

Signify Classified - Internal
Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions
(formerly Eaton)

Brand: McGRAW-EDISON

Report Number: P543163

Luminaire Tested: **TT-D8-735-U-5CQ-PM**

Issue Date: 6/22/2021

Test Information

Test Method: LM-79-08
Report Number: P543163
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2012-100-10)
Test Lab: INNOVATION CENTER
Issue Date: 6/22/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: MCGRAW-EDISON
Catalog Number: TT-D8-735-U-5CQ-PM
Description: TOPTIER LED SITE LUMINAIRE
3500K, 70 CRI LEDS AND CONCENTRATED DISTRIBUTION
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 17500 lumens
Efficiency: N/A
Efficacy: 117.7 lumens/watt
Luminous Opening: Circular (Dia: 1.12' x H: 0')
IES Classification: Type V - Short
BUG Rating: B3 - U0 - G2

Input Watts (W): 148.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



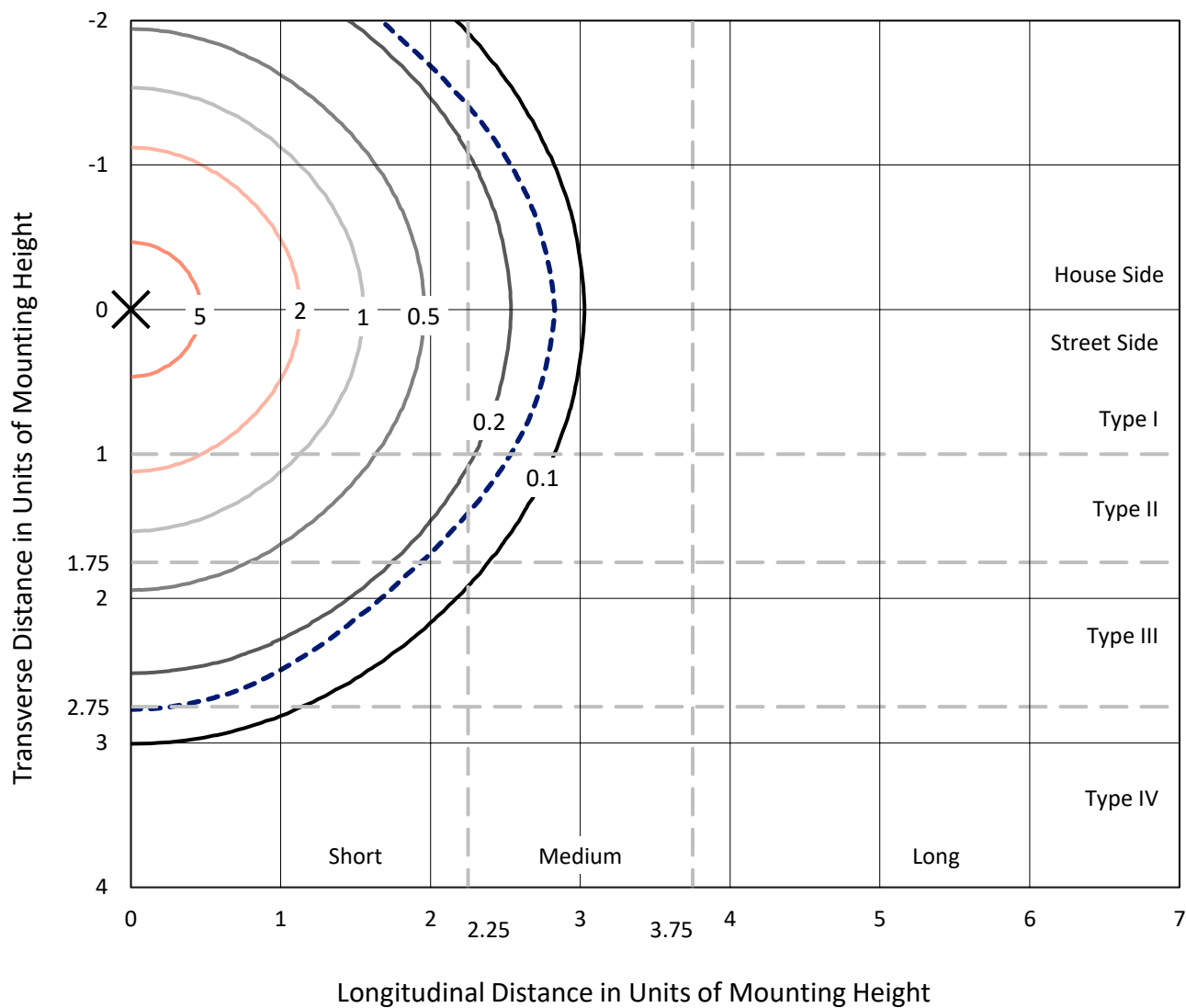
REPORT NUMBER: P543163

CATALOG NUMBER: TT-D8-735-U-5CQ-PM

Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd

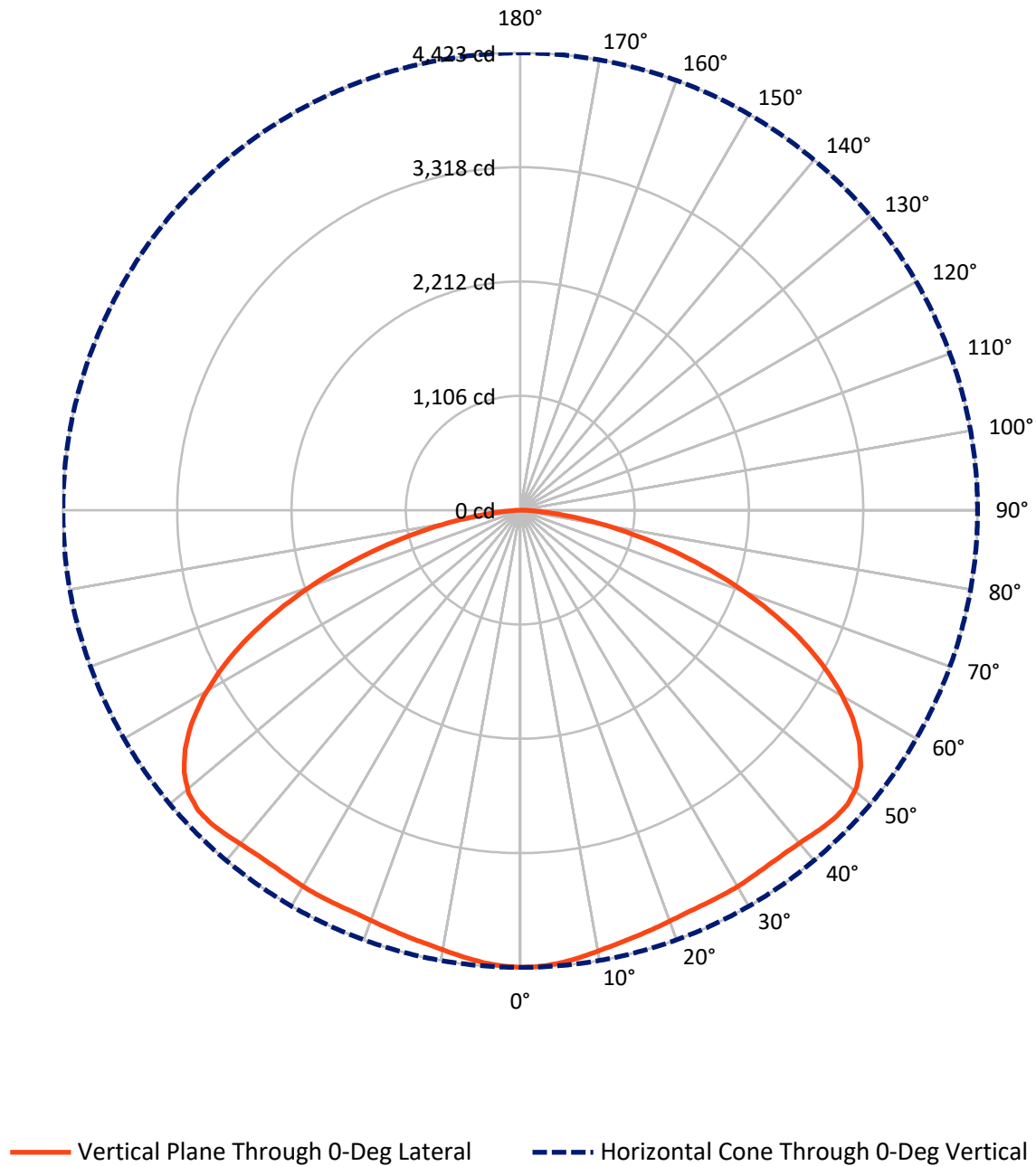
--- 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 7.1 fc
 Type V - Short - N/A

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Luminous Intensity Polar Plot



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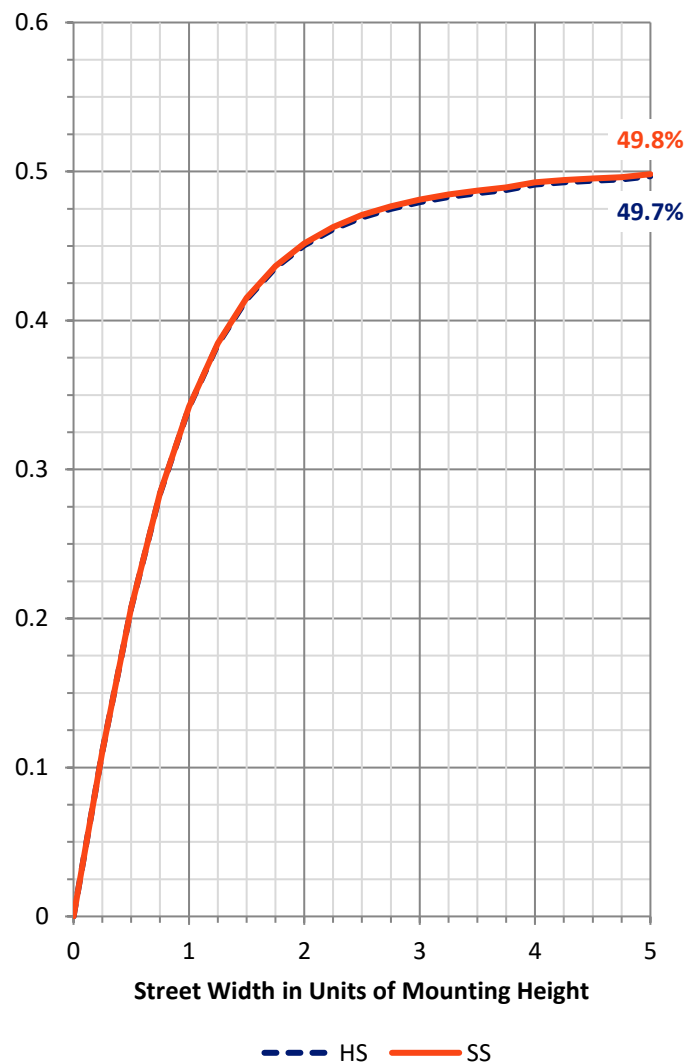
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	8750.0	0.0	8750.0
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	8750.0	0.0	8750.0
	% Fixture	50.0	0.0	50.0
Total	Lumens	17500.0	0.0	17500.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	416.8	2.4
10°-20°	1207.0	6.9
20°-30°	1939.8	11.1
30°-40°	2611.7	14.9
40°-50°	3231.4	18.5
50°-60°	3466.5	19.8
60°-70°	2824.9	16.1
70°-80°	1506.9	8.6
80°-90°	295.1	1.7
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-90°	17500.0	100.0
0°-180°	17500.0	100.0

Coefficient of Utilization



REPORT NUMBER: P543163

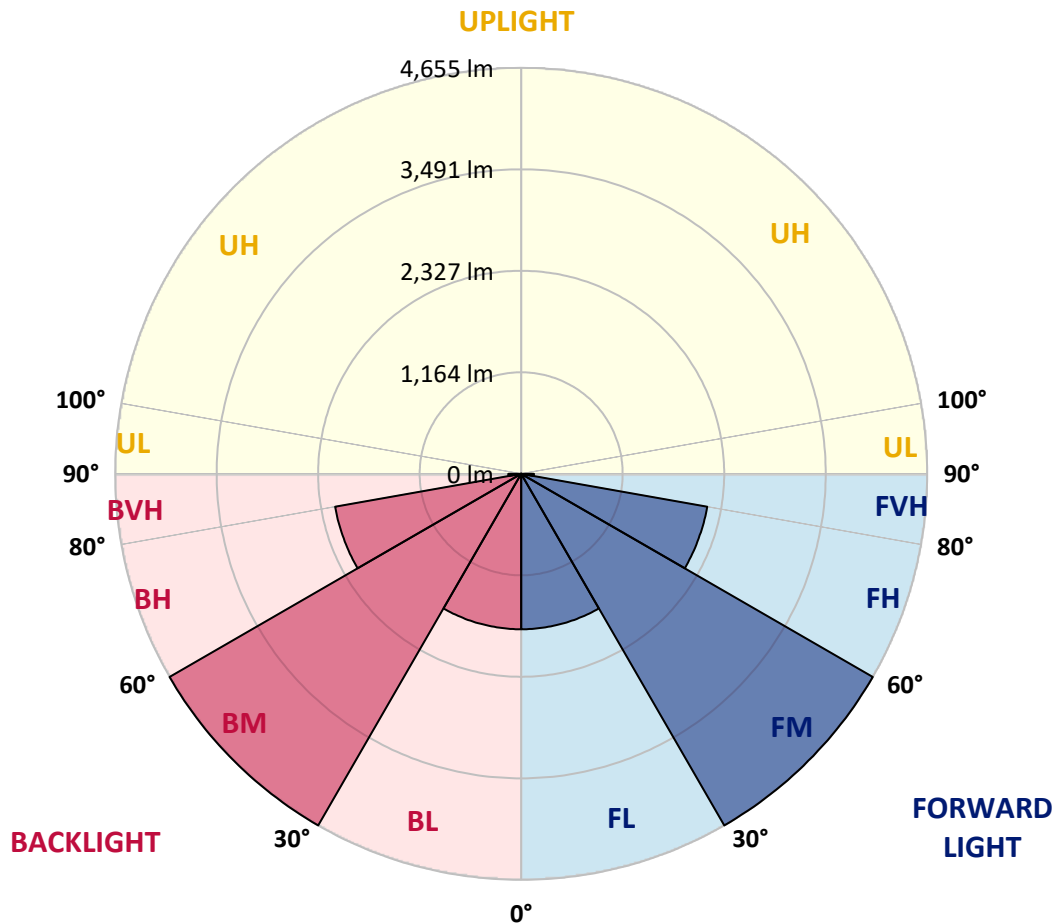
CATALOG NUMBER: TT-D8-735-U-5CQ-PM

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1781.8	10.2			
FM	(30°-60°)	4654.8	26.6			
FH	(60°-80°)	2165.9	12.4			G2/5000
FVH	(80°-90°)	147.5	0.8			G2/225
BL	(0°-30°)	1781.8	10.2	B3/2500		
BM	(30°-60°)	4654.8	26.6	B3/5000		
BH	(60°-80°)	2165.9	12.4	B3/2500		G2/5000
BVH	(80°-90°)	147.5	0.8			G2/225
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G2

Type V Short



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CATALOG NUMBER: TT-D8-735-U-5CQ-PM

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	4423.4	4423.4	4423.4	4423.4	4423.4	4423.4	4423.4	4423.4	4423.4	4423.4	4423.4
2.5°	4415.4	4415.4	4414.6	4413.0	4410.6	4409.0	4409.8	4412.2	4414.6	4415.4	4416.2
5°	4393.0	4394.6	4392.2	4389.0	4386.6	4385.8	4385.0	4388.2	4390.6	4391.4	4392.2
7.5°	4360.1	4362.5	4360.9	4357.7	4354.5	4352.9	4352.9	4354.5	4356.9	4359.3	4359.3
10°	4324.9	4324.9	4324.1	4320.9	4317.7	4315.3	4316.1	4317.7	4320.9	4323.3	4324.1
12.5°	4293.7	4294.5	4292.1	4287.3	4282.5	4280.1	4280.1	4284.1	4288.9	4291.3	4292.9
15°	4269.7	4270.5	4268.1	4260.9	4255.3	4253.7	4255.3	4258.5	4263.3	4266.5	4267.3
17.5°	4247.2	4248.1	4244.8	4236.8	4232.0	4229.6	4229.6	4234.4	4240.8	4243.2	4244.0
20°	4226.4	4225.6	4221.6	4212.8	4206.4	4203.2	4204.8	4211.2	4219.2	4223.2	4223.2
22.5°	4211.2	4210.4	4204.8	4195.2	4188.0	4182.4	4185.6	4193.6	4203.2	4210.4	4210.4
25°	4208.0	4206.4	4197.6	4186.4	4174.4	4169.6	4174.4	4185.6	4197.6	4206.4	4208.0
27.5°	4207.2	4204.8	4195.2	4180.0	4168.0	4164.0	4168.0	4181.6	4196.8	4207.2	4208.0
30°	4203.2	4201.6	4188.8	4172.0	4157.6	4152.8	4158.4	4173.6	4190.4	4200.0	4202.4
32.5°	4193.6	4191.2	4178.4	4159.2	4143.2	4136.8	4142.4	4160.0	4176.8	4190.4	4192.0
35°	4188.8	4187.2	4171.2	4147.2	4128.8	4119.2	4127.2	4145.6	4165.6	4181.6	4184.0
37.5°	4192.8	4190.4	4172.8	4144.8	4120.0	4109.5	4116.7	4138.4	4163.2	4181.6	4184.8
40°	4208.0	4204.8	4183.2	4149.6	4117.6	4105.5	4114.3	4141.6	4173.6	4194.4	4200.0
42.5°	4234.4	4231.2	4202.4	4160.0	4120.0	4105.5	4120.0	4156.0	4197.6	4224.8	4228.8
45°	4256.9	4253.7	4220.8	4168.8	4123.2	4106.3	4126.4	4175.2	4230.4	4266.5	4271.3
47.5°	4258.5	4253.7	4214.4	4156.0	4104.7	4089.5	4119.2	4180.0	4249.7	4296.1	4301.7
50°	4216.8	4212.0	4165.6	4100.7	4046.3	4031.9	4076.7	4152.0	4233.6	4286.5	4293.7
52.5°	4124.0	4119.2	4070.3	3997.5	3939.8	3928.6	3983.8	4069.5	4158.4	4217.6	4225.6
55°	3981.4	3974.2	3926.2	3846.9	3782.1	3776.5	3834.1	3925.4	4021.5	4079.1	4092.7
57.5°	3790.9	3782.9	3731.7	3646.8	3582.7	3575.5	3634.0	3727.7	3829.3	3884.6	3899.0
60°	3551.5	3550.7	3493.1	3407.4	3346.6	3336.2	3388.2	3484.3	3582.7	3641.2	3654.8
62.5°	3274.5	3274.5	3216.9	3140.0	3071.1	3060.7	3109.6	3204.1	3295.3	3353.0	3370.6
65°	2959.1	2952.7	2908.6	2828.6	2759.7	2751.7	2799.7	2875.0	2968.7	3023.1	3039.9
67.5°	2607.6	2600.4	2569.2	2493.1	2433.9	2417.0	2457.9	2534.7	2616.4	2669.2	2680.5
70°	2232.9	2229.7	2197.7	2129.6	2074.4	2061.6	2099.2	2164.9	2233.7	2276.9	2295.4
72.5°	1847.8	1849.4	1815.8	1759.7	1721.3	1708.5	1733.3	1779.0	1855.8	1883.8	1899.1
75°	1467.5	1465.9	1445.1	1397.1	1361.0	1345.0	1370.6	1415.5	1451.5	1487.5	1505.2
77.5°	1102.4	1100.0	1088.8	1048.8	1024.8	1012.8	1026.4	1057.6	1088.0	1119.3	1124.1
80°	765.4	766.2	753.4	728.6	702.9	701.3	712.5	728.6	753.4	774.2	777.4
82.5°	467.6	469.2	458.8	449.1	427.5	427.5	435.5	449.9	462.8	479.6	474.8
85°	222.6	222.6	220.2	212.2	205.0	202.6	206.6	212.2	217.8	225.8	226.6
87.5°	54.4	55.2	56.0	52.8	48.8	47.2	49.6	52.0	55.2	60.0	57.6
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

LM-79-2019: Approved Method: Electrical and Photometric Measurements of Solid-State Lighting Products

Report Prepared for

Cooper Lighting Solutions

MCGRAW EDISON

Report Number: SP1-2411-284-1

Test Date: 11/15/2024

Luminaire Tested: TTN-D0-735-U-WQ

Data in this report applies to families of products including TT-D* and TTN-D*

Test Information

Test Method: LM-79-2019
 Report Number: SP1-2411-284-1
 Test Lab: COOPER LIGHTING SOLUTIONS
 Photometer: SP1 - 76IN SPHERE
 Measurement Geometry: 4π
 Issue Date: 11/15/2024
 Manufacturer: COOPER LIGHTING SOLUTIONS
 Product Line: MCGRAW EDISON
 Catalog Number: **TTN-D0-735-U-WQ**
 Description: TOPTIER NANO LED PARKING GARAGE LUMINAIRE. 3500K, 70 CRI LEDS AND WIDE DISTRIBUTION

Spectral Parameters

CCT (K):	3405	CRI (Ra):	73.9		
CIE u':	0.2365	R1:	71.3	R9:	-18.0
CIE v':	0.5180	R2:	80.3	R10:	53.1
Duv:	0.0036	R3:	87.8	R11:	68.6
CIE x:	0.4148	R4:	73.2	R12:	42.6
CIE y:	0.4038	R5:	69.8	R13:	72.5
CIE z:	0.1814	R6:	71.8	R14:	92.7
Peak Wavelength (nm):	596	R7:	82.8	R15:	64.3
Dominant Wavelength (nm):	579	R8:	54.1		
Purity:	45.70672				
Rf:	76.6				
Rg:	95.4				



Test Conditions

Stabilization Time: 38M
 Operation Time: 1H 38M
 Sphere Temperature (°C): 24.9

REPORT NUMBER: SP1-2411-284-1

Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	6/18/2024	12/18/2024
Power Meter	INXT2011004	2/8/2024	2/8/2025
AC Power Source	IN0063	10/22/2024	10/22/2025
DC Power Source	IN0208	10/22/2024	10/22/2025
Sphere Thermometer	IN0085	10/22/2024	10/22/2025
Room Thermometer	IN0046	10/22/2024	10/22/2025

REPORT NUMBER: SP1-2411-284-1

Photopic Flux vs. Wavelength



Photopic Lumens: NR

λ (nm)	Power W/nm	Lumens (ϕ/nm)	λ (nm)	Power W/nm	Lumens (ϕ/nm)	λ (nm)	Power W/nm	Lumens (ϕ/nm)	λ (nm)	Power W/nm	Lumens (ϕ/nm)	λ (nm)	Power W/nm	Lumens (ϕ/nm)
360	0	NR	490	119	NR	620	846	NR	750	28	NR	880	1	NR
365	0	NR	495	160	NR	625	793	NR	755	25	NR	885	0	NR
370	0	NR	500	225	NR	630	739	NR	760	22	NR	890	0	NR
375	0	NR	505	308	NR	635	681	NR	765	19	NR	895	0	NR
380	0	NR	510	392	NR	640	623	NR	770	16	NR	900	0	NR
385	0	NR	515	474	NR	645	563	NR	775	14	NR	905	0	NR
390	0	NR	520	545	NR	650	506	NR	780	12	NR	910	0	NR
395	1	NR	525	603	NR	655	451	NR	785	10	NR	915	0	NR
400	3	NR	530	649	NR	660	399	NR	790	9	NR	920	0	NR
405	5	NR	535	687	NR	665	352	NR	795	8	NR	925	0	NR
410	11	NR	540	721	NR	670	307	NR	800	6	NR	930	0	NR
415	21	NR	545	751	NR	675	268	NR	805	6	NR	935	0	NR
420	43	NR	550	779	NR	680	234	NR	810	5	NR	940	0	NR
425	88	NR	555	811	NR	685	203	NR	815	4	NR	945	0	NR
430	163	NR	560	843	NR	690	176	NR	820	4	NR	950	0	NR
435	288	NR	565	873	NR	695	152	NR	825	3	NR	955	0	NR
440	416	NR	570	907	NR	700	131	NR	830	3	NR	960	0	NR
445	566	NR	575	938	NR	705	112	NR	835	3	NR	965	0	NR
450	810	NR	580	965	NR	710	96	NR	840	2	NR	970	0	NR
455	669	NR	585	986	NR	715	81	NR	845	2	NR	975	0	NR
460	338	NR	590	997	NR	720	69	NR	850	2	NR	980	0	NR
465	246	NR	595	997	NR	725	58	NR	855	1	NR	985	0	NR
470	182	NR	600	991	NR	730	49	NR	860	1	NR	990	0	NR
475	115	NR	605	968	NR	735	42	NR	865	1	NR	995	0	NR
480	97	NR	610	939	NR	740	37	NR	870	1	NR	1000	0	NR
485	103	NR	615	896	NR	745	32	NR	875	1	NR			

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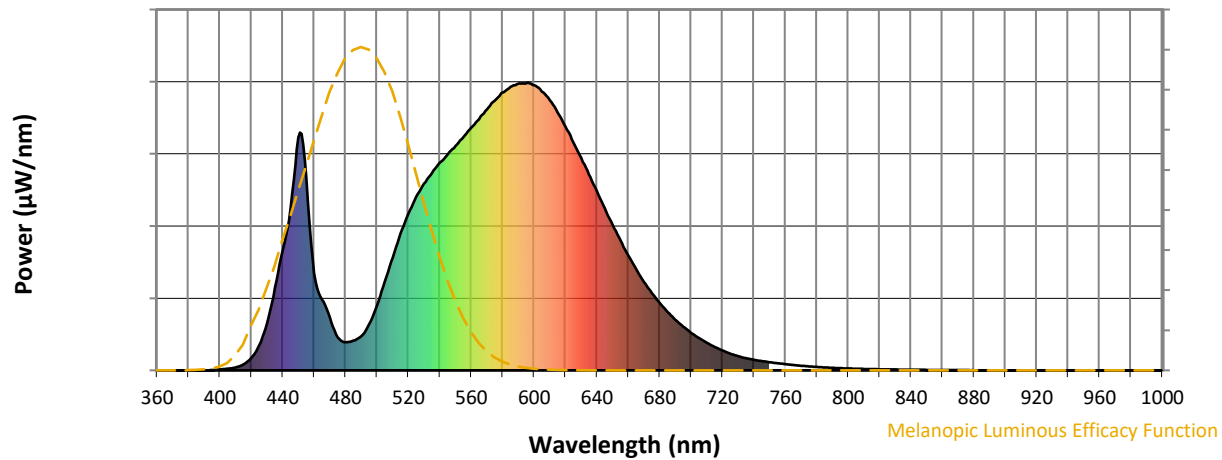
Scotopic Flux vs. Wavelength

Scotopic Lumens: NR
S/P: 1.33

λ (nm)	Power W [^] /nm	Lumens (Φ/nm)	λ (nm)	Power W [^] /nm	Lumens (Φ/nm)	λ (nm)	Power W [^] /nm	Lumens (Φ/nm)	λ (nm)	Power W [^] /nm	Lumens (Φ/nm)	λ (nm)	Power W [^] /nm	Lumens (Φ/nm)
360	0	NR	490	119	NR	620	846	NR	750	28	NR	880	1	NR
365	0	NR	495	160	NR	625	793	NR	755	25	NR	885	0	NR
370	0	NR	500	225	NR	630	739	NR	760	22	NR	890	0	NR
375	0	NR	505	308	NR	635	681	NR	765	19	NR	895	0	NR
380	0	NR	510	392	NR	640	623	NR	770	16	NR	900	0	NR
385	0	NR	515	474	NR	645	563	NR	775	14	NR	905	0	NR
390	0	NR	520	545	NR	650	506	NR	780	12	NR	910	0	NR
395	1	NR	525	603	NR	655	451	NR	785	10	NR	915	0	NR
400	3	NR	530	649	NR	660	399	NR	790	9	NR	920	0	NR
405	5	NR	535	687	NR	665	352	NR	795	8	NR	925	0	NR
410	11	NR	540	721	NR	670	307	NR	800	6	NR	930	0	NR
415	21	NR	545	751	NR	675	268	NR	805	6	NR	935	0	NR
420	43	NR	550	779	NR	680	234	NR	810	5	NR	940	0	NR
425	88	NR	555	811	NR	685	203	NR	815	4	NR	945	0	NR
430	163	NR	560	843	NR	690	176	NR	820	4	NR	950	0	NR
435	288	NR	565	873	NR	695	152	NR	825	3	NR	955	0	NR
440	416	NR	570	907	NR	700	131	NR	830	3	NR	960	0	NR
445	566	NR	575	938	NR	705	112	NR	835	3	NR	965	0	NR
450	810	NR	580	965	NR	710	96	NR	840	2	NR	970	0	NR
455	669	NR	585	986	NR	715	81	NR	845	2	NR	975	0	NR
460	338	NR	590	997	NR	720	69	NR	850	2	NR	980	0	NR
465	246	NR	595	997	NR	725	58	NR	855	1	NR	985	0	NR
470	182	NR	600	991	NR	730	49	NR	860	1	NR	990	0	NR
475	115	NR	605	968	NR	735	42	NR	865	1	NR	995	0	NR
480	97	NR	610	939	NR	740	37	NR	870	1	NR	1000	0	NR
485	103	NR	615	896	NR	745	32	NR	875	1	NR			

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Melanopic Flux vs. Wavelength



Melanopic Lumens: NR

M/P: 2.47

λ (nm)	Power W ^λ /nm	Lumens (φ/nm)	λ (nm)	Power W ^λ /nm	Lumens (φ/nm)	λ (nm)	Power W ^λ /nm	Lumens (φ/nm)	λ (nm)	Power W ^λ /nm	Lumens (φ/nm)	λ (nm)	Power W ^λ /nm	Lumens (φ/nm)
360	0	NR	490	119	NR	620	846	NR	750	28	NR	880	1	NR
365	0	NR	495	160	NR	625	793	NR	755	25	NR	885	0	NR
370	0	NR	500	225	NR	630	739	NR	760	22	NR	890	0	NR
375	0	NR	505	308	NR	635	681	NR	765	19	NR	895	0	NR
380	0	NR	510	392	NR	640	623	NR	770	16	NR	900	0	NR
385	0	NR	515	474	NR	645	563	NR	775	14	NR	905	0	NR
390	0	NR	520	545	NR	650	506	NR	780	12	NR	910	0	NR
395	1	NR	525	603	NR	655	451	NR	785	10	NR	915	0	NR
400	3	NR	530	649	NR	660	399	NR	790	9	NR	920	0	NR
405	5	NR	535	687	NR	665	352	NR	795	8	NR	925	0	NR
410	11	NR	540	721	NR	670	307	NR	800	6	NR	930	0	NR
415	21	NR	545	751	NR	675	268	NR	805	6	NR	935	0	NR
420	43	NR	550	779	NR	680	234	NR	810	5	NR	940	0	NR
425	88	NR	555	811	NR	685	203	NR	815	4	NR	945	0	NR
430	163	NR	560	843	NR	690	176	NR	820	4	NR	950	0	NR
435	288	NR	565	873	NR	695	152	NR	825	3	NR	955	0	NR
440	416	NR	570	907	NR	700	131	NR	830	3	NR	960	0	NR
445	566	NR	575	938	NR	705	112	NR	835	3	NR	965	0	NR
450	810	NR	580	965	NR	710	96	NR	840	2	NR	970	0	NR
455	669	NR	585	986	NR	715	81	NR	845	2	NR	975	0	NR
460	338	NR	590	997	NR	720	69	NR	850	2	NR	980	0	NR
465	246	NR	595	997	NR	725	58	NR	855	1	NR	985	0	NR
470	182	NR	600	991	NR	730	49	NR	860	1	NR	990	0	NR
475	115	NR	605	968	NR	735	42	NR	865	1	NR	995	0	NR
480	97	NR	610	939	NR	740	37	NR	870	1	NR	1000	0	NR
485	103	NR	615	896	NR	745	32	NR	875	1	NR			

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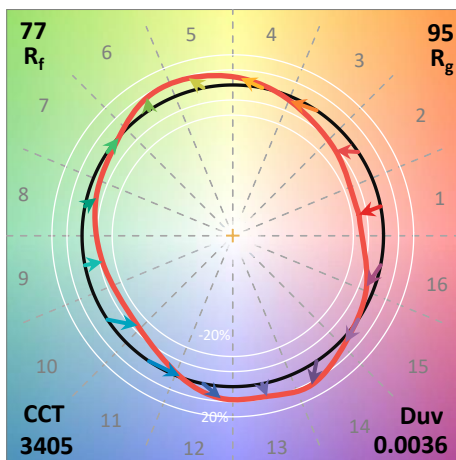
TM-30-18

Summary

$R_f = 76.6$
 $R_g = 95.4$
 $CIE R_a = 73.9$
 $R_g = -18.0$



Color Vector Graphics

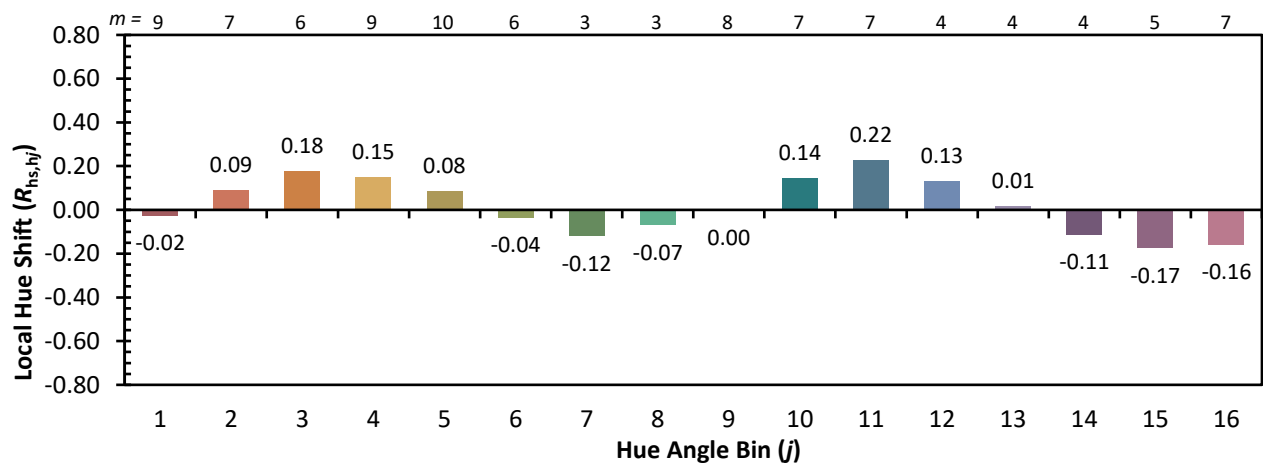


Individual Sample Fidelity Index ($R_{f,i}$)

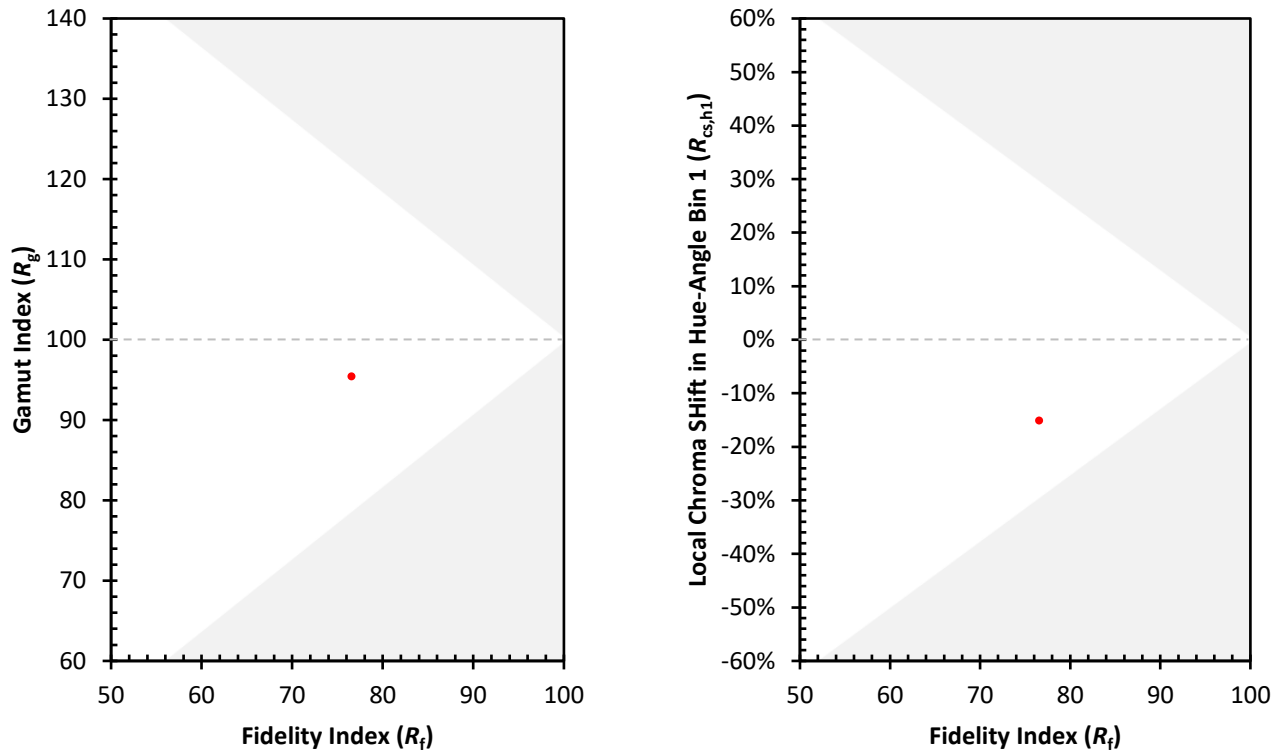
CES01 = 86	CES26 = 67	CES51 = 88	CES76 = 56
CES02 = 62	CES27 = 89	CES52 = 88	CES77 = 75
CES03 = 31	CES28 = 83	CES53 = 78	CES78 = 60
CES04 = 70	CES29 = 69	CES54 = 86	CES79 = 85
CES05 = 48	CES30 = 83	CES55 = 85	CES80 = 82
CES06 = 51	CES31 = 72	CES56 = 75	CES81 = 78
CES07 = 41	CES32 = 65	CES57 = 75	CES82 = 92
CES08 = 40	CES33 = 78	CES58 = 76	CES83 = 90
CES09 = 29	CES34 = 74	CES59 = 87	CES84 = 88
CES10 = 75	CES35 = 86	CES60 = 91	CES85 = 79
CES11 = 58	CES36 = 93	CES61 = 84	CES86 = 72
CES12 = 64	CES37 = 81	CES62 = 88	CES87 = 79
CES13 = 43	CES38 = 92	CES63 = 74	CES88 = 82
CES14 = 74	CES39 = 96	CES64 = 69	CES89 = 72
CES15 = 71	CES40 = 92	CES65 = 66	CES90 = 82
CES16 = 47	CES41 = 93	CES66 = 62	CES91 = 79
CES17 = 50	CES42 = 83	CES67 = 60	CES92 = 63
CES18 = 56	CES43 = 79	CES68 = 68	CES93 = 77
CES19 = 72	CES44 = 99	CES69 = 76	CES94 = 56
CES20 = 65	CES45 = 86	CES70 = 61	CES95 = 70
CES21 = 86	CES46 = 83	CES71 = 55	CES96 = 79
CES22 = 79	CES47 = 85	CES72 = 85	CES97 = 85
CES23 = 92	CES48 = 78	CES73 = 53	CES98 = 78
CES24 = 91	CES49 = 81	CES74 = 95	CES99 = 68
CES25 = 72	CES50 = 88	CES75 = 57	



Color Rendition by Hue-Angle Bin



Measure Comparisons



(END OF REPORT)