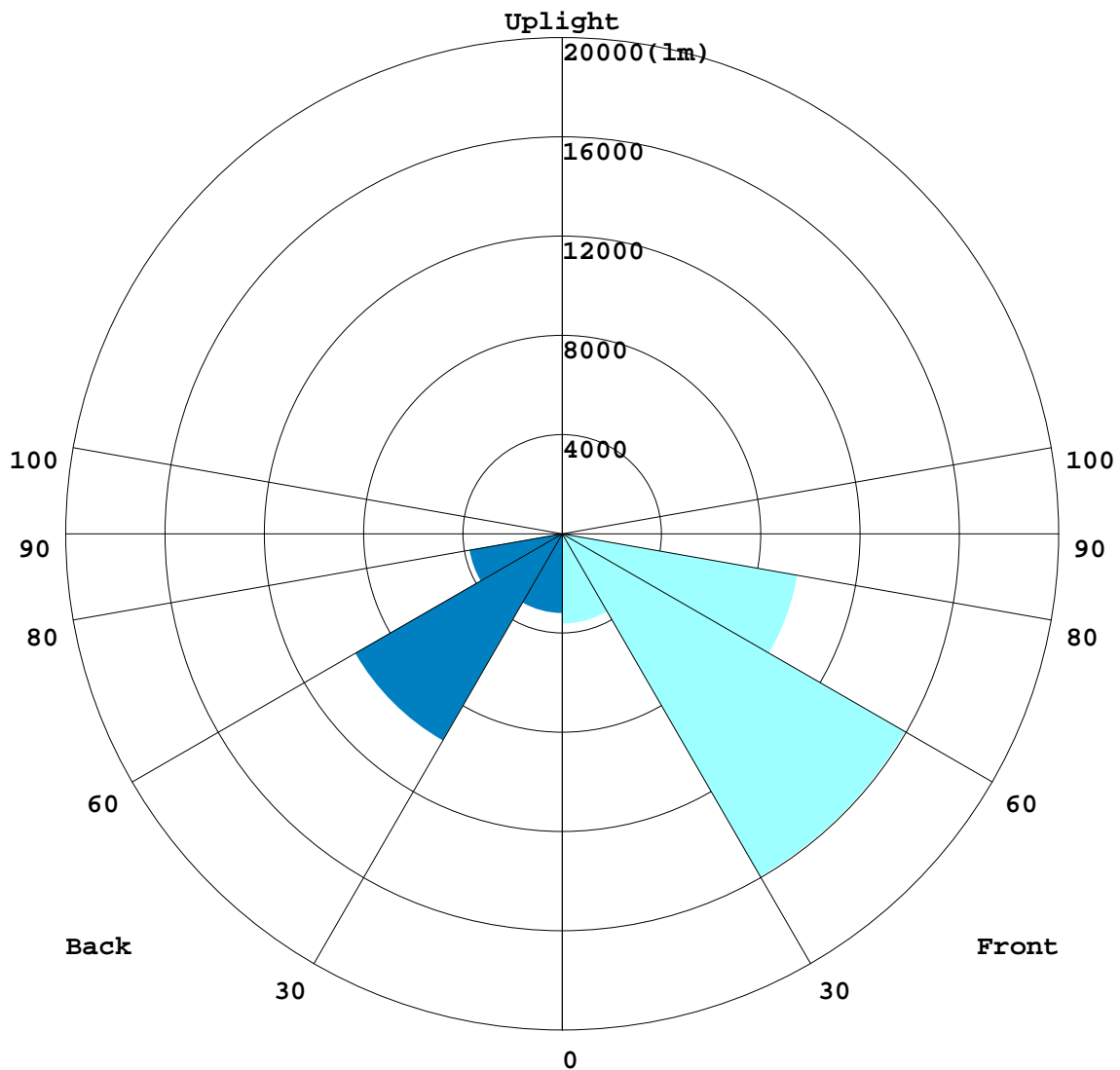
C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: Jonathan
 Test Date: 2023-05-16

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-R5000_V2 SYSTEM V2.00.444
 Humidity: 65.0%
 Test Distance: 2.554m [K=1.0000]
 Remarks:

LCS REPORT

Test:U:347.07V I:0.9088A P:308.91W PF:0.9794 Freq:60.00Hz Lamp Flux:46104.9x1 lm		
NAME: Roadway Luminaires	TYPE: LOC-SPAL-MW(180/200/240)E32H130KD-27311g	
SPEC.: 320.0W 42000lm	DIM.: L=0.526,W=0.376	SERIAL No.: N/A
MFR.: LED One Corporation	SUR.: 0.16*0.33	Shielding Angle: N/A

LUMINAIRE CLASSIFICATION SYSTEM(LCS) GRAPH



C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:Jonathan
 Test Date:2023-05-16

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.444
 Humidity:65.0%
 Test Distance:2.554m [K=1.0000]
 Remarks:

BUG REPORT

Test:U:347.07V I:0.9088A P:308.91W PF:0.9794 Freq:60.00Hz Lamp Flux:46104.9x1 lm		
NAME: Roadway Luminaires	TYPE: LOC-SPAL-MW(180/200/240)E27H130KD-27311g	
SPEC.: 320.0W 42000lm	DIM.: L=0.526,W=0.376	SERIAL No.: N/A
MFR.: LED One Corporation	SUR.: 0.16*0.33	Shielding Angle: N/A

IESNA Luminaire Flux Distribution Table:

Zone	Lumens	Luminaire %
FL - Front-Low(0-30)	3622.1	7.9
FM - Front-Medium(30-60)	15955	34.6
FH - Front-High(60-80)	9628.5	20.9
FVH - Front-Very High(80-90)	194.57	0.4
Total Forward Light	29400	63.8

BL - Back-Low(0-30)	3201.6	6.9
BM - Back-Medium(30-60)	9629.5	20.9
BH - Back-High(60-80)	3791.4	8.2
BVH - Back-Very High(80-90)	82.559	0.2
Total Back Light	16705	36.2

UL - Uplight-Low(90-100)	0	0.0
UH - Uplight-High(100-180)	0	0.0
Total Up Light	0	0.0

BUG(Back,Up,Glare) Rating	B5-U0-G4
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Zone	Downward Lumens	Upward Lumens	Total Lumens
House Side	16705	0	16705
Street Side	29400	0	29400

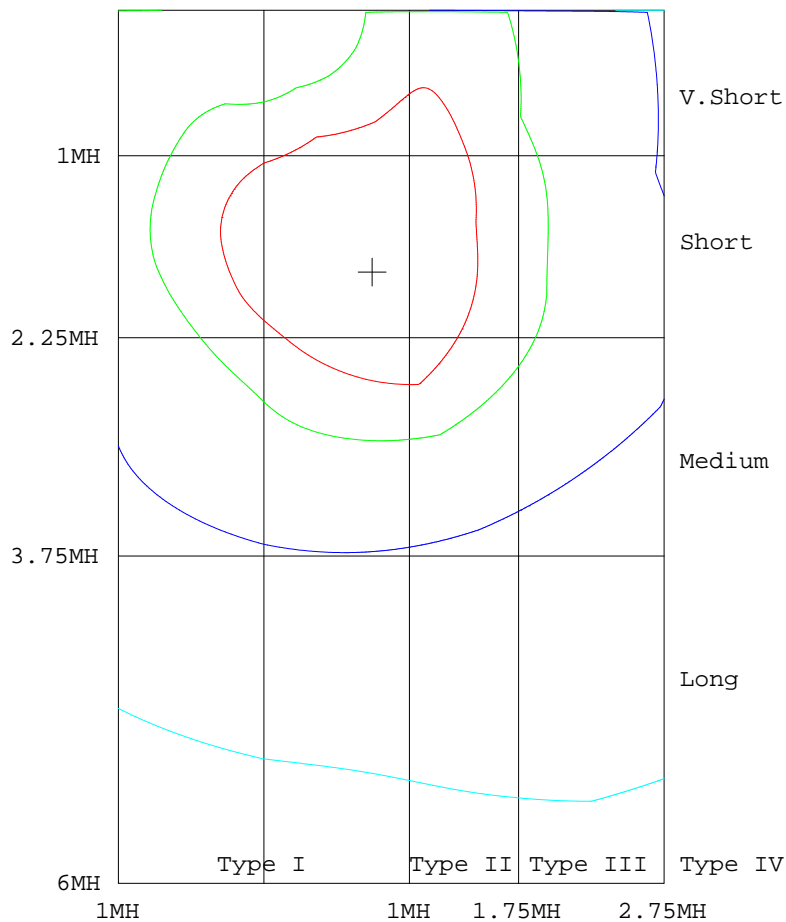
C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Jonathan
Test Date:2023-05-16

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.444
Humidity:65.0%
Test Distance:2.554m [K=1.0000]
Remarks:

ROAD ISOCANDELA REPORT

Test:U:347.07V I:0.9088A P:308.91W PF:0.9794 Freq:60.00Hz		
Lamp Flux:46104.9x1 lm		
NAME: Roadway Luminaires	TYPE: LOC-SPAL-MW(180/200/240)E32H130KD-27311g	
SPEC.: 320.0W 42000lm	DIM.: L=0.526,W=0.376	SERIAL No.: N/A
MFR.: LED One Corporation	SUR.: 0.16*0.33	Shielding Angle: N/A

ROAD SURFACE ISOCANDELA DIAGRAM



Pavement Road
 - 70% 14934 - 20% 4266.9 -2.5% 533.37
 - 50% 10667 - 5% 1066.7

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:Jonathan
 Test Date:2023-05-16

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.444
 Humidity:65.0%
 Test Distance:2.554m [K=1.0000]
 Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:347.07V I:0.9088A P:308.91W PF:0.9794 Freq:60.00Hz Lamp Flux:46104.9x1 lm		
NAME: Roadway Luminaires	TYPE: LOC-SPAL-MW(180/200/240)E320H30KD-2731Ag	
SPEC.: 320.0W 42000lm	DIM.: L=0.526,W=0.376	SERIAL No.: N/A
MFR.: LED One Corporation	SUR.: 0.16*0.33	Shielding Angle: N/A

Table--1

UNIT: x10cd

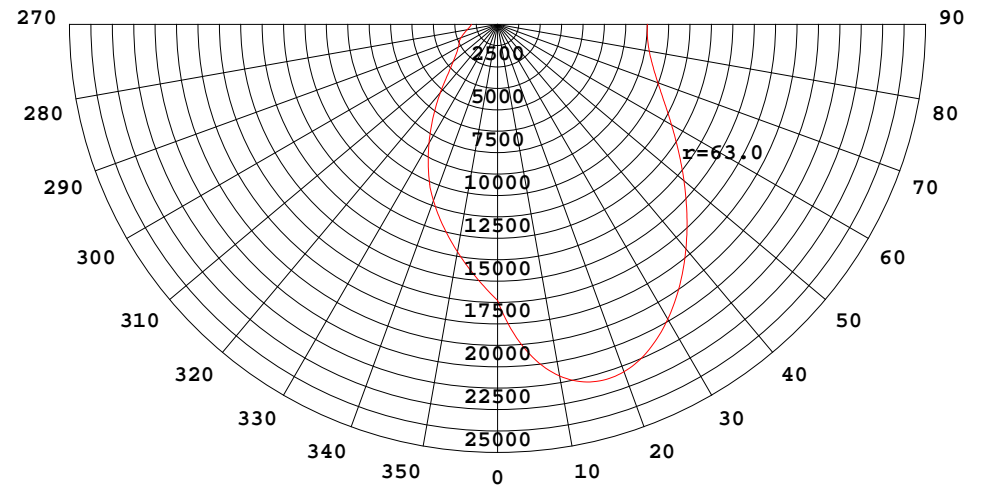
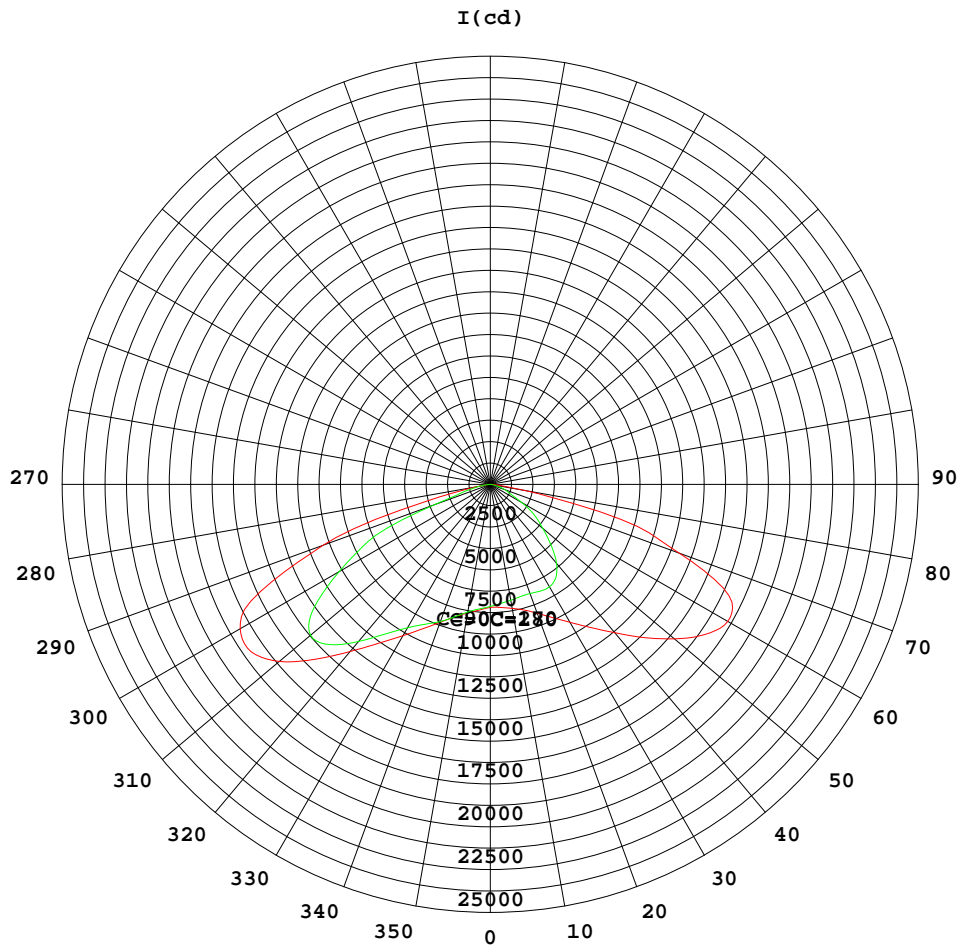
C(DEG) γ (DEG)	0	22.5	45	67.5	90	112.5	135	157.5	180	202.5	225	247.5	270	292.5	315	337.5			
0	719	719	713	712	713	715	718	721	719	719	713	712	713	715	718	721			
5	737	742	732	732	730	728	725	723	722	714	704	697	698	707	720	735			
10	763	774	763	761	757	751	747	740	736	719	702	687	688	704	730	757			
15	802	819	805	804	800	789	779	767	760	735	709	681	679	706	750	790			
20	857	882	865	862	852	841	827	808	801	766	729	685	679	718	780	838			
25	930	964	938	921	901	896	892	870	858	812	763	700	689	740	823	901			
30	1020	1067	1021	988	967	961	969	949	930	870	804	714	691	758	872	981			
35	1132	1197	1121	1082	1066	1049	1057	1047	1020	943	832	707	667	751	906	1070			
40	1275	1364	1253	1217	1198	1175	1167	1170	1131	1017	836	664	602	706	912	1156			
45	1444	1560	1413	1372	1324	1324	1307	1322	1265	1077	807	585	503	626	882	1231			
50	1609	1769	1598	1468	1371	1439	1479	1501	1403	1117	742	488	401	534	810	1279			
55	1705	1963	1744	1406	1258	1414	1668	1703	1529	1128	641	393	316	434	696	1287			
60	1687	2099	1708	1185	1021	1210	1728	1901	1601	1109	497	297	213	311	524	1194			
65	1483	2095	1436	936	786	975	1542	2056	1538	1007	331	182	127	170	345	878			
70	1037	1535	1067	525	341	616	1213	2047	1175	705	144	76.4	89.1	65.5	138	476			
75	397	530	496	170	144	205	761	1384	791	331	47.4	37.7	49.9	33.1	47.5	213			
80	83.2	113	121	64.0	58.8	77.0	131	310	205	158	20.3	13.1	10.6	10.5	15.1	54.2			
85	10.1	12.7	18.7	5.85	7.44	9.91	49.8	90.6	29.6	34.9	2.69	0.38	0.25	0.40	0.57	4.07			
90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
100	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
105	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
110	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
115	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
120	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
125	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
130	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
135	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
140	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
145	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
150	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
155	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
160	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
165	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
170	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
175	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
180	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:Jonathan
 Test Date:2023-05-16

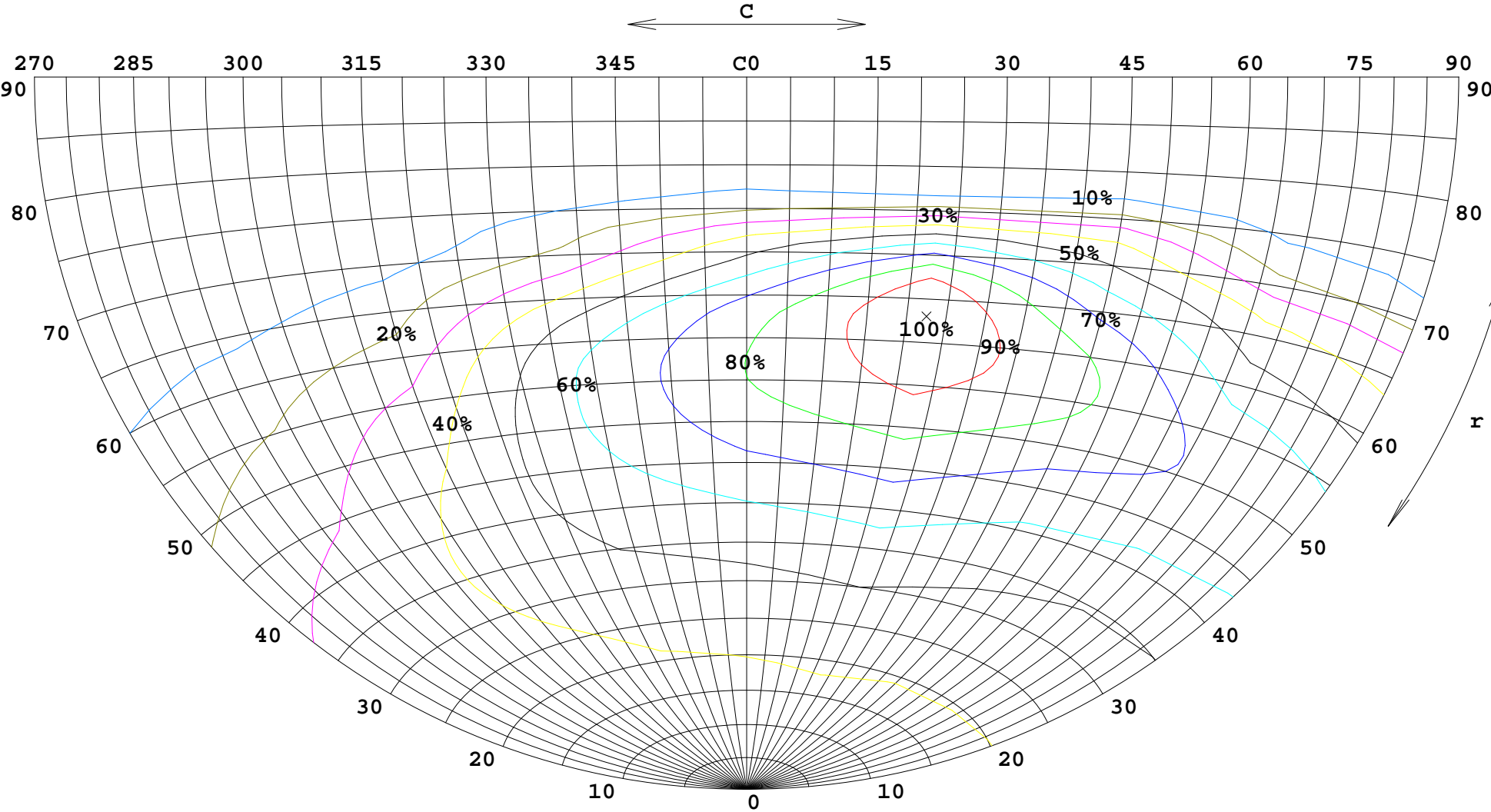
γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.444
 Humidity:65.0%
 Test Distance:2.554m [K=1.0000]
 Remarks:

FLUX DATA:

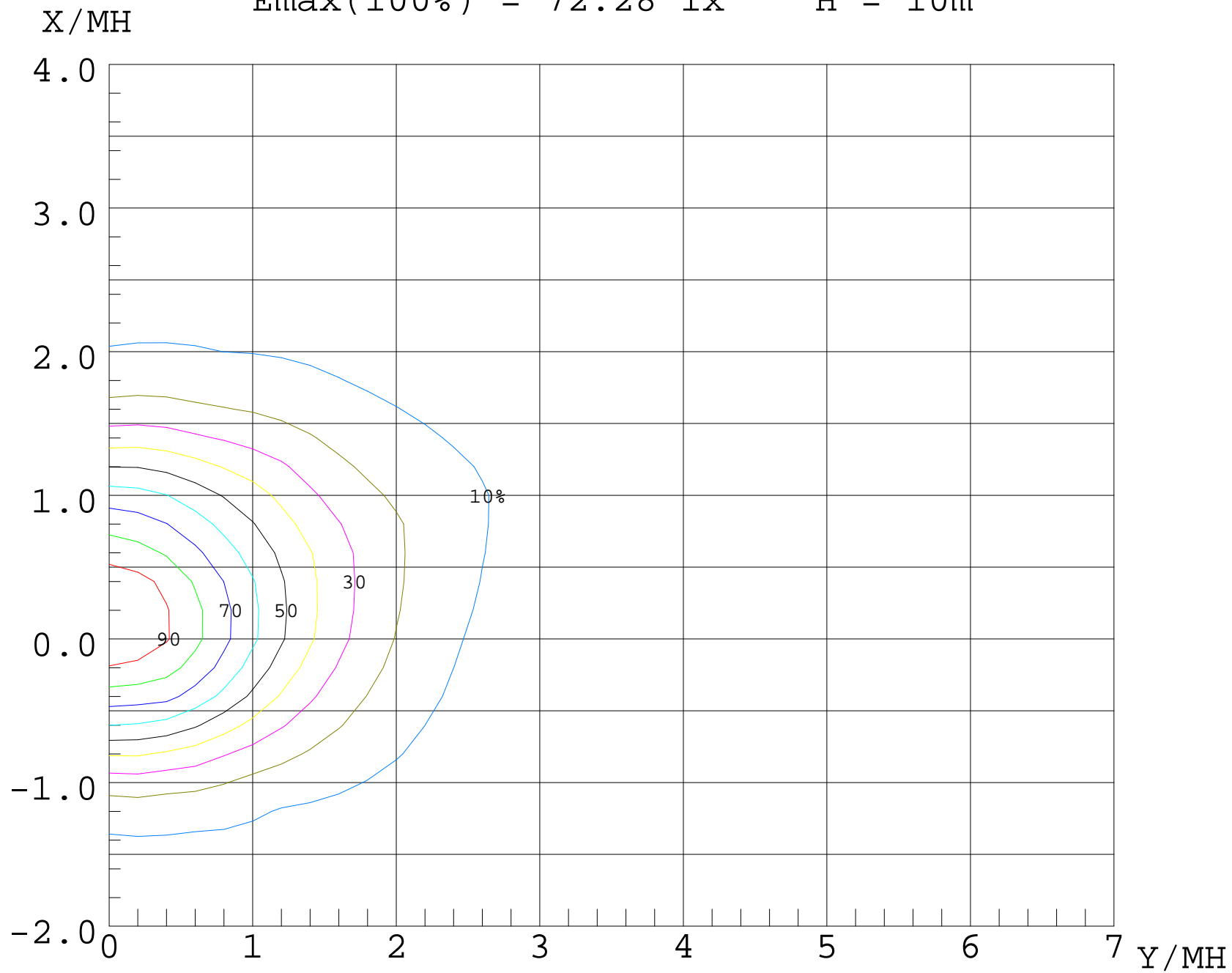
LOR: 100.0 %
STREET DOWN: 29400 lm
STREET UP: 0 lm
HOUSE DOWN: 16705 lm
HOUSE UP: 0 lm



$I_{max}(100\%) = 21342 \text{ cd}$



$E_{\max}(100\%) = 72.28 \text{ lx}$ $H = 10\text{m}$



UF (%)

80

70

60

50

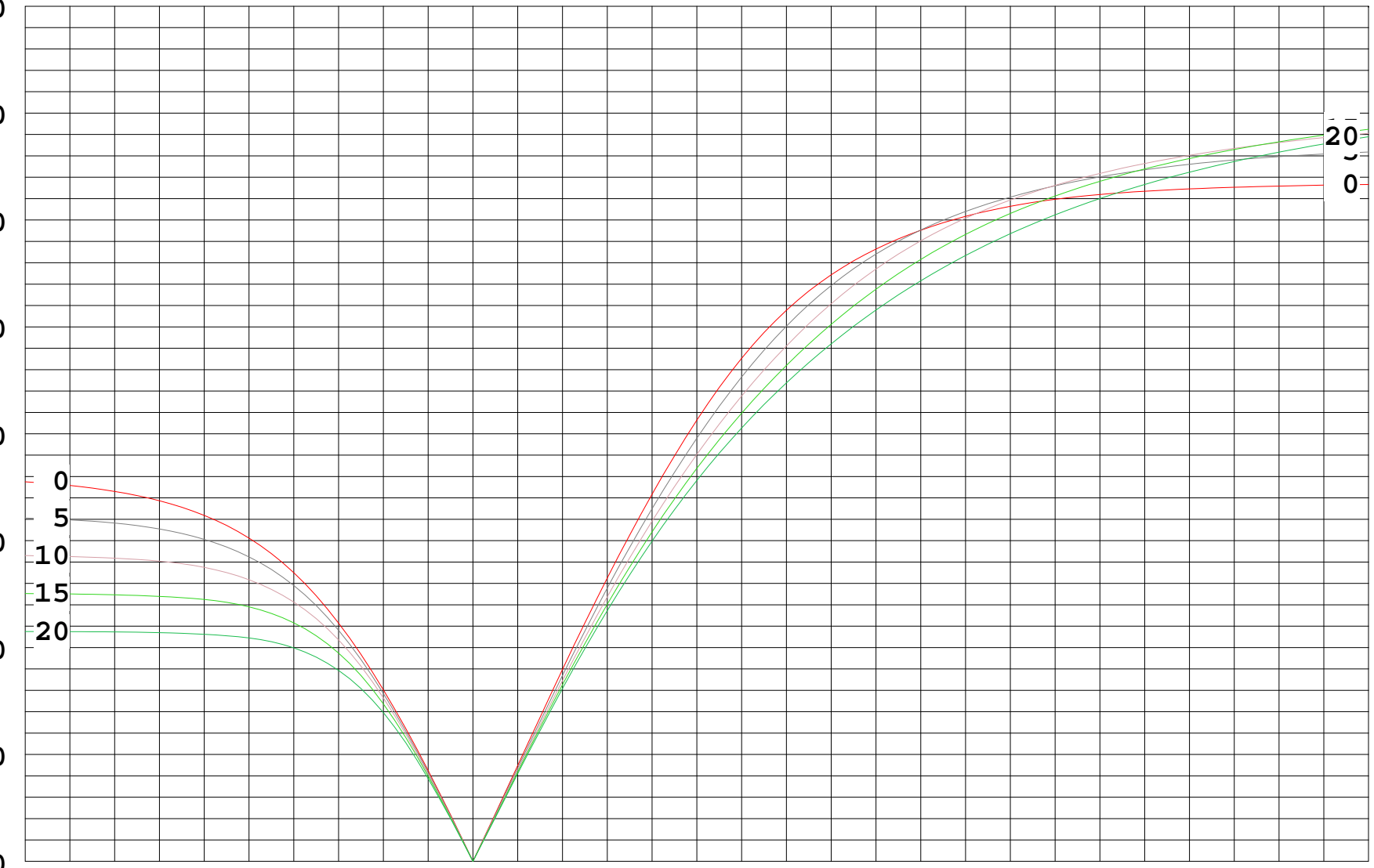
40

30

20

10

0



-2

-1

0

1

2

3

4 X/MH

0

5

10

15

20

20

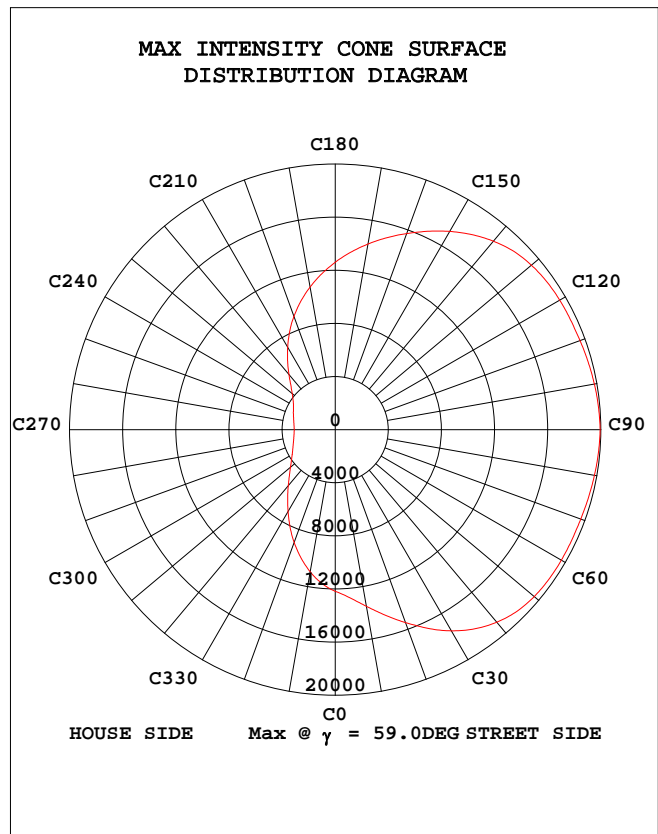
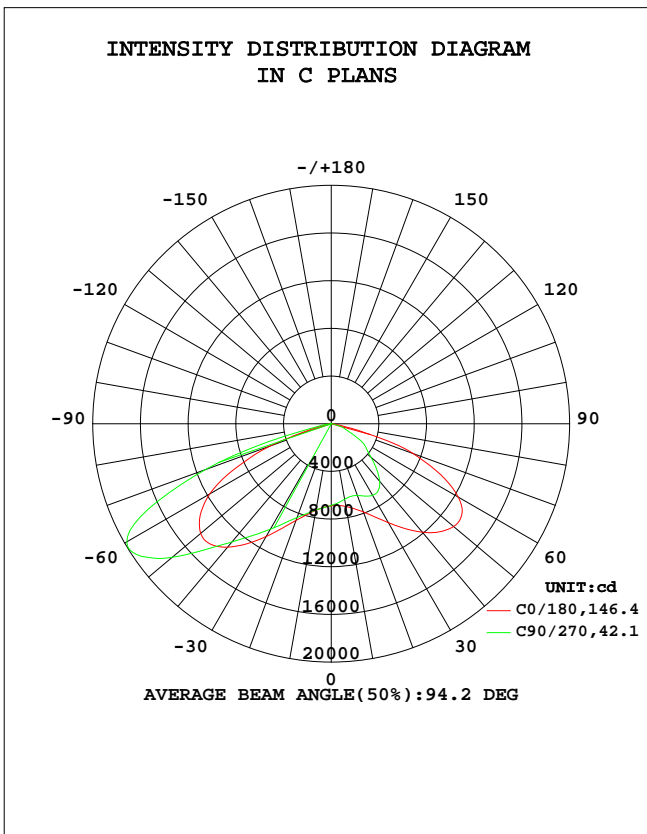
10

0

STREETLIGHT PHOTOMETRIC TEST REPORT

Test:U:347.05V I:0.9086A P:308.75W PF:0.9791 Freq:60.00Hz Lamp Flux:46052.7x1 lm		
NAME: Roadway Luminaires	TYPE: LOC-SPAL-MW(180/200/240/320)30KD-T4LV	
SPEC.: 320.0W 42000lm	DIM.: L=0.526,W=0.376	SERIAL No.: N/A
MFR.: LED One Corporation	SUR.: 0.16*0.33	Shielding Angle: N/A

DATA OF LAMP		PHOTOMETRIC DATA Eff: 149.16 lm/W			
MODEL	LOC-SPAL-MW(180/200/240/320)30KD-T4LV	I _{max} (cd)	19942	η street_up(%)	0.0
NOMINAL POWER(W)	320.0	LOR(%)	100.0	η street_down(%)	67.6
RATED VOLTAGE(V)	347	TOTAL FLUX(lm)	46053	η house_up(%)	0.0
NOMINAL FLUX(lm)	46052.7	MAXIMUM @(C,γ)	90,59.0	η house_down(%)	32.4
LAMPS INSIDE	1	η up(%)	0.0	76 FLASHAREA(m2)	0.00100
TEST VOLTAGE(V)	347	η down(%)	100.0	SLI	19.933

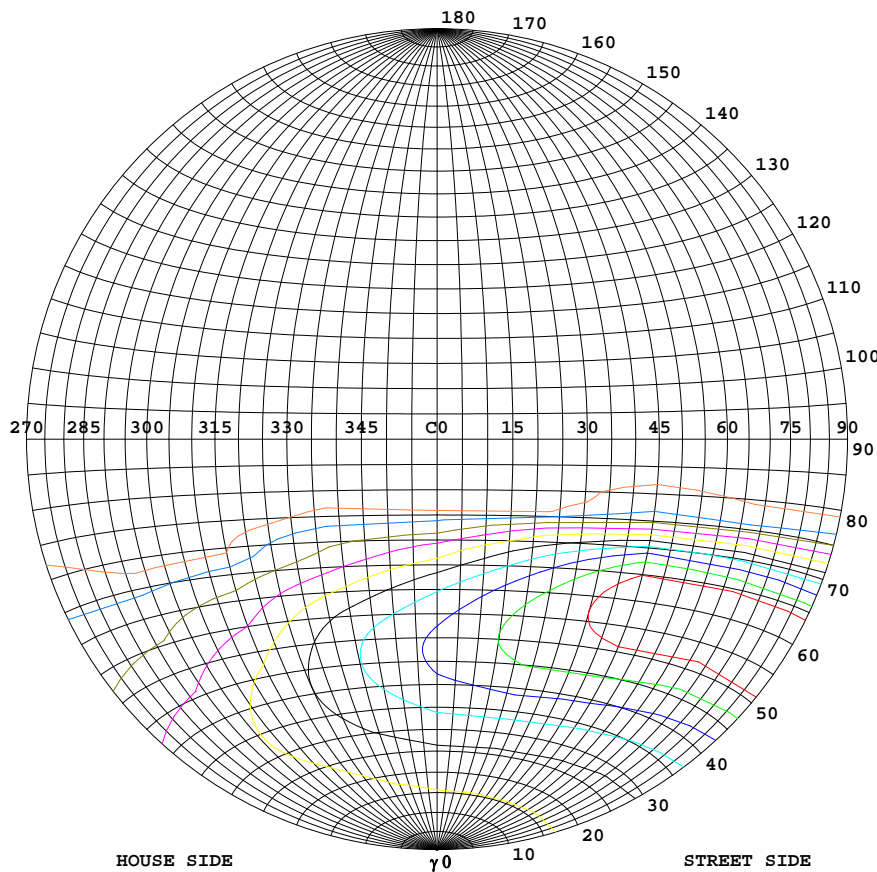


C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:Jonathan
 Test Date:2023-05-16

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.444
 Humidity:65.0%
 Test Distance:2.554m [K=1.0000]
 Remarks:

STREETLIGHT ISOCANDELA DIAGRAM

Test:U:347.05V I:0.9086A P:308.75W PF:0.9791 Freq:60.00Hz Lamp Flux:46052.7x1 lm		
NAME: Roadway Luminaires	TYPE: LOC-SPAL-MW(180/200/240)VERTICAL-27W	OVERSIGHT: 27W
SPEC.: 320.0W 42000lm	DIM.: L=0.526,W=0.376	SERIAL No.: N/A
MFR.: LED One Corporation	SUR.: 0.16*0.33	Shielding Angle: N/A



Classification:

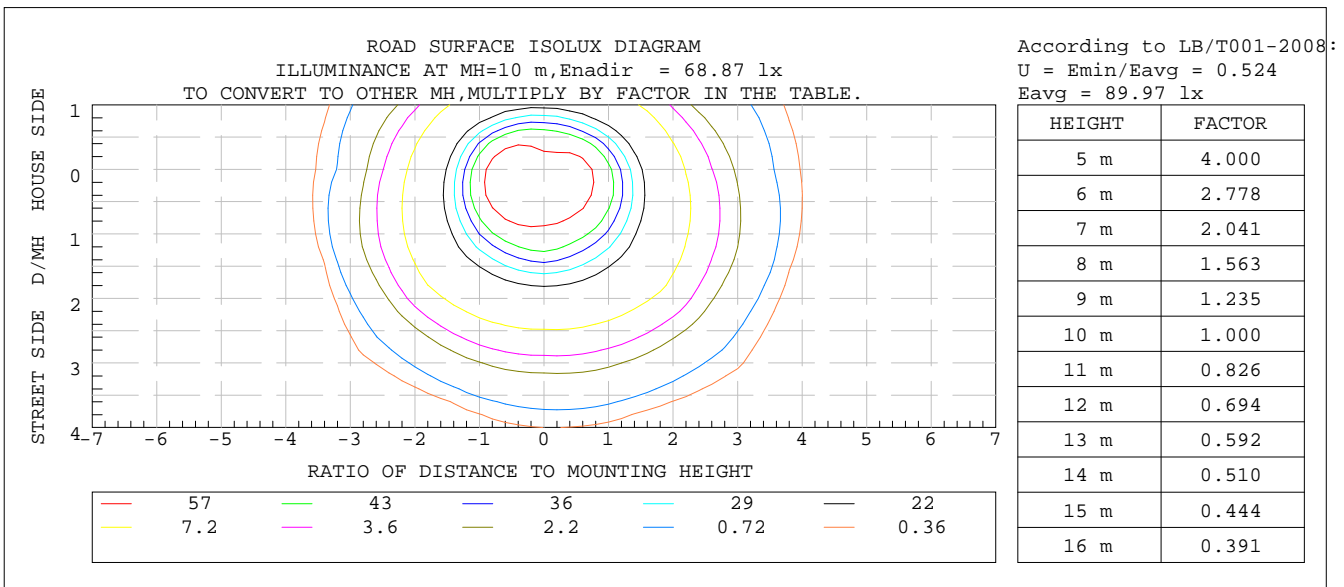
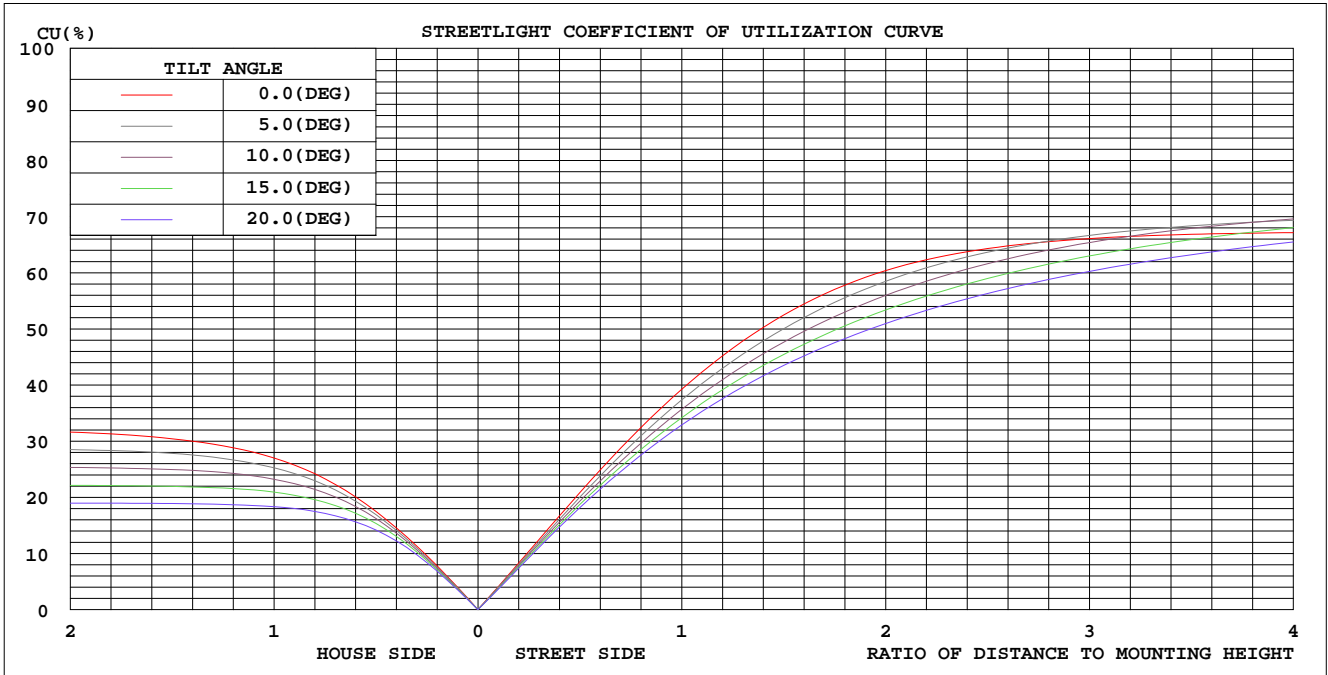
IES:Type IV - Very Short
 CIE:Broad - Short
 IES:Full cut-off
 CIE:Semi-cut-off
 Max.At80:32.88cd/klm
 Max.At90:0cd/klm
 Max.80-90:32.88cd/klm
 NRB 5101:Limited[5.1%]

ISOCANDELA DIAGRAM	
UNIT	cd
Imax=100%	19942
90%	17947
80%	15953
70%	13959
60%	11965
50%	9971
40%	7977
30%	5982
20%	3988
10%	1994
5%	997

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:Jonathan
 Test Date:2023-05-16

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.444
 Humidity:65.0%
 Test Distance:2.554m [K=1.0000]
 Remarks:

COEFFICIENT OF UTILIZATION CURVE
AND ISOLUX DIAGRAM



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: Jonathan
Test Date: 2023-05-16

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System: EVERFINE GO-R5000_V2 SYSTEM V2.00.444
Humidity: 65.0%
Test Distance: 2.554m [K=1.0000]
Remarks:

ZONAL FLUX DIAGRAM

Test:U:347.05V I:0.9086A P:308.75W PF:0.9791 Freq:60.00Hz Lamp Flux:46052.7x1 lm		
NAME: Roadway Luminaires	TYPE: LOC-SPAL-MW(180/200/240)E27H130KD-27W14g	
SPEC.: 320.0W 42000lm	DIM.: L=0.526,W=0.376	SERIAL No.: N/A
MFR.: LED One Corporation	SUR.: 0.16*0.33	Shielding Angle: N/A

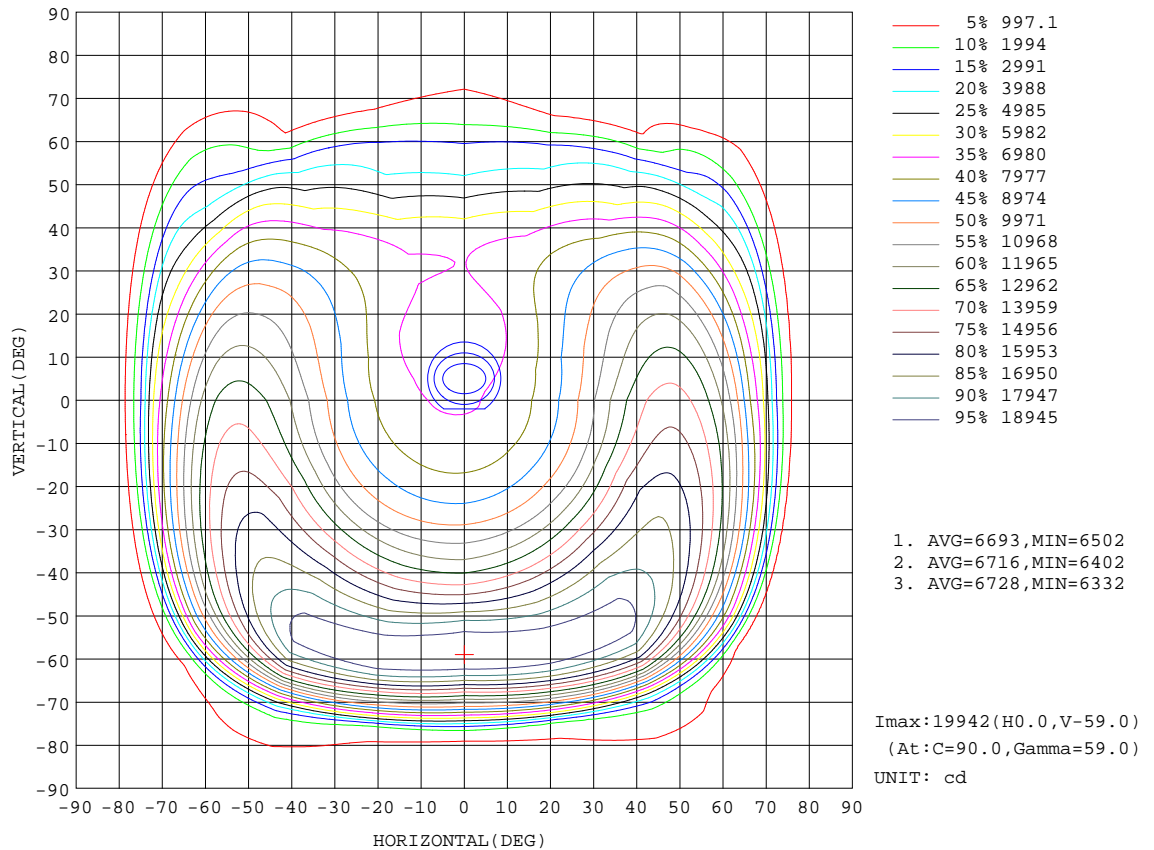
γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	λlamp
10	737.2	740.3	734.9	723.3	704.8	663.3	643.8	690.7	0- 10	663.7	663.7	1.44
20	862.6	861.0	837.3	817.8	788.0	686.8	641.0	749.9	10- 20	2099	2763	6
30	1092	1079	1021	989.6	958.5	770.7	694.2	851.6	20- 30	3962	6725	14.6
40	1352	1423	1294	1282	1188	796.7	632.8	882.8	30- 40	6427	13152	28.6
50	1430	1767	1743	1645	1342	687.5	435.9	740.4	40- 50	9099	22250	48.3
60	1178	1936	1981	1919	1230	447.1	289.3	461.7	50- 60	10941	33191	72.1
70	540.9	1245	1117	1469	728.6	91.27	118.1	92.40	60- 70	9577	42768	92.9
80	39.17	147.9	82.03	151.4	69.31	25.32	14.11	19.91	70- 80	3079	45847	99.6
90	0	0	0	0	0	0	0	0	80- 90	205.7	46053	100
100	0	0	0	0	0	0	0	0	90-100	0	46053	100
110	0	0	0	0	0	0	0	0	100-110	0	46053	100
120	0	0	0	0	0	0	0	0	110-120	0	46053	100
130	0	0	0	0	0	0	0	0	120-130	0	46053	100
140	0	0	0	0	0	0	0	0	130-140	0	46053	100
150	0	0	0	0	0	0	0	0	140-150	0	46053	100
160	0	0	0	0	0	0	0	0	150-160	0	46053	100
170	0	0	0	0	0	0	0	0	160-170	0	46053	100
180	0	0	0	0	0	0	0	0	170-180	0	46053	100
DEG	LUMINOUS INTENSITY:×10cd									UNIT:lm		

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:Jonathan
 Test Date:2023-05-16

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.444
 Humidity:65.0%
 Test Distance:2.554m [K=1.0000]
 Remarks:

ISOCANDELA DIAGRAM

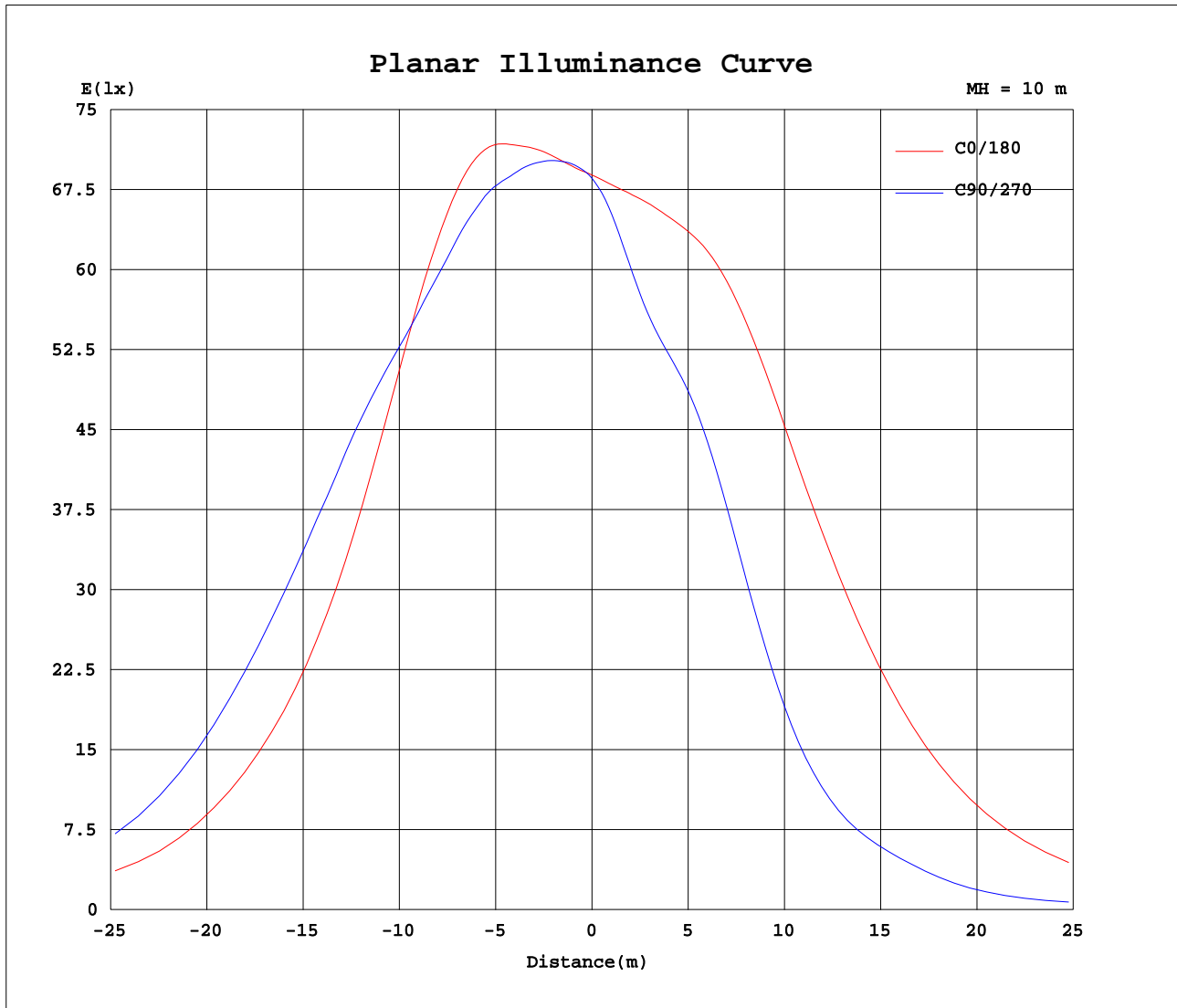
Test:U:347.05V I:0.9086A P:308.75W PF:0.9791 Freq:60.00Hz Lamp Flux:46052.7x1 lm		
NAME: Roadway Luminaires	TYPE: LOC-SPAL-MW(180/200/240) 2700K-27lm	OVERSIZE: 0.0000
SPEC.: 320.0W 42000lm	DIM.: L=0.526,W=0.376	SERIAL No.: N/A
MFR.: LED One Corporation	SUR.: 0.16*0.33	Shielding Angle: N/A



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Jonathan
Test Date:2023-05-16

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.444
Humidity:65.0%
Test Distance:2.554m [K=1.0000]
Remarks:

Planar Illuminance Curve



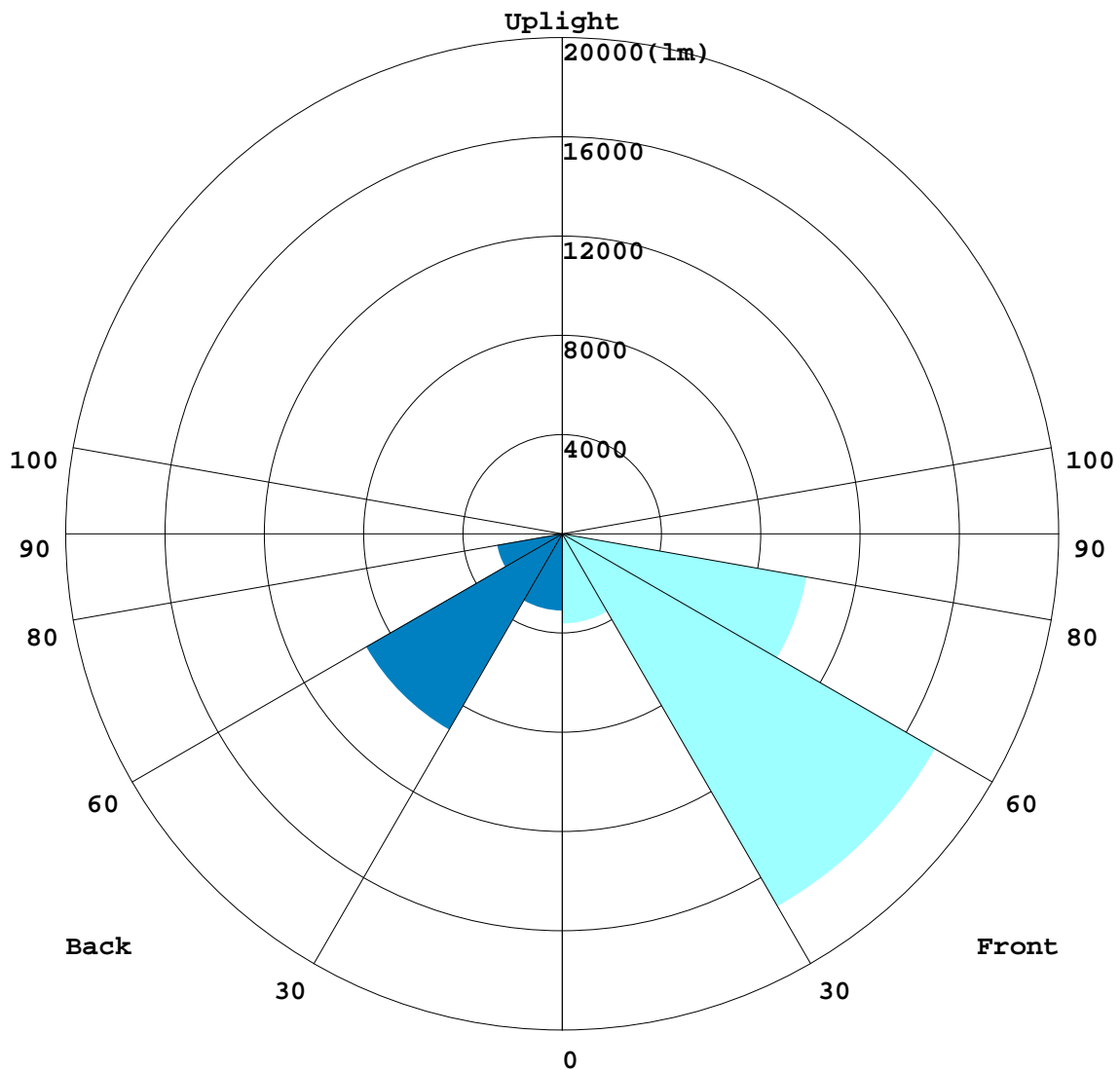
C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: Jonathan
 Test Date: 2023-05-16

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-R5000_V2 SYSTEM V2.00.444
 Humidity: 65.0%
 Test Distance: 2.554m [K=1.0000]
 Remarks:

LCS REPORT

Test:U:347.05V I:0.9086A P:308.75W PF:0.9791 Freq:60.00Hz Lamp Flux:46052.7x1 lm		
NAME: Roadway Luminaires	TYPE: LOC-SPAL-MW(180/200/240)E32H130KD-27W14g	
SPEC.: 320.0W 42000lm	DIM.: L=0.526,W=0.376	SERIAL No.: N/A
MFR.: LED One Corporation	SUR.: 0.16*0.33	Shielding Angle: N/A

LUMINAIRE CLASSIFICATION SYSTEM(LCS) GRAPH



C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:Jonathan
 Test Date:2023-05-16

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.444
 Humidity:65.0%
 Test Distance:2.554m [K=1.0000]
 Remarks:

BUG REPORT

Test:U:347.05V I:0.9086A P:308.75W PF:0.9791 Freq:60.00Hz Lamp Flux:46052.7x1 lm		
NAME: Roadway Luminaires	TYPE: LOC-SPAL-MW(180/200/240)E27H30KD-27W	
SPEC.: 320.0W 42000lm	DIM.: L=0.526,W=0.376	SERIAL No.: N/A
MFR.: LED One Corporation	SUR.: 0.16*0.33	Shielding Angle: N/A

IESNA Luminaire Flux Distribution Table:

Zone	Lumens	Luminaire %
FL - Front-Low(0-30)	3622.7	7.9
FM - Front-Medium(30-60)	17348	37.7
FH - Front-High(60-80)	10000	21.7
FVH - Front-Very High(80-90)	153.02	0.3
Total Forward Light	31124	67.6

BL - Back-Low(0-30)	3102	6.7
BM - Back-Medium(30-60)	9118.2	19.8
BH - Back-High(60-80)	2655.7	5.8
BVH - Back-Very High(80-90)	52.731	0.1
Total Back Light	14929	32.4

UL - Uplight-Low(90-100)	0	0.0
UH - Uplight-High(100-180)	0	0.0
Total Up Light	0	0.0

BUG(Back,Up,Glare) Rating	B5-U0-G4
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Zone	Downward Lumens	Upward Lumens	Total Lumens
House Side	14929	0	14929
Street Side	31124	0	31124

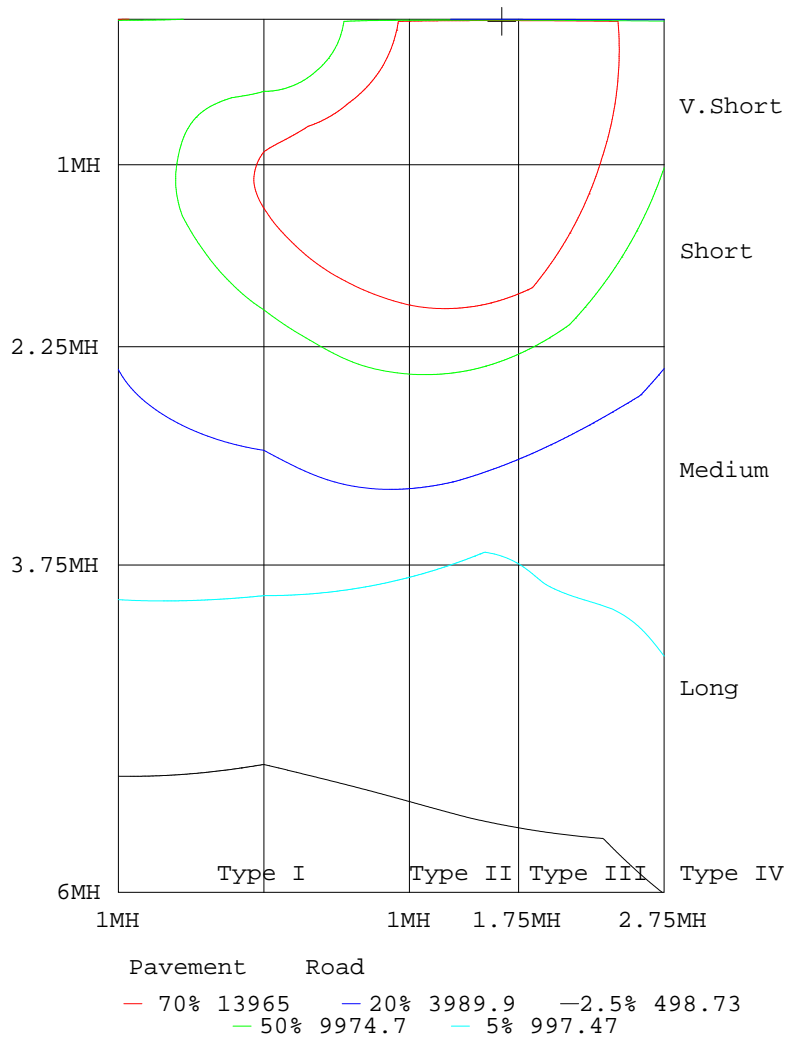
C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Jonathan
Test Date:2023-05-16

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.444
Humidity:65.0%
Test Distance:2.554m [K=1.0000]
Remarks:

ROAD ISOCANDELA REPORT

Test:U:347.05V I:0.9086A P:308.75W PF:0.9791 Freq:60.00Hz Lamp Flux:46052.7x1 lm		
NAME: Roadway Luminaires	TYPE: LOC-SPAL-MW(180/200/240)E32H130KD-27H14g	
SPEC.: 320.0W 42000lm	DIM.: L=0.526,W=0.376	SERIAL No.: N/A
MFR.: LED One Corporation	SUR.: 0.16*0.33	Shielding Angle: N/A

ROAD SURFACE ISOCANDELA DIAGRAM



C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:Jonathan
 Test Date:2023-05-16

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.444
 Humidity:65.0%
 Test Distance:2.554m [K=1.0000]
 Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:347.05V I:0.9086A P:308.75W PF:0.9791 Freq:60.00Hz Lamp Flux:46052.7x1 lm		
NAME: Roadway Luminaires	TYPE: LOC-SPAL-MW(180/200/240)E32H130KD-27H11g	
SPEC.: 320.0W 42000lm	DIM.: L=0.526,W=0.376	SERIAL No.: N/A
MFR.: LED One Corporation	SUR.: 0.16*0.33	Shielding Angle: N/A

Table--1

UNIT: x10cd

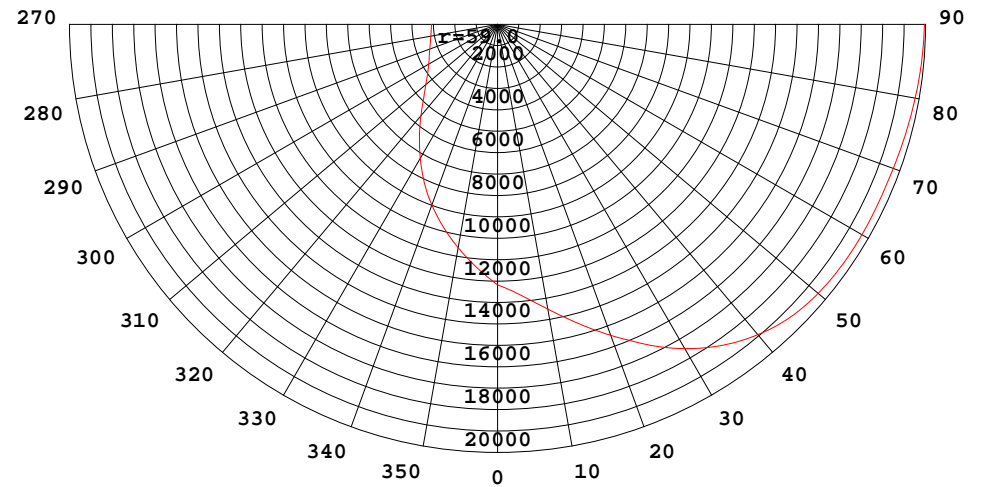
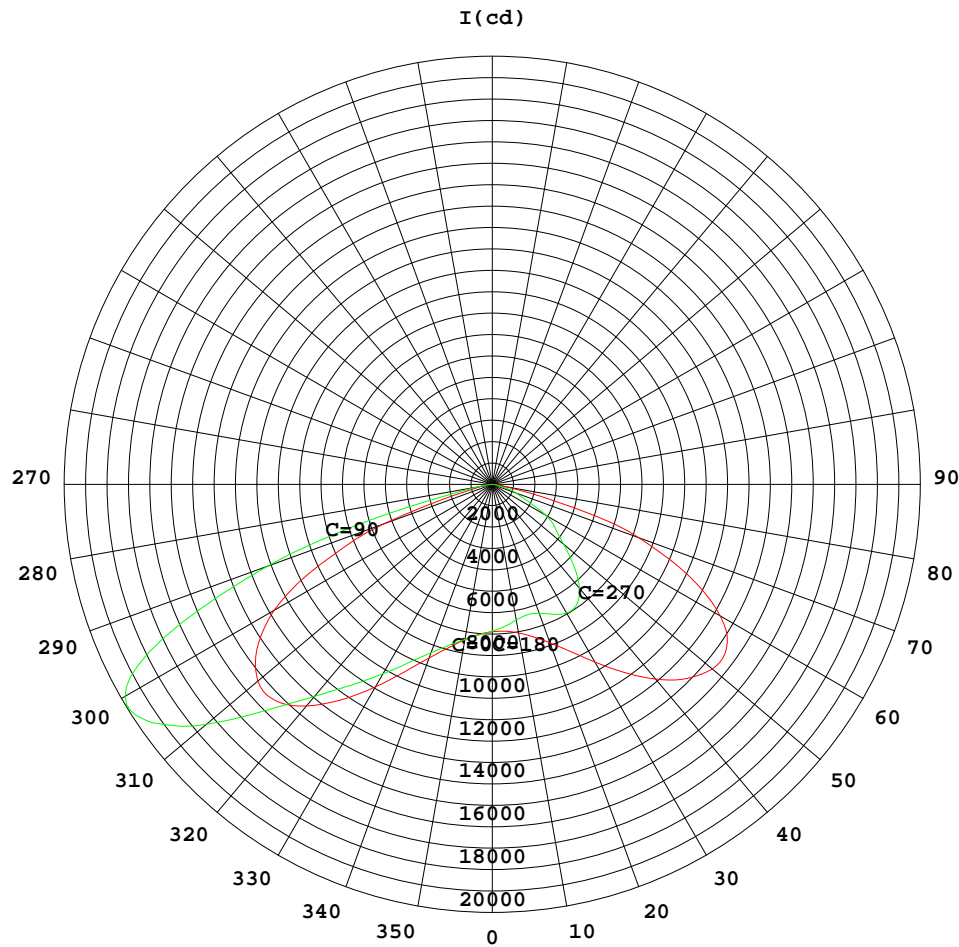
C(DEG) γ (DEG)	0	22.5	45	67.5	90	112.5	135	157.5	180	202.5	225	247.5	270	292.5	315	337.5			
0	689	686	686	685	686	687	688	689	689	686	686	685	686	687	688	689			
5	704	704	706	707	706	703	699	694	689	681	671	666	666	673	685	697			
10	737	738	740	738	735	730	723	714	705	688	663	645	644	661	691	722			
15	790	791	791	785	778	771	762	751	738	710	665	634	631	659	710	764			
20	863	864	861	851	837	828	818	804	788	750	687	644	641	679	750	826			
25	964	963	956	937	917	904	894	877	861	810	728	676	670	718	803	907			
30	1092	1092	1079	1048	1021	1005	990	976	958	881	771	702	694	744	852	992			
35	1228	1263	1236	1187	1144	1129	1118	1108	1072	949	796	702	687	743	883	1072			
40	1352	1450	1423	1352	1294	1281	1282	1267	1188	1004	797	664	633	702	883	1135			
45	1430	1598	1606	1541	1493	1459	1464	1428	1283	1037	763	582	539	619	838	1161			
50	1430	1681	1767	1730	1743	1654	1645	1555	1342	1026	688	479	436	512	740	1135			
55	1343	1670	1884	1894	1941	1848	1809	1623	1336	968	576	391	360	411	599	1021			
60	1178	1567	1936	1965	1981	1970	1919	1593	1230	826	447	329	289	327	462	809			
65	891	1344	1788	1758	1692	1837	1876	1436	1016	586	273	200	177	156	272	564			
70	541	923	1245	1163	1117	1269	1469	1127	729	364	91.3	89.9	118	75.7	92.4	358			
75	131	178	363	318	398	480	614	529	297	216	50.5	49.1	52.9	40.9	46.6	128			
80	39.2	55.8	148	84.1	82.0	100.0	151	77.5	69.3	66.8	25.3	19.9	14.1	16.3	19.9	44.9			
85	7.68	8.84	10.4	6.13	4.48	6.28	44.1	24.5	20.2	9.63	5.43	2.36	0.28	0.40	2.67	4.37			
90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
100	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
105	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
110	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
115	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
120	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
125	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
130	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
135	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
140	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
145	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
150	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
155	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
160	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
165	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
170	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
175	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
180	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:Jonathan
 Test Date:2023-05-16

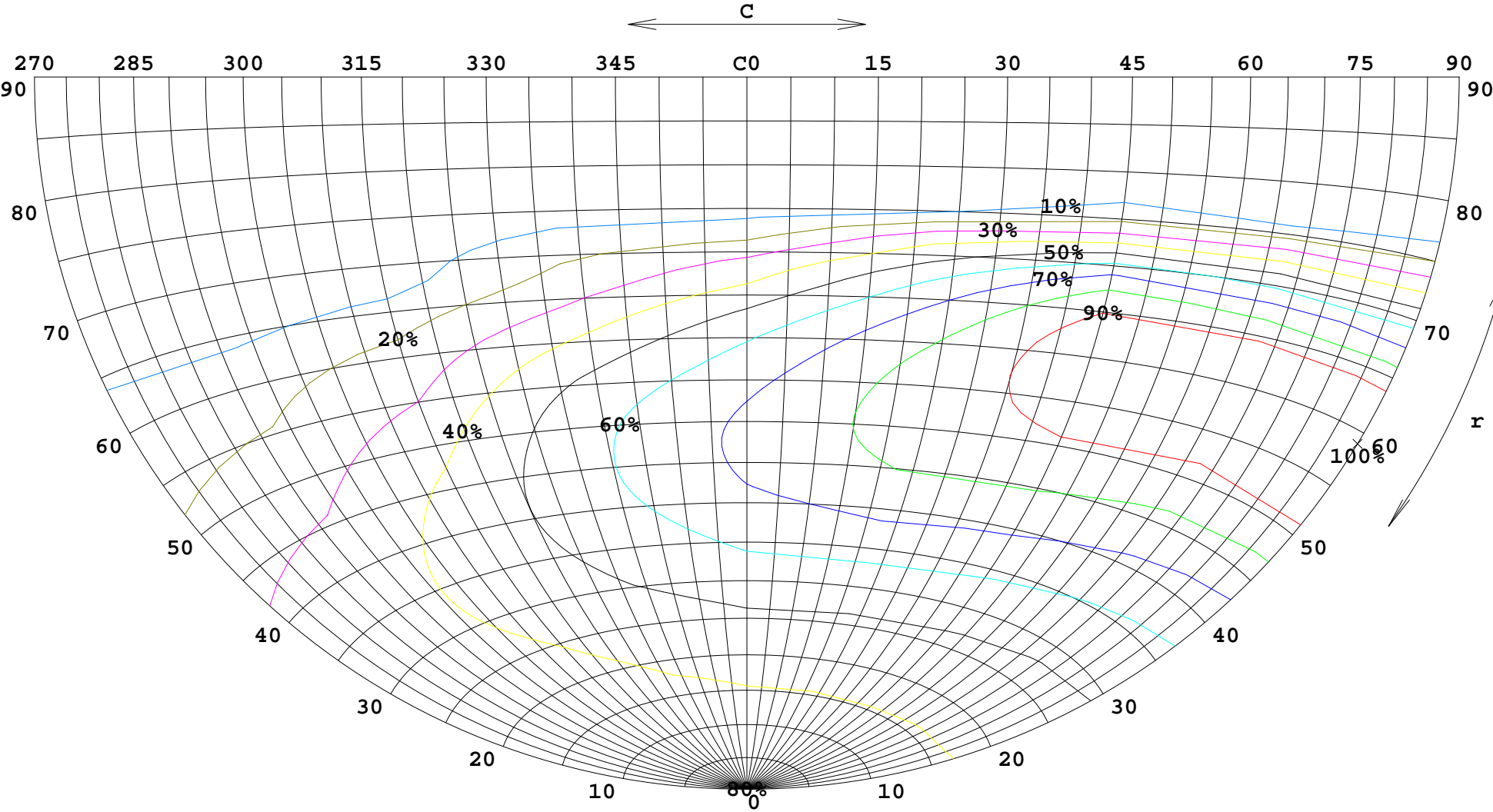
γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.444
 Humidity:65.0%
 Test Distance:2.554m [K=1.0000]
 Remarks:

FLUX DATA:

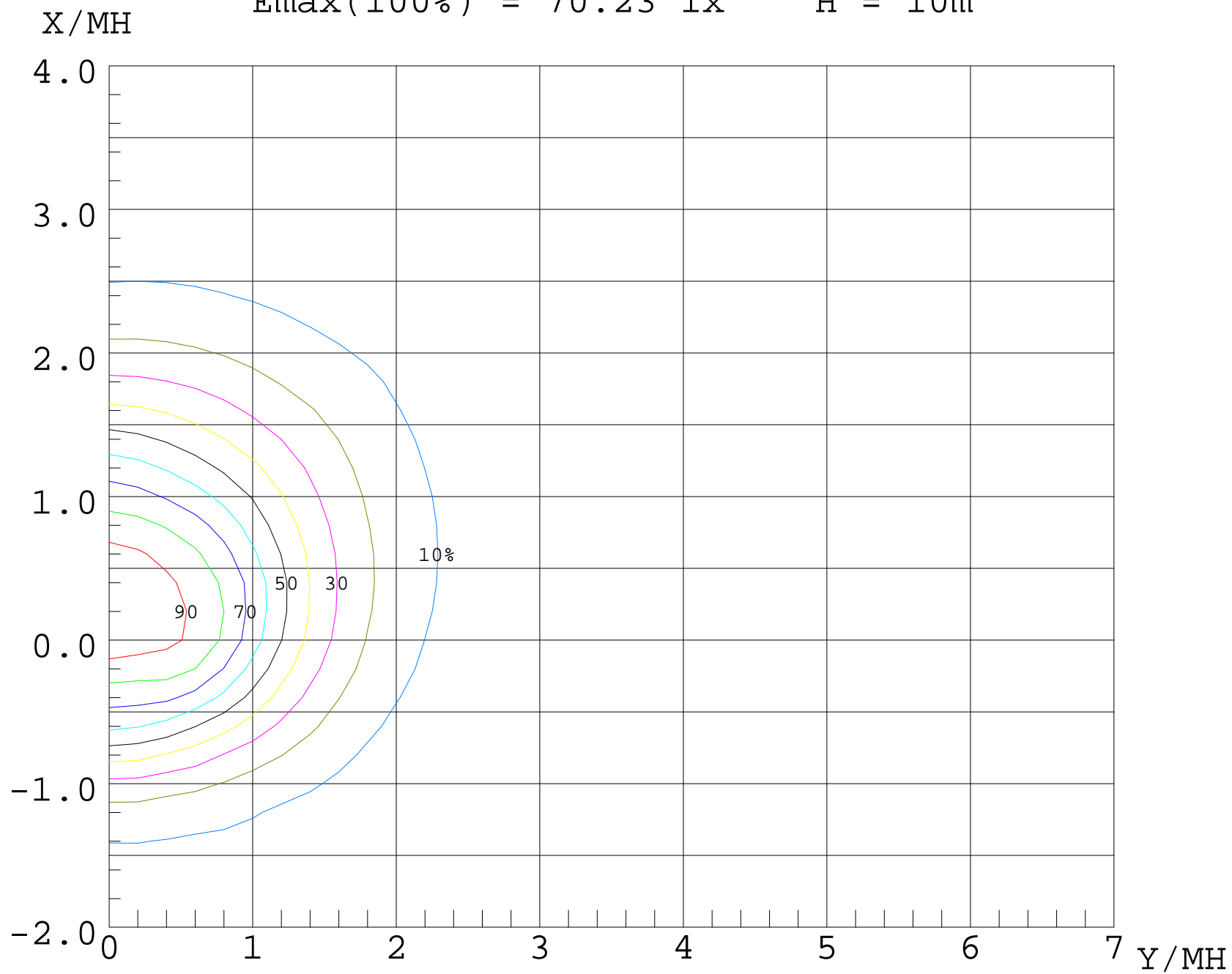
LOR:	100.0 %
STREET DOWN:	31124 lm
STREET UP:	0 lm
HOUSE DOWN:	14929 lm
HOUSE UP:	0 lm



$I_{max}(100\%) = 19942 \text{ cd}$



$E_{\max}(100\%) = 70.23 \text{ lx}$ $H = 10\text{m}$



UF (%)

80

70

60

50

40

30

20

10

0

-2

-1

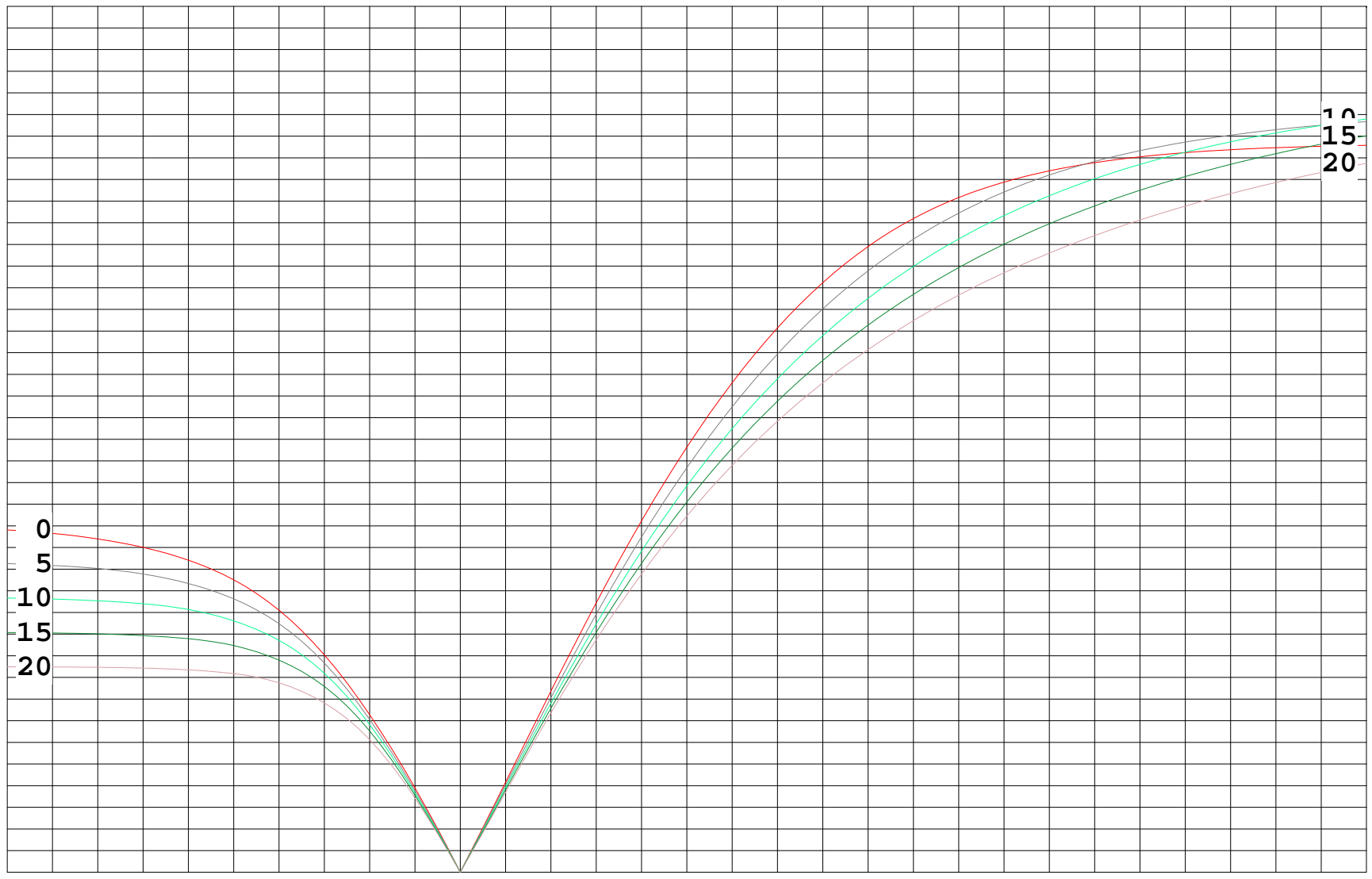
0

1

2

3

4 X/MH



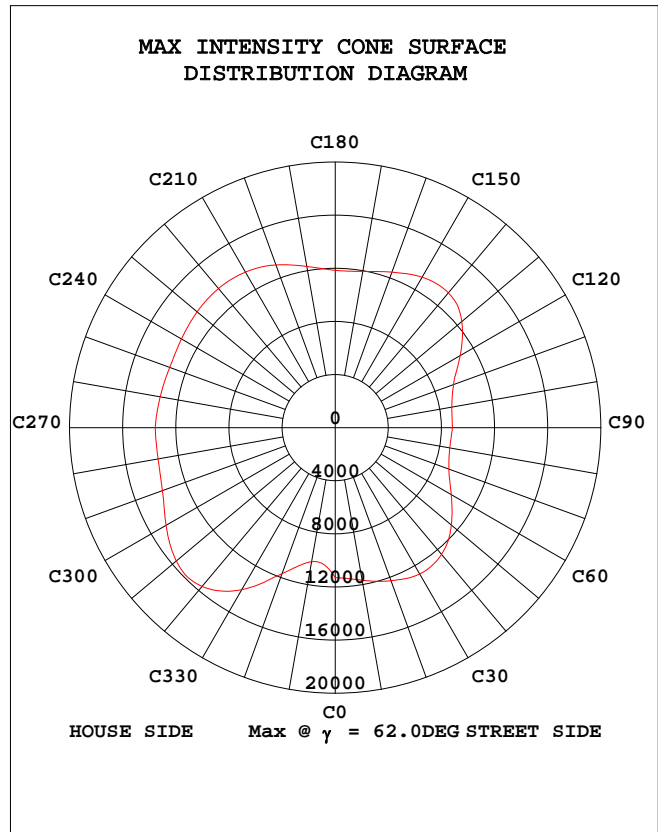
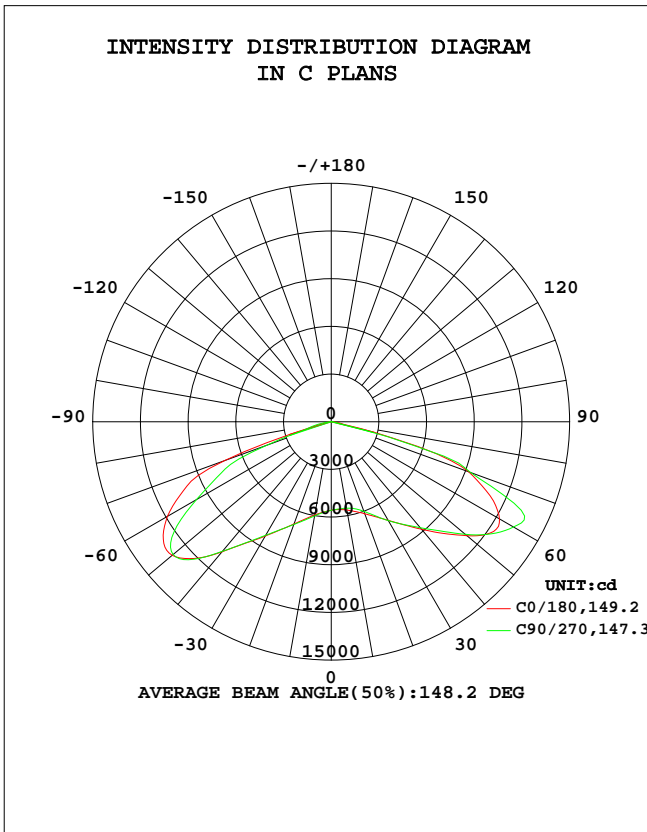
0
5
10
15
20

0
5
10
15
20

STREETLIGHT PHOTOMETRIC TEST REPORT

Test:U:347.01V I:0.9090A P:308.93W PF:0.9793 Freq:60.00Hz Lamp Flux:46528.5x1 lm		
NAME: Roadway Luminaires	TYPE: LOC-SPAL-MW(180/200/240/320)30KD-T5LV	OVERSIZE: 0.00%
SPEC.: 320.0W 42000lm	DIM.: L=0.526,W=0.376	SERIAL No.: N/A
MFR.: LED One Corporation	SUR.: 0.16*0.33	Shielding Angle: N/A

DATA OF LAMP		PHOTOMETRIC DATA Eff: 150.61 lm/W			
MODEL: 180/200/240/320)30KD-T5LV		Imax(cd)	15825	η street_up(%)	0.0
NOMINAL POWER(W)	320.0	LOR(%)	100.0	η street_down(%)	48.3
RATED VOLTAGE(V)	347	TOTAL FLUX(lm)	46528	η house_up(%)	0.0
NOMINAL FLUX(lm)	46528.5	MAXIMUM @(C, γ)	315,62.0	η house_down(%)	51.7
LAMPS INSIDE	1	η up(%)	0.0	76 FLASHAREA(m2)	0.00100
TEST VOLTAGE(V)	347	η down(%)	100.0	SLI	19.763

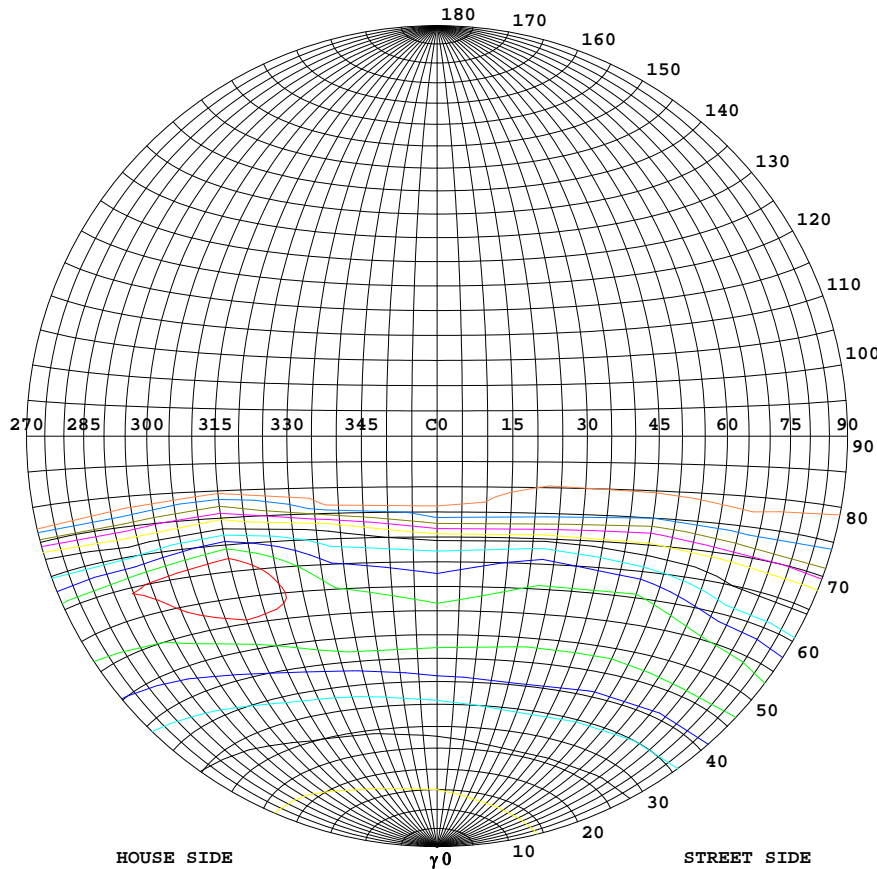


C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:Jonathan
 Test Date:2023-05-16

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.444
 Humidity:65.0%
 Test Distance:2.554m [K=1.0000]
 Remarks:

STREETLIGHT ISOCANDELA DIAGRAM

Test:U:347.01V I:0.9090A P:308.93W PF:0.9793 Freq:60.00Hz Lamp Flux:46528.5x1 lm		
NAME: Roadway Luminaires	TYPE: LOC-SPAL-MW(180/200/240)VERTICAL-275lm	
SPEC.: 320.0W 42000lm	DIM.: L=0.526,W=0.376	SERIAL No.: N/A
MFR.: LED One Corporation	SUR.: 0.16*0.33	Shielding Angle: N/A



Classification:

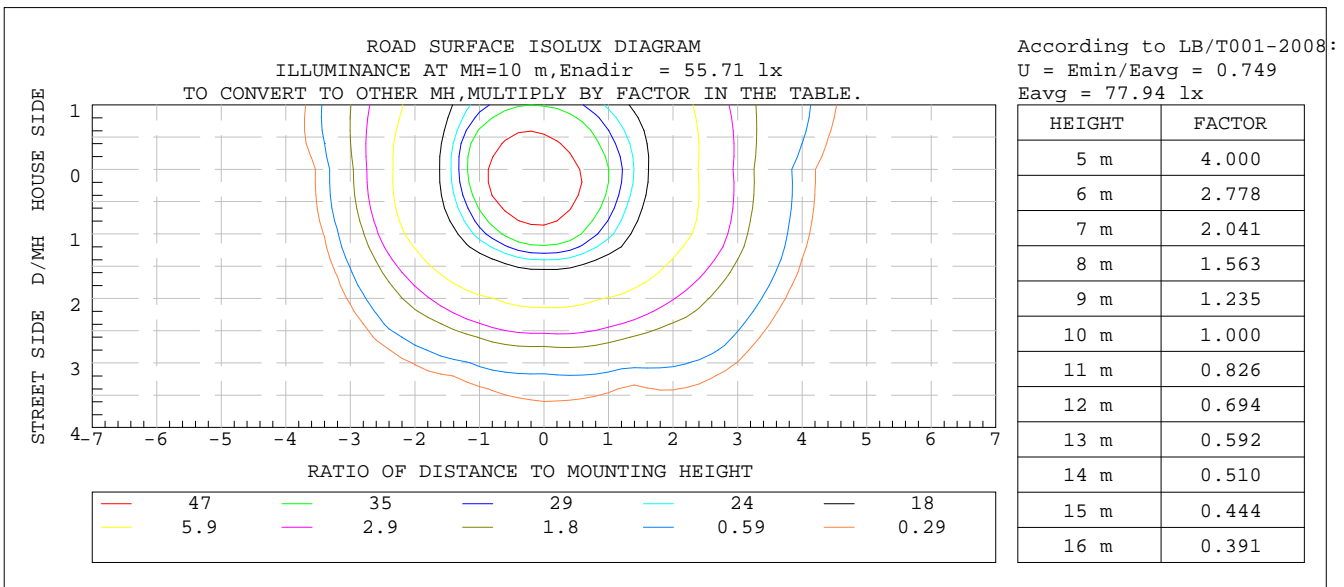
IES:Type V - Short
 CIE:Narrow - Intermediate
 IES:Full cut-off
 CIE:Semi-cut-off
 Max.At80:52.92cd/klm
 Max.At90:0cd/klm
 Max.80-90:52.92cd/klm
 NRB 5101:Semi limited[13.4%]

ISOCANDELA DIAGRAM	
UNIT	cd
Imax=100%	15825
90%	14242
80%	12660
70%	11077
60%	9495
50%	7912
40%	6330
30%	4747
20%	3165
10%	1582
5%	791

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:Jonathan
 Test Date:2023-05-16

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.444
 Humidity:65.0%
 Test Distance:2.554m [K=1.0000]
 Remarks:

COEFFICIENT OF UTILIZATION CURVE
AND ISOLUX DIAGRAM



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: Jonathan
Test Date: 2023-05-16

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System: EVERFINE GO-R5000_V2 SYSTEM V2.00.444
Humidity: 65.0%
Test Distance: 2.554m [K=1.0000]
Remarks:

ZONAL FLUX DIAGRAM

Test:U:347.01V I:0.9090A P:308.93W PF:0.9793 Freq:60.00Hz Lamp Flux:46528.5x1 lm		
NAME: Roadway Luminaires	TYPE: LOC-SPAL-MW(180/200/240)VERTICAL-275lm	OVERSAMPLING: 275lm
SPEC.: 320.0W 42000lm	DIM.: L=0.526,W=0.376	SERIAL No.: N/A
MFR.: LED One Corporation	SUR.: 0.16*0.33	Shielding Angle: N/A

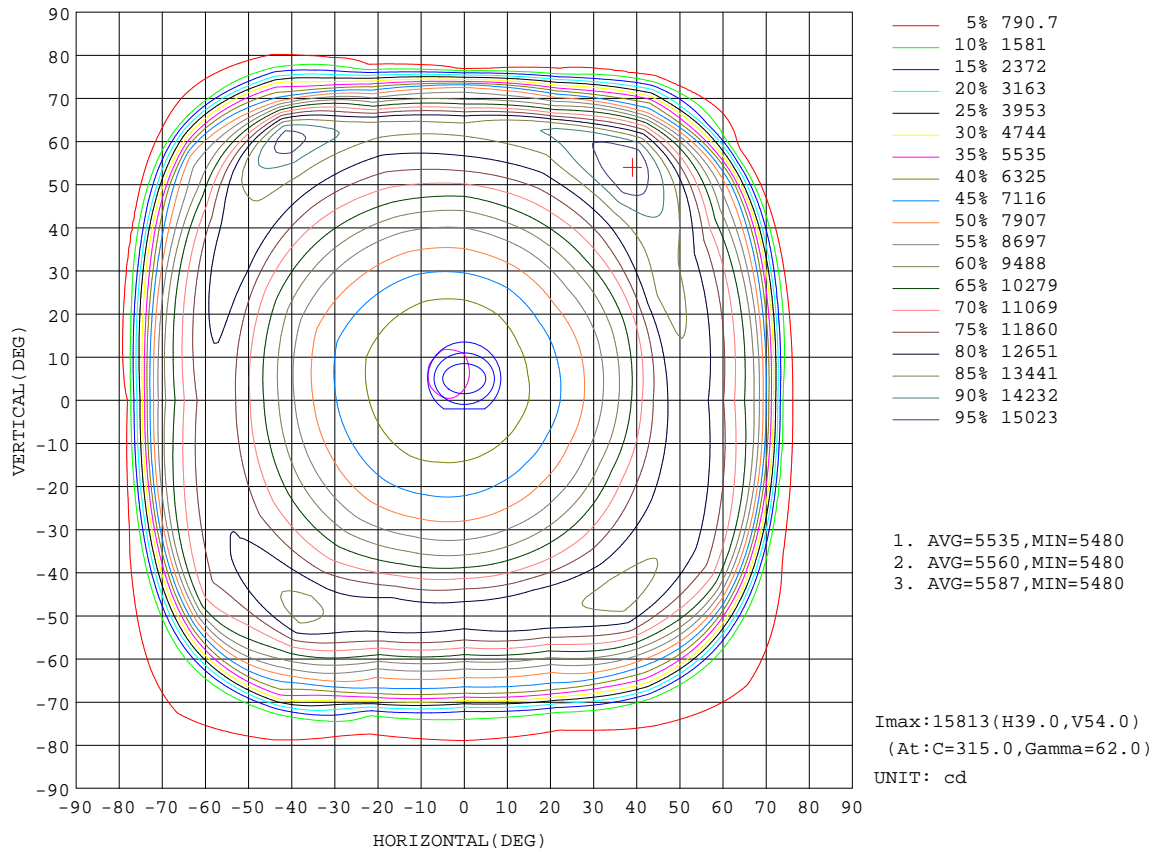
γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	λlamp
10	595.8	607.2	601.1	579.4	564.2	550.6	552.5	578.1	0- 10	542.2	542.2	1.17
20	684.3	707.3	687.9	650.5	616.1	592.8	599.9	653.1	10- 20	1739	2281	4.9
30	830.6	858.0	824.4	767.2	716.4	691.5	718.3	788.3	20- 30	3287	5568	12
40	1067	1082	1064	946.8	882.7	845.4	870.1	978.6	30- 40	5449	11017	23.7
50	1307	1311	1298	1195	1115	1069	1102	1242	40- 50	8477	19494	41.9
60	1189	1294	978.4	1366	1222	1317	1324	1570	50- 60	11325	30819	66.2
70	712.7	655.1	435.8	839.0	918.1	1489	931.4	1185	60- 70	11162	41981	90.2
80	35.33	72.68	61.58	108.2	60.67	246.2	35.95	69.92	70- 80	4299	46280	99.5
90	0	0	0	0	0	0	0	0	80- 90	248.9	46528	100
100	0	0	0	0	0	0	0	0	90-100	0	46528	100
110	0	0	0	0	0	0	0	0	100-110	0	46528	100
120	0	0	0	0	0	0	0	0	110-120	0	46528	100
130	0	0	0	0	0	0	0	0	120-130	0	46528	100
140	0	0	0	0	0	0	0	0	130-140	0	46528	100
150	0	0	0	0	0	0	0	0	140-150	0	46528	100
160	0	0	0	0	0	0	0	0	150-160	0	46528	100
170	0	0	0	0	0	0	0	0	160-170	0	46528	100
180	0	0	0	0	0	0	0	0	170-180	0	46528	100
DEG	LUMINOUS INTENSITY:×10cd									UNIT:lm		

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:Jonathan
 Test Date:2023-05-16

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.444
 Humidity:65.0%
 Test Distance:2.554m [K=1.0000]
 Remarks:

ISOCANDELA DIAGRAM

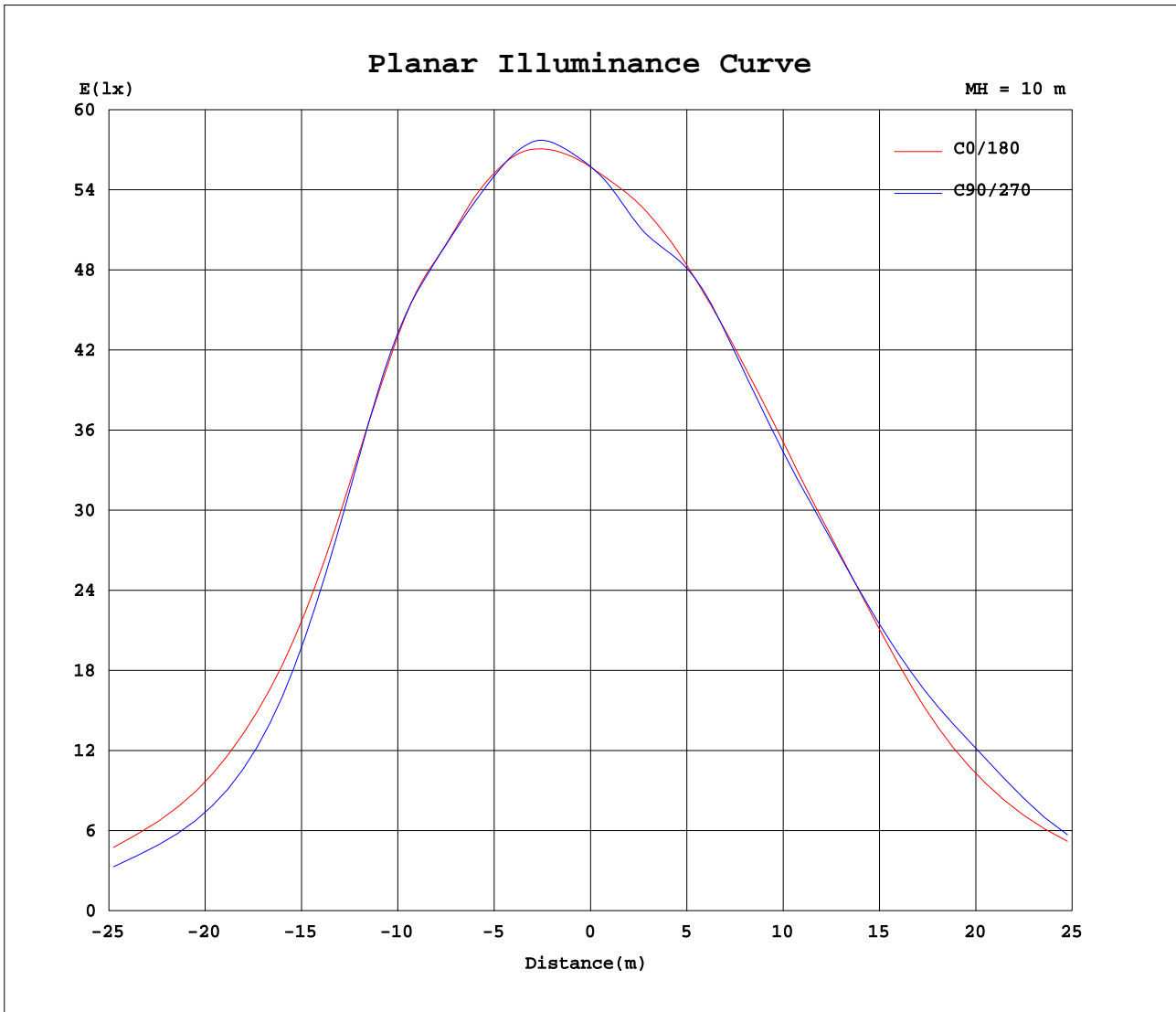
Test:U:347.01V I:0.9090A P:308.93W PF:0.9793 Freq:60.00Hz Lamp Flux:46528.5x1 lm		
NAME: Roadway Luminaires	TYPE: LOC-SPAL-MW(180/200/240) 2700K-275lm	OVERSAMPLING: 275lm
SPEC.: 320.0W 42000lm	DIM.: L=0.526,W=0.376	SERIAL No.: N/A
MFR.: LED One Corporation	SUR.: 0.16*0.33	Shielding Angle: N/A



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Jonathan
Test Date:2023-05-16

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.444
Humidity:65.0%
Test Distance:2.554m [K=1.0000]
Remarks:

Planar Illuminance Curve



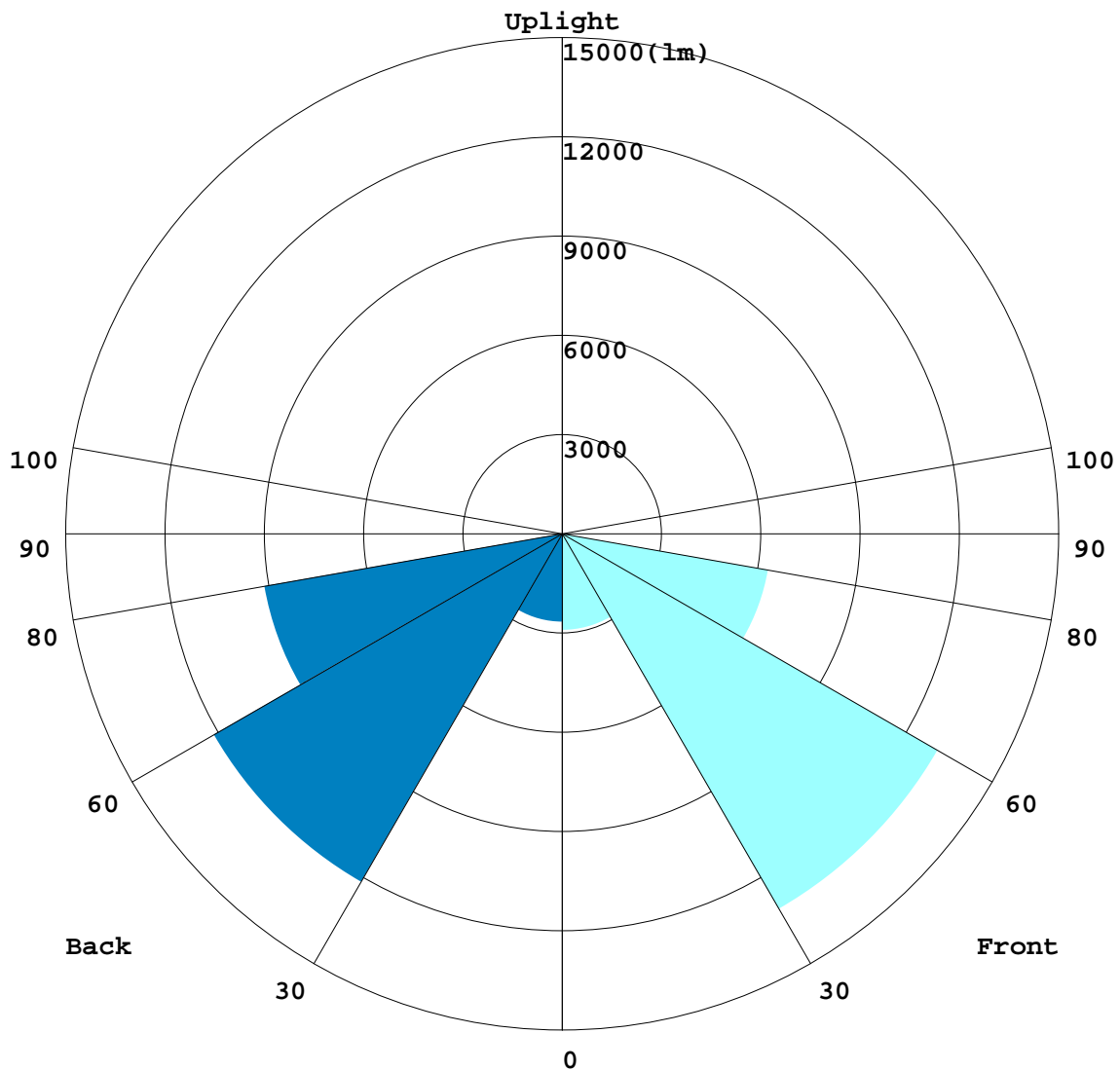
C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: Jonathan
 Test Date: 2023-05-16

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-R5000_V2 SYSTEM V2.00.444
 Humidity: 65.0%
 Test Distance: 2.554m [K=1.0000]
 Remarks:

LCS REPORT

Test:U:347.01V I:0.9090A P:308.93W PF:0.9793 Freq:60.00Hz		
Lamp Flux:46528.5x1 lm		
NAME: Roadway Luminaires	TYPE: LOC-SPAL-MW(180/200/240)E27H130KD-275lm	
SPEC.: 320.0W 42000lm	DIM.: L=0.526,W=0.376	SERIAL No.: N/A
MFR.: LED One Corporation	SUR.: 0.16*0.33	Shielding Angle: N/A

LUMINAIRE CLASSIFICATION SYSTEM(LCS) GRAPH



C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:Jonathan
 Test Date:2023-05-16

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.444
 Humidity:65.0%
 Test Distance:2.554m [K=1.0000]
 Remarks:

BUG REPORT

Test:U:347.01V I:0.9090A P:308.93W PF:0.9793 Freq:60.00Hz Lamp Flux:46528.5x1 lm		
NAME: Roadway Luminaires	TYPE: LOC-SPAL-MW(180/200/240) OVERHEAD-ROCK-275lm	
SPEC.: 320.0W 42000lm	DIM.: L=0.526,W=0.376	SERIAL No.: N/A
MFR.: LED One Corporation	SUR.: 0.16*0.33	Shielding Angle: N/A

IESNA Luminaire Flux Distribution Table:

Zone	Lumens	Luminaire %
FL - Front-Low(0-30)	2909.7	6.3
FM - Front-Medium(30-60)	13099	28.2
FH - Front-High(60-80)	6322	13.6
FVH - Front-Very High(80-90)	121.58	0.3
Total Forward Light	22452	48.3

BL - Back-Low(0-30)	2658.7	5.7
BM - Back-Medium(30-60)	12151	26.1
BH - Back-High(60-80)	9138.8	19.6
BVH - Back-Very High(80-90)	127.33	0.3
Total Back Light	24076	51.7

UL - Uplight-Low(90-100)	0	0.0
UH - Uplight-High(100-180)	0	0.0
Total Up Light	0	0.0

BUG(Back,Up,Glare) Rating	B5-U0-G4
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Zone	Downward Lumens	Upward Lumens	Total Lumens
House Side	24076	0	24076
Street Side	22452	0	22452

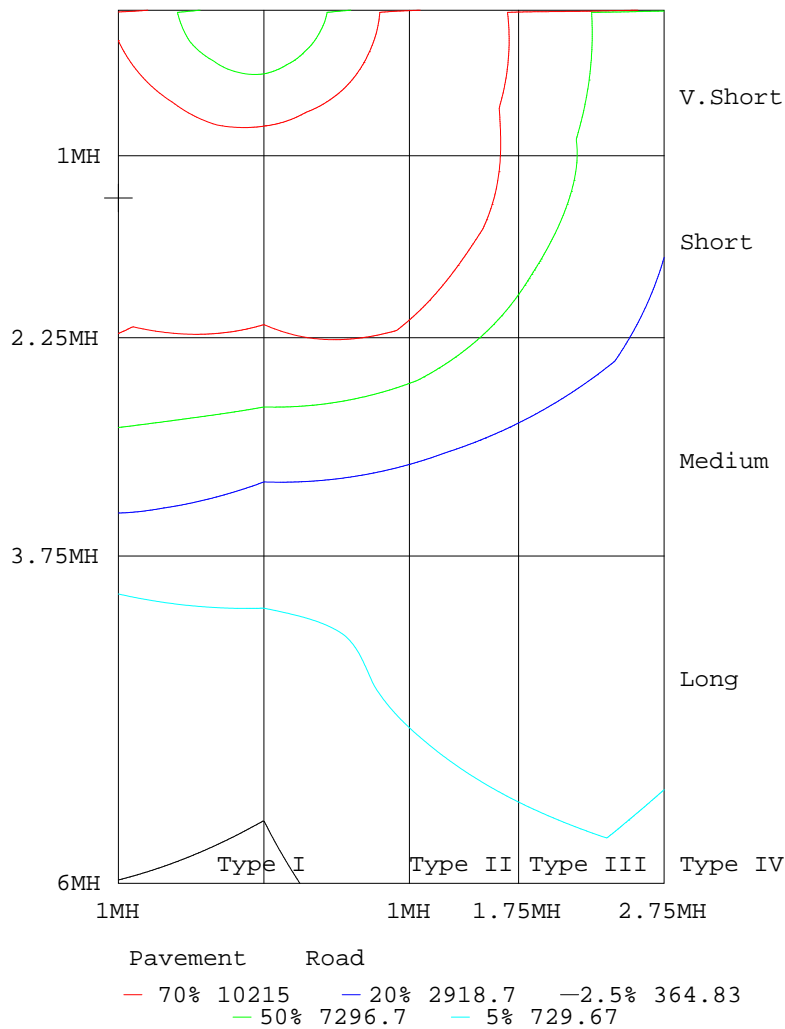
C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:Jonathan
Test Date:2023-05-16

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.444
Humidity:65.0%
Test Distance:2.554m [K=1.0000]
Remarks:

ROAD ISOCANDELA REPORT

Test:U:347.01V I:0.9090A P:308.93W PF:0.9793 Freq:60.00Hz Lamp Flux:46528.5x1 lm		
NAME: Roadway Luminaires	TYPE: LOC-SPAL-MW(180/200/240)S20H30KD-275lm	
SPEC.: 320.0W 42000lm	DIM.: L=0.526,W=0.376	SERIAL No.: N/A
MFR.: LED One Corporation	SUR.: 0.16*0.33	Shielding Angle: N/A

ROAD SURFACE ISOCANDELA DIAGRAM



C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:Jonathan
 Test Date:2023-05-16

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.444
 Humidity:65.0%
 Test Distance:2.554m [K=1.0000]
 Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:347.01V I:0.9090A P:308.93W PF:0.9793 Freq:60.00Hz Lamp Flux:46528.5x1 lm		
NAME: Roadway Luminaires	TYPE: LOC-SPAL-MW(180/200/240)E27H30KD-275lm	
SPEC.: 320.0W 42000lm	DIM.: L=0.526,W=0.376	SERIAL No.: N/A
MFR.: LED One Corporation	SUR.: 0.16*0.33	Shielding Angle: N/A

Table--1

UNIT: x10cd

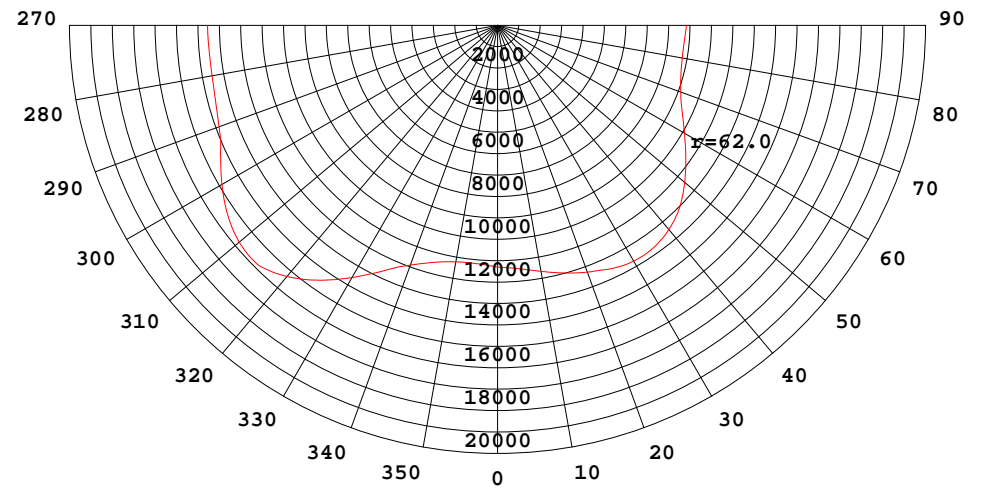
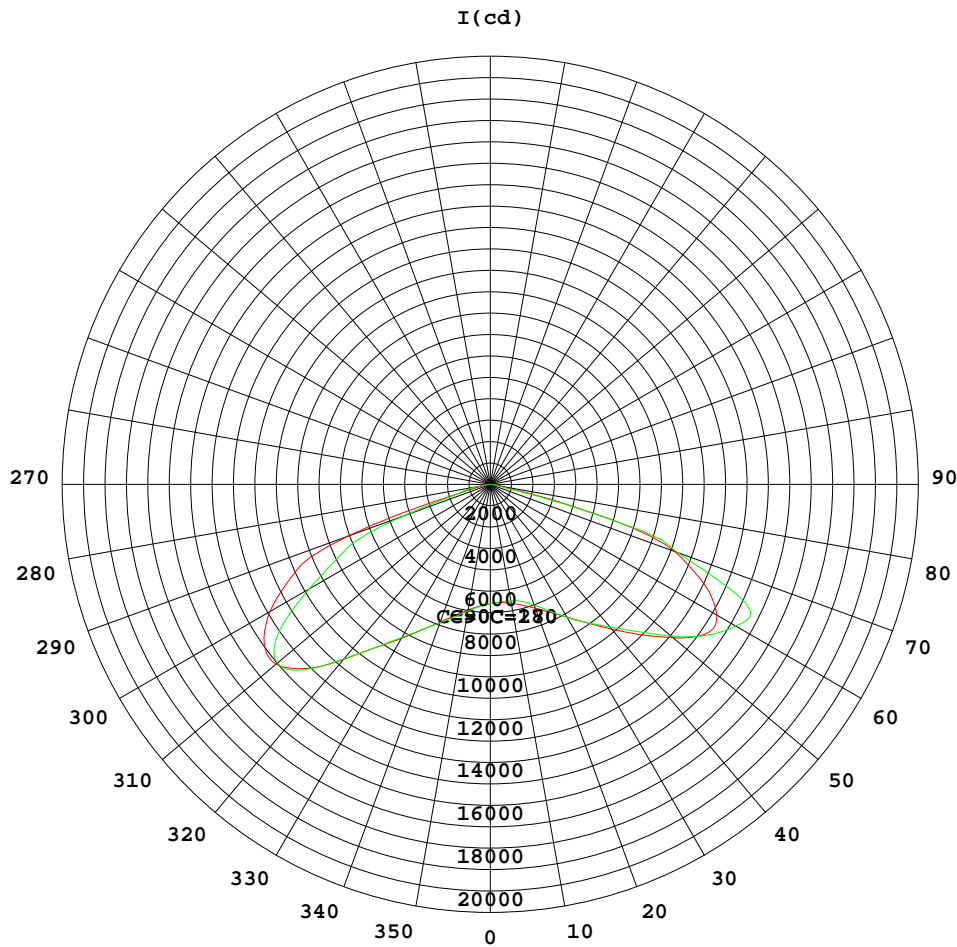
C(DEG) γ (DEG)	0	22.5	45	67.5	90	112.5	135	157.5	180	202.5	225	247.5	270	292.5	315	337.5			
0	557	557	557	557	557	557	557	558	557	557	557	557	557	557	557	558			
5	571	574	576	576	573	569	562	558	555	551	549	549	551	555	562	569			
10	596	604	607	606	601	593	579	571	564	556	551	549	552	563	578	590			
15	633	646	651	649	640	629	610	597	585	571	564	561	566	584	608	625			
20	684	702	707	701	688	673	650	634	616	597	593	591	600	621	653	673			
25	749	772	775	765	747	729	702	683	660	635	635	637	653	676	713	732			
30	831	858	858	846	824	803	767	745	716	685	692	698	718	746	788	804			
35	930	965	960	950	928	899	849	822	790	750	763	768	788	826	875	895			
40	1067	1098	1082	1079	1064	1021	947	913	883	836	845	849	870	920	979	1009			
45	1217	1214	1202	1230	1224	1173	1062	1021	993	945	948	953	972	1037	1108	1182			
50	1307	1290	1311	1330	1298	1306	1195	1129	1115	1071	1069	1071	1102	1156	1242	1352			
55	1290	1320	1381	1269	1208	1290	1342	1226	1221	1225	1197	1185	1230	1268	1400	1358			
60	1189	1281	1294	1035	978	1080	1366	1270	1222	1328	1317	1287	1324	1363	1570	1272			
65	1027	1154	1008	787	765	829	1136	1226	1103	1261	1473	1378	1319	1418	1554	1117			
70	713	735	655	510	436	591	839	1088	918	1062	1489	996	931	929	1185	881			
75	114	118	157	111	141	127	477	505	413	853	799	492	376	378	609	269			
80	35.3	84.1	72.7	49.9	61.6	57.2	108	115	60.7	109	246	50.7	35.9	40.7	69.9	49.1			
85	7.62	6.29	7.17	0.24	0.25	5.90	28.2	49.4	19.6	36.9	41.5	7.85	0.37	0.51	0.49	8.55			
90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
100	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
105	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
110	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
115	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
120	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
125	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
130	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
135	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
140	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
145	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
150	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
155	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
160	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
165	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
170	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
175	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
180	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:Jonathan
 Test Date:2023-05-16

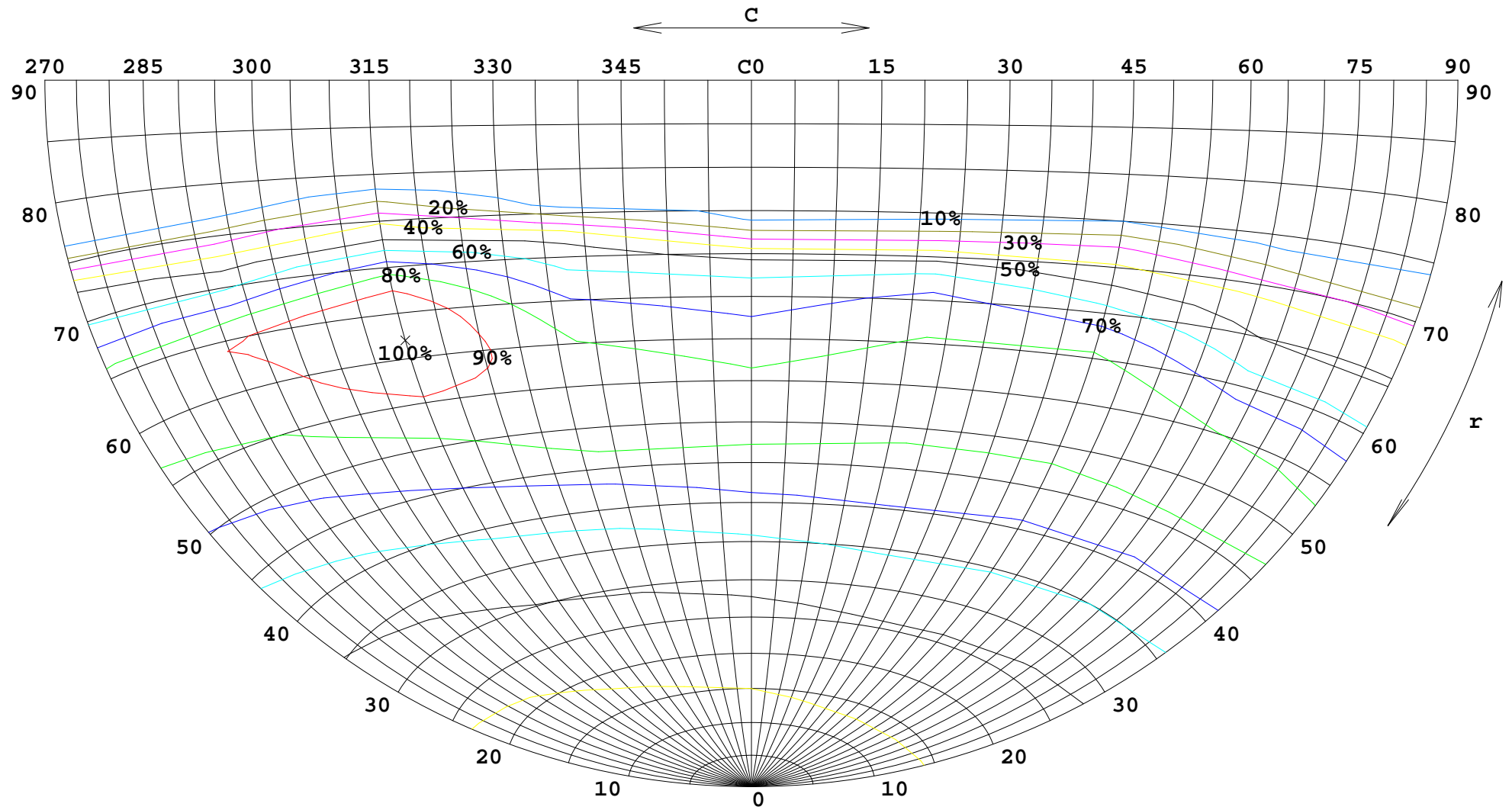
γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-R5000_V2 SYSTEM V2.00.444
 Humidity:65.0%
 Test Distance:2.554m [K=1.0000]
 Remarks:

FLUX DATA:

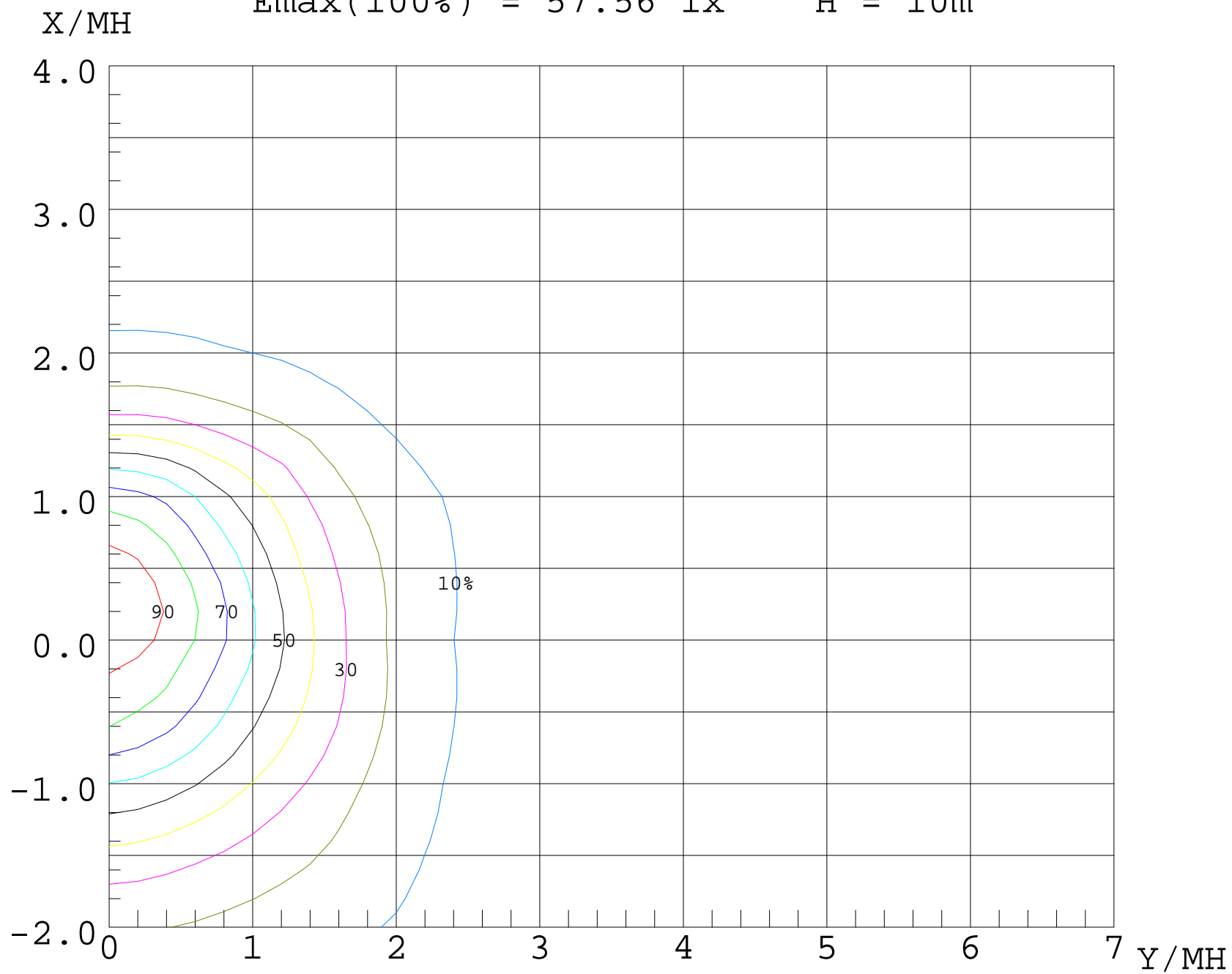
LOR:	100.0 %
STREET DOWN:	22452 lm
STREET UP:	0 lm
HOUSE DOWN:	24076 lm
HOUSE UP:	0 lm



$$I_{\max}(100\%) = 15825 \text{ cd}$$



$E_{\max}(100\%) = 57.56 \text{ lx}$ $H = 10\text{m}$



UF (%)

80

70

60

50

40

30

20

10

0

-2

-1

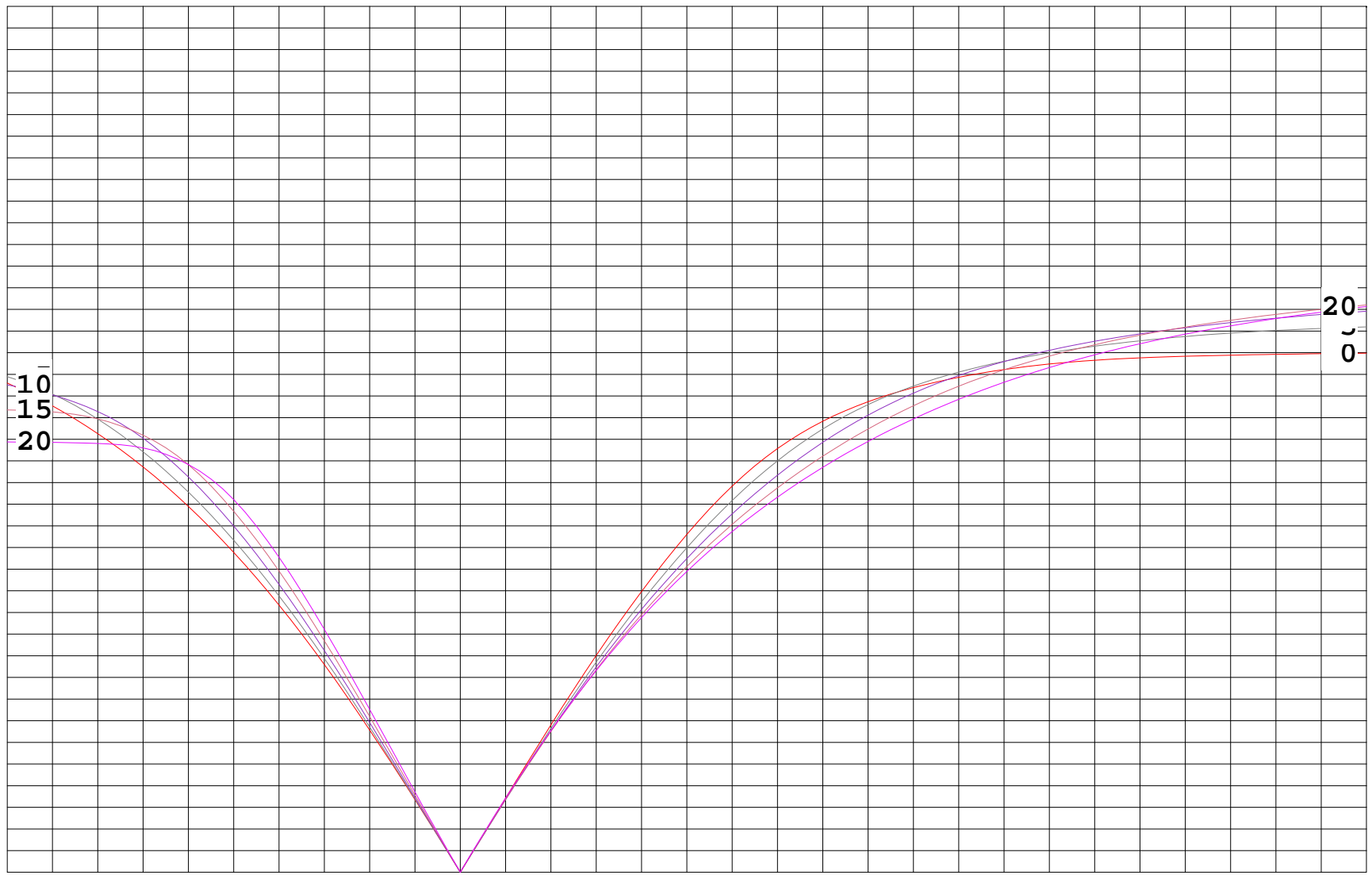
0

1

2

3

4 X/MH



10
15
20

20
0