

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: P232798

Luminaire Tested: **CTN-10-9-D-E1-T2**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P232798
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1707-171-7)
Test Lab: INNOVATION CENTER(G2)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: MCGRAW-EDISON
Catalog Number: CTN-10-9-D-E1-T2
Description: CELESTEON HIGH MAST LUMINAIRE
(10) 70 CRI, 4000K LEDS AND TYPE II OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 92395.9 lumens
Efficiency: N/A
Efficacy: 121.6 lumens/watt
Luminous Opening: Circular (Dia: 2.08' x H: 0')
IES Classification: Type II - Short - Non-Cutoff
BUG Rating: B5 - U0 - G5

Input Watts (W): 760
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: 25 FT



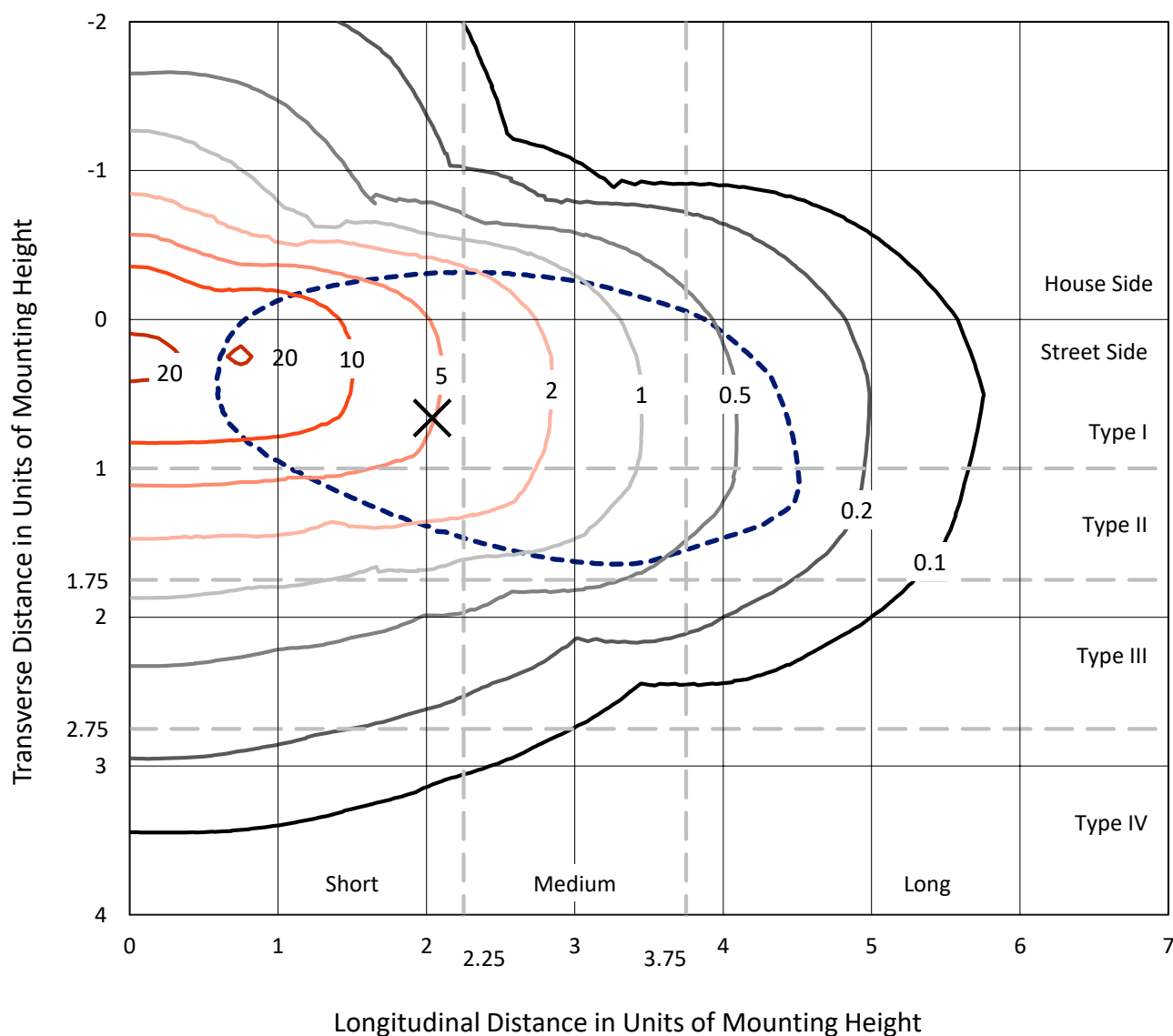
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Iso-Footcandle Lines of Horizontal Illumination

× Max cd

--- 1/2 Max cd

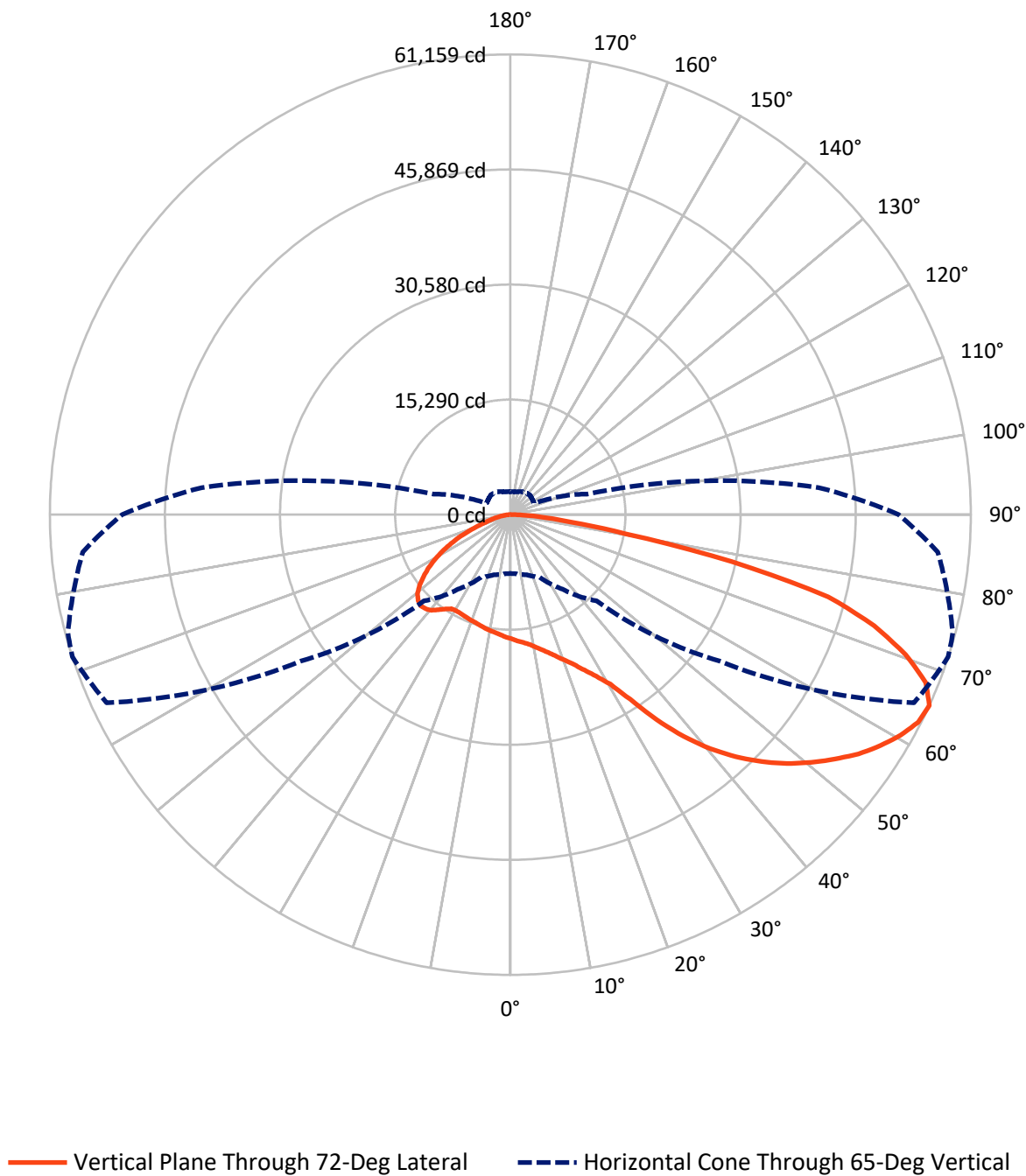


Based on 30 foot mounting height. Maximum calculated value = 21.4 fc
 Type II - Short - Non-Cutoff

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Luminous Intensity Polar Plot



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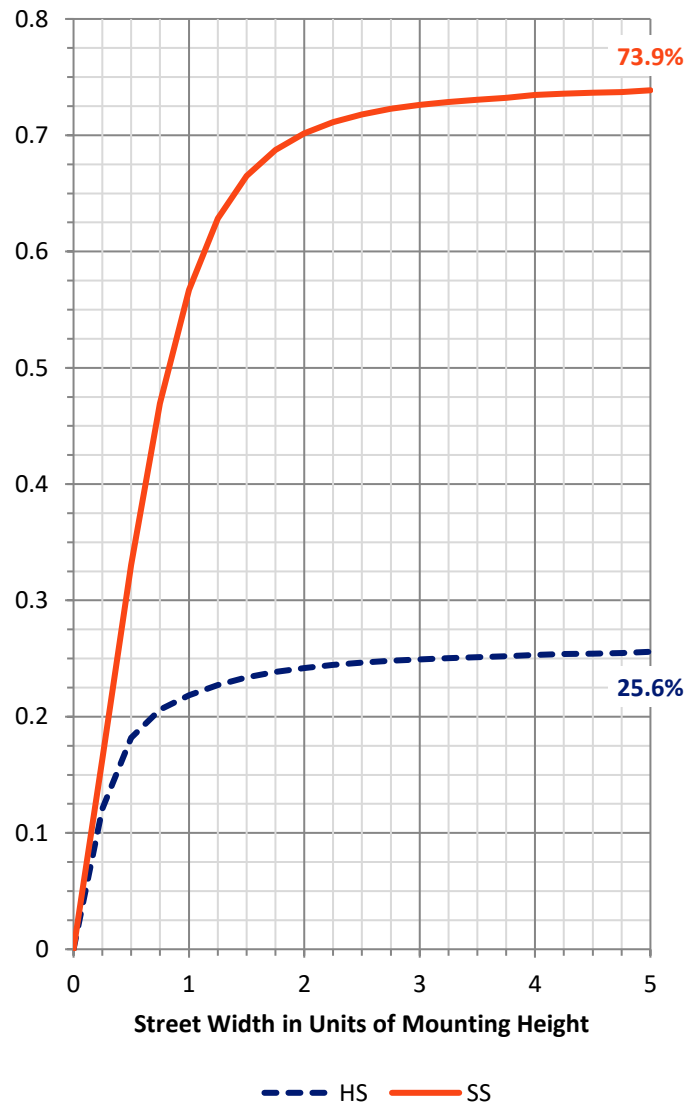
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	24068.3	0.0	24068.3
	% Fixture	26.0	0.0	26.0
Street Side	Lumens	68327.7	0.0	68327.7
	% Fixture	74.0	0.0	74.0
Total	Lumens	92395.9	0.0	92395.9
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	1585.8	1.7
10°-20°	4833.5	5.2
20°-30°	8096.2	8.8
30°-40°	11751.7	12.7
40°-50°	15890.7	17.2
50°-60°	18548.8	20.1
60°-70°	18468.5	20.0
70°-80°	11199.1	12.1
80°-90°	2021.6	2.2
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°	92395.9	100.0
0°-180°	92395.9	100.0

Coefficient of Utilization



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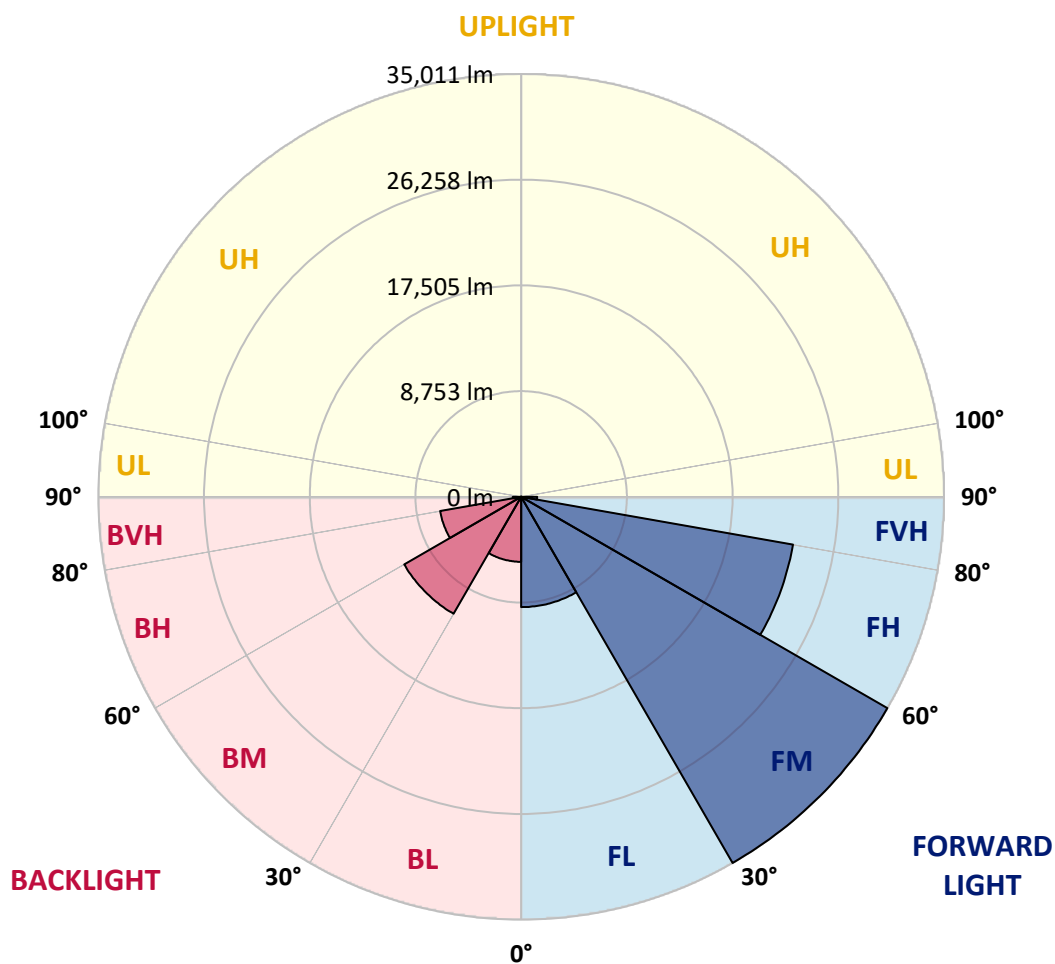
CATALOG NUMBER: CTN-10-9-D-E1-T2

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	9132.0	9.9			
FM	(30°-60°)	35010.9	37.9			
FH	(60°-80°)	22854.9	24.7			G5
FVH	(80°-90°)	1329.8	1.4			G5
BL	(0°-30°)	5383.5	5.8	B5		
BM	(30°-60°)	11180.3	12.1	B5		
BH	(60°-80°)	6812.7	7.4	B5		G5
BVH	(80°-90°)	691.8	0.7			G4/750
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B5-U0-G5

Type II Short



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	72°	75°	85°
0°	16492	16492	16492	16492	16492	16492	16492	16492	16492	16492	16492
2.5°	17350	17317	17328	17344	17147	17114	16951	16868	16777	16713	16569
5°	18243	18240	18169	18170	17861	17742	17441	17219	17026	16926	16626
7.5°	19053	18969	18962	18942	18593	18403	18004	17667	17372	17218	16753
10°	19814	19755	19756	19732	19374	19137	18657	18233	17839	17640	16963
12.5°	20626	20559	20548	20464	20135	19907	19382	18861	18384	18159	17281
15°	21459	21395	21363	21266	20899	20656	20216	19572	19029	18749	17699
17.5°	22227	22188	22134	22059	21738	21472	21032	20420	19771	19413	18180
20°	22701	22667	22703	22703	22518	22325	21882	21357	20656	20213	18733
22.5°	23064	23029	23189	23270	23289	23246	22811	22353	21623	21166	19417
25°	23153	23157	23428	23792	24062	24188	23853	23516	22886	22314	20352
27.5°	23127	23153	23500	24150	24797	25103	24982	24786	24287	23800	21601
30°	23089	23157	23615	24414	25350	25956	26077	26374	26129	25797	23582
32.5°	22617	22678	23334	24512	25821	26921	27572	28831	29230	29165	26648
35°	21512	21632	22605	24255	26184	27904	29449	32085	33466	33355	30185
37.5°	20386	20533	21700	23776	26348	28950	31503	35723	37392	37230	33584
40°	19365	19534	20712	23058	26304	29928	33661	39142	40888	40600	36615
42.5°	18185	18430	19503	22101	25961	30617	35796	42409	43990	43550	39373
45°	17086	17283	18314	20790	25438	31124	37749	45436	46811	46298	41914
47.5°	15895	16145	17181	19441	24399	31238	39537	48125	49419	48885	44284
50°	12753	13156	15496	18121	22786	30824	41125	50647	51763	51341	46736
52.5°	11119	11198	12382	16606	20822	29741	42271	53121	53967	53537	48906
55°	10388	10410	10940	14055	18917	27678	42826	55490	56126	55530	50960
57.5°	9637	9760	10293	11861	17126	24701	42441	57562	57941	57270	52846
60°	9016	9116	9648	10713	15161	21240	40647	59213	59547	58862	54616
62.5°	8453	8526	8938	9936	13386	18171	37299	59655	60776	60231	56252
65°	7814	7881	8263	9153	12087	16207	33931	59158	61159	60829	56988
67.5°	7055	7145	7490	8257	10749	14516	29955	57897	59525	59018	55401
70°	6058	6205	6596	7261	9186	12337	23896	53752	55686	55107	51163
72.5°	4776	4808	5091	5644	7275	9814	16127	45483	50534	50370	45258
75°	3561	3670	4124	4550	5315	7041	9803	33150	43629	43629	38142
77.5°	2906	2963	3265	3623	4145	4941	6232	18731	30072	33122	28669
80°	2271	2251	2272	2433	2926	3267	4143	9627	15536	17660	18780
82.5°	1244	1245	1381	1302	1614	1836	2513	5415	8118	9014	10061
85°	630	615	685	639	747	838	1141	2690	4143	4491	4741
87.5°	225	214	246	295	276	293	394	967	1601	1713	1679
90°	0	0	0	0	0	0	0	0	0	0	0

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CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	16492	16492	16492	16492	16492	16492	16492	16492	16492	16492	16492
2.5°	16528	16432	16316	16219	16014	15907	15822	15846	15754	15621	15619
5°	16517	16334	16085	15879	15549	15379	15219	15177	15040	14908	14901
7.5°	16555	16312	15908	15579	15149	14884	14636	14539	14378	14239	14232
10°	16660	16339	15786	15330	14792	14429	14108	13913	13727	13584	13582
12.5°	16848	16419	15679	15084	14445	13964	13554	13302	13042	12936	12930
15°	17113	16536	15540	14757	14018	13470	12963	12630	12342	12240	12262
17.5°	17453	16727	15428	14396	13547	12886	12359	12024	11600	11506	11532
20°	17875	17022	15404	14066	13031	12244	11597	11360	10823	10697	10680
22.5°	18421	17370	15394	13713	12426	11506	10739	10438	9987	9775	9727
25°	19097	17773	15377	13360	11752	10665	9732	9309	9027	8706	8699
27.5°	19987	18314	15417	13010	11017	9684	8651	8138	7976	7768	7660
30°	21521	19278	15526	12587	10213	8555	7467	7078	6879	6668	6632
32.5°	24096	21364	15863	12129	9318	7334	6498	6091	5761	5652	5623
35°	27321	23841	16729	11639	8350	6367	5700	5163	4848	4822	4820
37.5°	30218	26483	17858	11035	7283	5677	4908	4445	4208	4232	4295
40°	33020	28827	19055	10433	6247	4947	4139	3917	3811	3897	3939
42.5°	35652	30968	19917	9616	5350	4163	3609	3740	3778	3849	3878
45°	38112	33162	20558	8632	4543	3610	3533	3759	3867	3922	3919
47.5°	40492	35259	20750	7331	3919	3549	3603	3732	3901	4002	3995
50°	42867	37167	20589	6009	3793	3667	3670	3649	3846	3928	3897
52.5°	44996	38949	19679	5029	3877	3791	3749	3643	3699	3756	3728
55°	46910	40436	18252	4546	3949	3871	3927	3721	3610	3562	3571
57.5°	48691	41583	16612	4246	3934	3852	3998	3700	3538	3336	3297
60°	50380	42336	14765	3987	3863	3824	3844	3701	3471	3209	3145
62.5°	51574	42376	12645	3756	3726	3781	3723	3672	3489	3290	3250
65°	51550	41131	10548	3491	3555	3666	3566	3397	3120	3061	3041
67.5°	49313	37980	8514	3098	3278	3511	3341	3066	2827	2757	2770
70°	44449	33525	6288	2511	2862	3247	3141	2835	2573	2518	2577
72.5°	38684	28799	4470	1991	2377	2873	2831	2567	2337	2360	2413
75°	32296	22925	3279	1713	1866	2449	2555	2386	2240	2313	2311
77.5°	24070	16930	2497	1437	1545	1906	2252	2188	2586	3143	3161
80°	15817	10992	1685	1180	1264	1430	1838	2108	2648	2295	2267
82.5°	8764	5834	1045	918	949	1037	1332	2201	1945	1805	1812
85°	3886	2259	617	616	618	629	855	1669	1368	1325	1347
87.5°	1346	595	194	154	174	218	445	1018	714	592	594
90°	0	0	0	0	0	0	0	0	0	0	0

LM-79-08: Approved Method: Electrical and Photometric Measurements of Solid-State Lighting Products

Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

STREETWORKS

Report Number: SP1-2104-215-1

Luminaire Tested: CST-CA6-230-740-U-T4

Test Date: 04/20/2021

Test Information

Test Method: LM-79-08
 Report Number: SP1-2104-215-1
 Test Lab: COOPER LIGHTING SOLUTIONS
 Photometer: SP1
 Measurement Geometry: 4π
 Issue Date: 04/20/2021
 Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
 Product Line: STREETWORKS
 Catalog Number: **CST-CA6-230-740-U-T4**
 Description: STREETWORKS HIGH MAST LUMINAIRE

230W

Spectral Parameters

CCT (K):	3783	CRI (Ra):	75.1		
CIE u':	0.2297	R1:	72.8	R9:	-19.0
CIE v':	0.5046	R2:	81.9	R10:	57.0
Duv:	-0.0008	R3:	89.0	R11:	70.7
CIE x:	0.3897	R4:	74.1	R12:	48.2
CIE y:	0.3804	R5:	72.3	R13:	74.4
CIE z:	0.2299	R6:	74.5	R14:	93.7
Peak Wavelength (nm):	450	R7:	81.7		
Dominant Wavelength (nm):	580	R8:	54.6		
Purity:	31.3				
Rf:	76.5				
Rg:	95.6				



Test Conditions

Stabilization Time: 47M
 Operation Time: 12H
 Room Temperature (°C) / RH%: 25.5/39%
 Sphere Temperature (°C): 24.0

REPORT NUMBER: SP1-2104-215-1

Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	IN0058	1/31/2021	7/31/2021
Power Meter	IN0071	12/1/2020	12/1/2021
AC Power Source	IN0063	12/1/2020	12/1/2021
DC Power Source	IN0208	12/1/2020	12/1/2021
Sphere Thermometer	IN0085	12/1/2020	12/1/2021
Room Thermometer	IN0046	12/1/2020	12/1/2021

REPORT NUMBER: SP1-2104-215-1

CIE 1931 Chromaticity Diagram



CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles



Point lies inside the ANSI 4000K 7-step quadrangle

REPORT NUMBER: SP1-2104-215-1

Photopic Flux vs. Wavelength



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λ (nm)	Power (μW/nm)	Lumens (Φ/nm)	λ (nm)	Power (μW/nm)	Lumens (Φ/nm)	λ (nm)	Power (μW/nm)	Lumens (Φ/nm)	λ (nm)	Power (μW/nm)	Lumens (Φ/nm)	λ (nm)	Power (μW/nm)	Lumens (Φ/nm)
360	13329	0.0	490	105235	15.0	620	524343	136.4	750	24224	0.0	880	16135	0.0
365	11697	0.0	495	137678	25.0	625	488932	107.9	755	22376	0.0	885	16876	0.0
370	10917	0.0	500	186689	41.2	630	445400	80.6	760	20109	0.0	890	13554	0.0
375	12548	0.0	505	244611	68.4	635	403534	60.6	765	18097	0.0	895	11525	0.0
380	13932	0.0	510	298987	102.7	640	366414	43.8	770	17366	0.0	900	14656	0.0
385	13265	0.0	515	348170	144.2	645	331272	31.9	775	16226	0.0	905	11999	0.0
390	11808	0.0	520	390427	189.3	650	297360	21.7	780	14803	0.0	910	12965	0.0
395	10395	0.0	525	421211	226.1	655	263291	15.1	785	15199	0.0	915	15939	0.0
400	9348	0.0	530	446063	262.6	660	232931	9.7	790	12989	0.0	920	16238	0.0
405	9479	0.0	535	465110	288.4	665	204719	6.5	795	12106	0.0	925	14419	0.0
410	12414	0.0	540	479189	312.2	670	177096	3.9	800	12942	0.0	930	14788	0.0
415	21574	0.0	545	495864	330.0	675	153254	2.6	805	13253	0.0	935	18619	0.0
420	41448	0.1	550	516625	351.1	680	132874	1.5	810	12808	0.0	940	13995	0.0
425	79385	0.4	555	538555	367.8	685	115378	1.0	815	12903	0.0	945	18047	0.0
430	141845	1.1	560	562412	382.2	690	100157	0.6	820	12621	0.0	950	21418	0.0
435	231290	2.7	565	585835	389.5	695	85561	0.4	825	13903	0.0	955	23138	0.0
440	374482	5.9	570	608681	395.8	700	75396	0.2	830	11870	0.0	960	13665	0.0
445	596715	12.4	575	629563	391.7	705	65658	0.1	835	11069	0.0	965	14793	0.0
450	719656	18.7	580	646820	384.3	710	58172	0.1	840	15291	0.0	970	14396	0.0
455	530438	17.8	585	659231	366.3	715	52563	0.1	845	15125	0.0	975	11155	0.0
460	330446	13.5	590	665630	344.2	720	47085	0.0	850	15336	0.0	980	17987	0.0
465	241999	12.5	595	656228	311.1	725	41741	0.0	855	15791	0.0	985	16185	0.0
470	167096	10.4	600	646946	278.8	730	37415	0.0	860	14660	0.0	990	22120	0.0
475	113791	8.9	605	628643	243.4	735	32125	0.0	865	12528	0.0	995	11943	0.0
480	96126	9.1	610	599057	205.8	740	29322	0.0	870	14089	0.0	1000	16020	0.0
485	94467	11.2	615	565669	170.8	745	26862	0.0	875	11732	0.0			

REPORT NUMBER: SP1-2104-215-1

Scotopic Flux vs. Wavelength



Scotopic Lumens: 54268.8

S/P: 1.5

λ (nm)	Power (μW/nm)	Lumens (Φ/nm)	λ (nm)	Power (μW/nm)	Lumens (Φ/nm)	λ (nm)	Power (μW/nm)	Lumens (Φ/nm)	λ (nm)	Power (μW/nm)	Lumens (Φ/nm)	λ (nm)	Power (μW/nm)	Lumens (Φ/nm)
360	13329	0.0	490	105235	162.0	620	524343	6.6	750	24224	0.0	880	16135	0.0
365	11697	0.0	495	137678	222.6	625	488932	4.1	755	22376	0.0	885	16876	0.0
370	10917	0.0	500	186689	312.3	630	445400	2.5	760	20109	0.0	890	13554	0.0
375	12548	0.0	505	244611	415.8	635	403534	1.5	765	18097	0.0	895	11525	0.0
380	13932	0.0	510	298987	506.8	640	366414	0.9	770	17366	0.0	900	14656	0.0
385	13265	0.0	515	348170	577.1	645	331272	0.6	775	16226	0.0	905	11999	0.0
390	11808	0.0	520	390427	620.6	650	297360	0.3	780	14803	0.0	910	12965	0.0
395	10395	0.1	525	421211	630.1	655	263291	0.2	785	15199	0.0	915	15939	0.0
400	9348	0.1	530	446063	615.0	660	232931	0.1	790	12989	0.0	920	16238	0.0
405	9479	0.3	535	465110	579.6	665	204719	0.1	795	12106	0.0	925	14419	0.0
410	12414	0.7	540	479189	529.5	670	177096	0.0	800	12942	0.0	930	14788	0.0
415	21574	2.2	545	495864	475.4	675	153254	0.0	805	13253	0.0	935	18619	0.0
420	41448	6.8	550	516625	422.4	680	132874	0.0	810	12808	0.0	940	13995	0.0
425	79385	19.4	555	538555	368.0	685	115378	0.0	815	12903	0.0	945	18047	0.0
430	141845	48.3	560	562412	314.4	690	100157	0.0	820	12621	0.0	950	21418	0.0
435	231290	103.4	565	585835	262.8	695	85561	0.0	825	13903	0.0	955	23138	0.0
440	374482	209.3	570	608681	214.8	700	75396	0.0	830	11870	0.0	960	13665	0.0
445	596715	399.6	575	629563	171.5	705	65658	0.0	835	11069	0.0	965	14793	0.0
450	719656	557.8	580	646820	133.3	710	58172	0.0	840	15291	0.0	970	14396	0.0
455	530438	463.5	585	659231	100.8	715	52563	0.0	845	15125	0.0	975	11155	0.0
460	330446	319.2	590	665630	74.1	720	47085	0.0	850	15336	0.0	980	17987	0.0
465	241999	255.6	595	656228	52.3	725	41741	0.0	855	15791	0.0	985	16185	0.0
470	167096	192.4	600	646946	36.5	730	37415	0.0	860	14660	0.0	990	22120	0.0
475	113791	142.3	605	628643	24.7	735	32125	0.0	865	12528	0.0	995	11943	0.0
480	96126	129.8	610	599057	16.2	740	29322	0.0	870	14089	0.0	1000	16020	0.0
485	94467	136.9	615	565669	10.5	745	26862	0.0	875	11732	0.0			

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Melanopic Flux vs. Wavelength


Melanopic Lumens: 20938.3 M/P: 0.58

λ (nm)	Power (μW/nm)	Lumens (Φ/nm)	λ (nm)	Power (μW/nm)	Lumens (Φ/nm)	λ (nm)	Power (μW/nm)	Lumens (Φ/nm)	λ (nm)	Power (μW/nm)	Lumens (Φ/nm)	λ (nm)	Power (μW/nm)	Lumens (Φ/nm)
360	13329	0.0	490	105235	87.6	620	524343	0.4	750	24224	0.0	880	16135	0.0
365	11697	0.0	495	137678	113.7	625	488932	0.3	755	22376	0.0	885	16876	0.0
370	10917	0.0	500	186689	150.1	630	445400	0.2	760	20109	0.0	890	13554	0.0
375	12548	0.0	505	244611	187.7	635	403534	0.1	765	18097	0.0	895	11525	0.0
380	13932	0.0	510	298987	214.7	640	366414	0.1	770	17366	0.0	900	14656	0.0
385	13265	0.0	515	348170	227.5	645	331272	0.0	775	16226	0.0	905	11999	0.0
390	11808	0.0	520	390427	227.3	650	297360	0.0	780	14803	0.0	910	12965	0.0
395	10395	0.1	525	421211	213.6	655	263291	0.0	785	15199	0.0	915	15939	0.0
400	9348	0.1	530	446063	192.8	660	232931	0.0	790	12989	0.0	920	16238	0.0
405	9479	0.2	535	465110	167.4	665	204719	0.0	795	12106	0.0	925	14419	0.0
410	12414	0.5	540	479189	140.2	670	177096	0.0	800	12942	0.0	930	14788	0.0
415	21574	1.4	545	495864	115.2	675	153254	0.0	805	13253	0.0	935	18619	0.0
420	41448	4.7	550	516625	92.7	680	132874	0.0	810	12808	0.0	940	13995	0.0
425	79385	12.4	555	538555	72.6	685	115378	0.0	815	12903	0.0	945	18047	0.0
430	141845	30.0	560	562412	55.5	690	100157	0.0	820	12621	0.0	950	21418	0.0
435	231290	61.7	565	585835	41.1	695	85561	0.0	825	13903	0.0	955	23138	0.0
440	374482	125.1	570	608681	29.7	700	75396	0.0	830	11870	0.0	960	13665	0.0
445	596715	235.4	575	629563	21.0	705	65658	0.0	835	11069	0.0	965	14793	0.0
450	719656	331.6	580	646820	14.5	710	58172	0.0	840	15291	0.0	970	14396	0.0
455	530438	277.9	585	659231	9.8	715	52563	0.0	845	15125	0.0	975	11155	0.0
460	330446	194.7	590	665630	6.5	720	47085	0.0	850	15336	0.0	980	17987	0.0
465	241999	158.1	595	656228	4.2	725	41741	0.0	855	15791	0.0	985	16185	0.0
470	167096	119.6	600	646946	2.7	730	37415	0.0	860	14660	0.0	990	22120	0.0
475	113791	86.9	605	628643	1.7	735	32125	0.0	865	12528	0.0	995	11943	0.0
480	96126	77.2	610	599057	1.1	740	29322	0.0	870	14089	0.0	1000	16020	0.0
485	94467	77.9	615	565669	0.7	745	26862	0.0	875	11732	0.0			

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TM-30-18

Summary

$R_f = 76.5$
 $R_g = 95.6$
 CIE $R_a = 75.1$
 $R_g = -19.0$



Color Vector Graphics



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

CES01 = 86	CES26 = 66	CES51 = 90	CES76 = 56
CES02 = 61	CES27 = 89	CES52 = 89	CES77 = 73
CES03 = 31	CES28 = 83	CES53 = 81	CES78 = 58
CES04 = 70	CES29 = 69	CES54 = 87	CES79 = 84
CES05 = 48	CES30 = 84	CES55 = 86	CES80 = 81
CES06 = 51	CES31 = 72	CES56 = 77	CES81 = 79
CES07 = 40	CES32 = 64	CES57 = 77	CES82 = 92
CES08 = 39	CES33 = 79	CES58 = 77	CES83 = 90
CES09 = 29	CES34 = 73	CES59 = 87	CES84 = 87
CES10 = 74	CES35 = 85	CES60 = 90	CES85 = 78
CES11 = 57	CES36 = 91	CES61 = 84	CES86 = 73
CES12 = 63	CES37 = 81	CES62 = 87	CES87 = 79
CES13 = 42	CES38 = 94	CES63 = 75	CES88 = 83
CES14 = 74	CES39 = 96	CES64 = 69	CES89 = 73
CES15 = 71	CES40 = 91	CES65 = 66	CES90 = 83
CES16 = 47	CES41 = 94	CES66 = 63	CES91 = 76
CES17 = 49	CES42 = 82	CES67 = 60	CES92 = 62
CES18 = 56	CES43 = 78	CES68 = 68	CES93 = 77
CES19 = 72	CES44 = 99	CES69 = 76	CES94 = 57
CES20 = 65	CES45 = 86	CES70 = 60	CES95 = 69
CES21 = 86	CES46 = 84	CES71 = 54	CES96 = 79
CES22 = 78	CES47 = 87	CES72 = 85	CES97 = 86
CES23 = 92	CES48 = 80	CES73 = 52	CES98 = 79
CES24 = 91	CES49 = 82	CES74 = 94	CES99 = 69
CES25 = 72	CES50 = 90	CES75 = 56	



Color Rendition by Hue-Angle Bin



Measure Comparisons



(END OF REPORT)