

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: P821376

Luminaire Tested: **TT-D1-740-12VDC-T4-PM-HSS**

Issue Date: 12/2/2020

Test Information

Test Method: LM-79-08
Report Number: P821376
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2010-017-4)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: MCGRAW-EDISON
Catalog Number: TT-D1-740-12VDC-T4-PM-HSS
Description: TOPTIER LED SITE LUMINAIRE
4000K, 70 CRI LEDS AND DRIVE LANE DISTRIBUTION WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

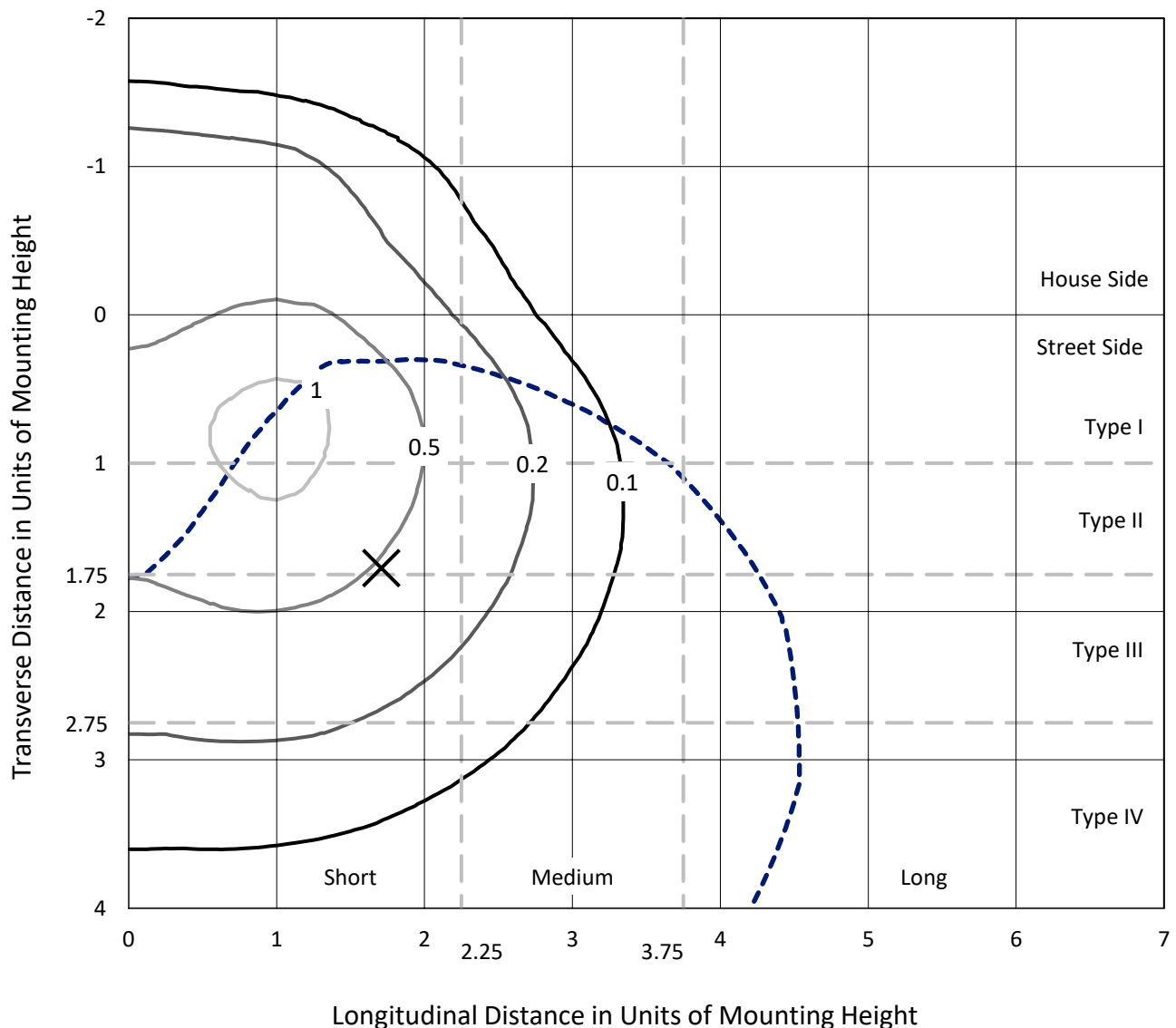
Lumens per Lamp: N/A
Luminaire Lumens: 2929.9 lumens
Efficiency: N/A
Efficacy: 104.6 lumens/watt
Luminous Opening: Circular (Dia: 1.12' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U1 - G2

Input Watts (W): 28
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

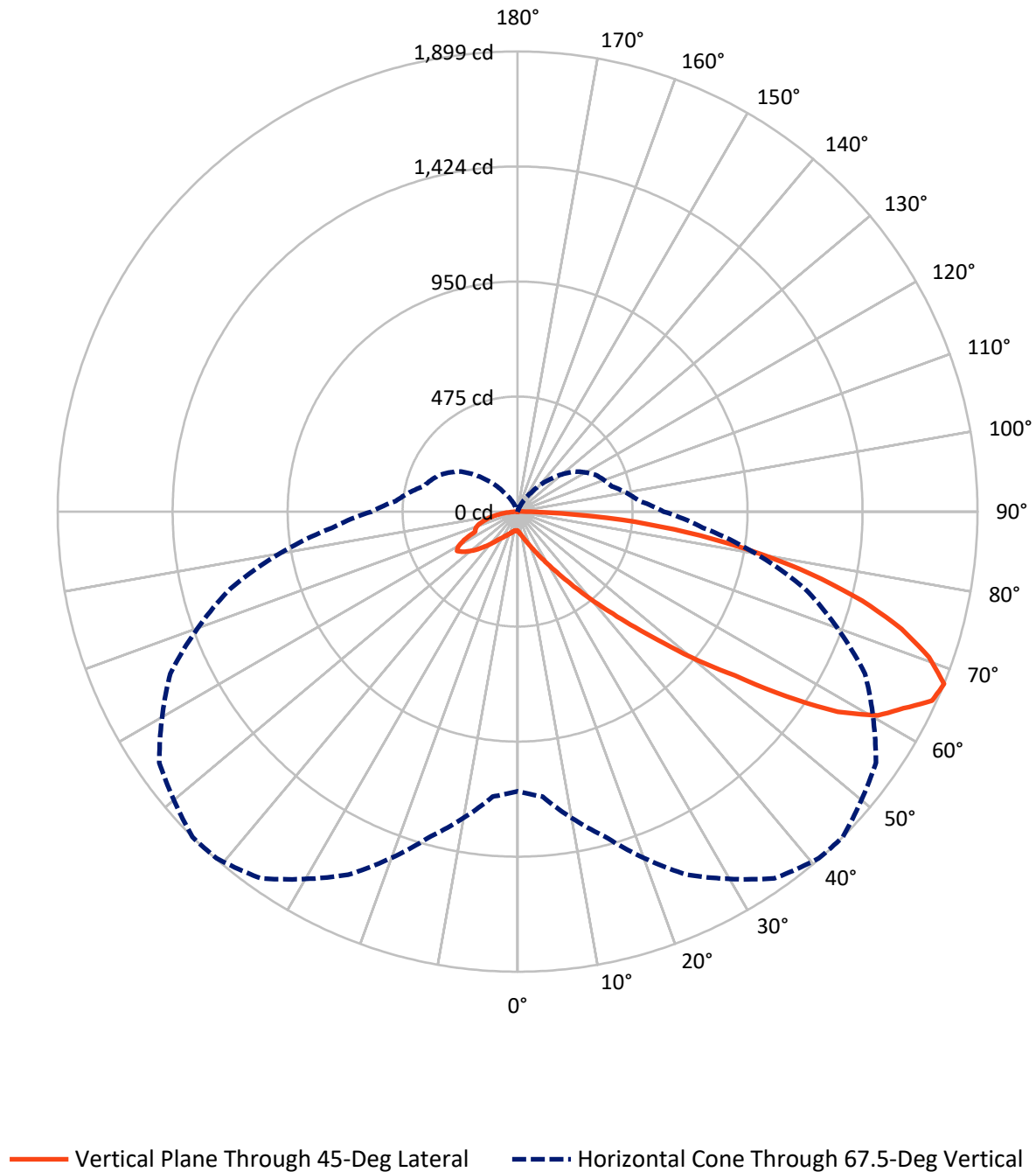
✕ Max cd
 - - - 1/2 Max cd



Based on 15 foot mounting height. Maximum calculated value = 1.1 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



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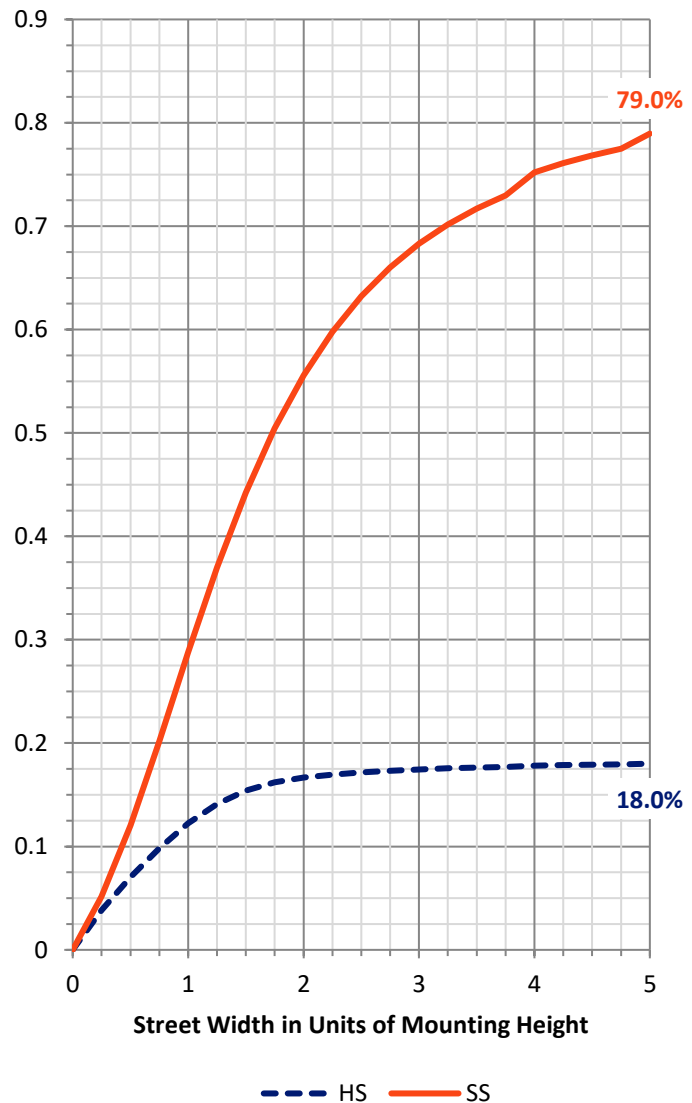
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	532.3	0.6	532.9
	% Fixture	18.2	0.0	18.2
Street Side	Lumens	2390.5	6.5	2397.0
	% Fixture	81.6	0.2	81.8
Total	Lumens	2922.9	7.1	2929.9
	% Fixture	99.8	0.2	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	8.3	0.3
10°-20°	30.8	1.1
20°-30°	71.1	2.4
30°-40°	151.6	5.2
40°-50°	317.3	10.8
50°-60°	601.9	20.5
60°-70°	819.2	28.0
70°-80°	704.3	24.0
80°-90°	218.4	7.5
90°-100°	4.6	0.2
100°-110°	1.3	0.0
110°-120°	0.4	0.0
120°-130°	0.3	0.0
130°-140°	0.2	0.0
140°-150°	0.2	0.0
150°-160°	0.1	0.0
160°-170°	0.1	0.0
170°-180°	0.0	0.0
0°-90°	2922.9	99.8
0°-180°	2929.9	100.0



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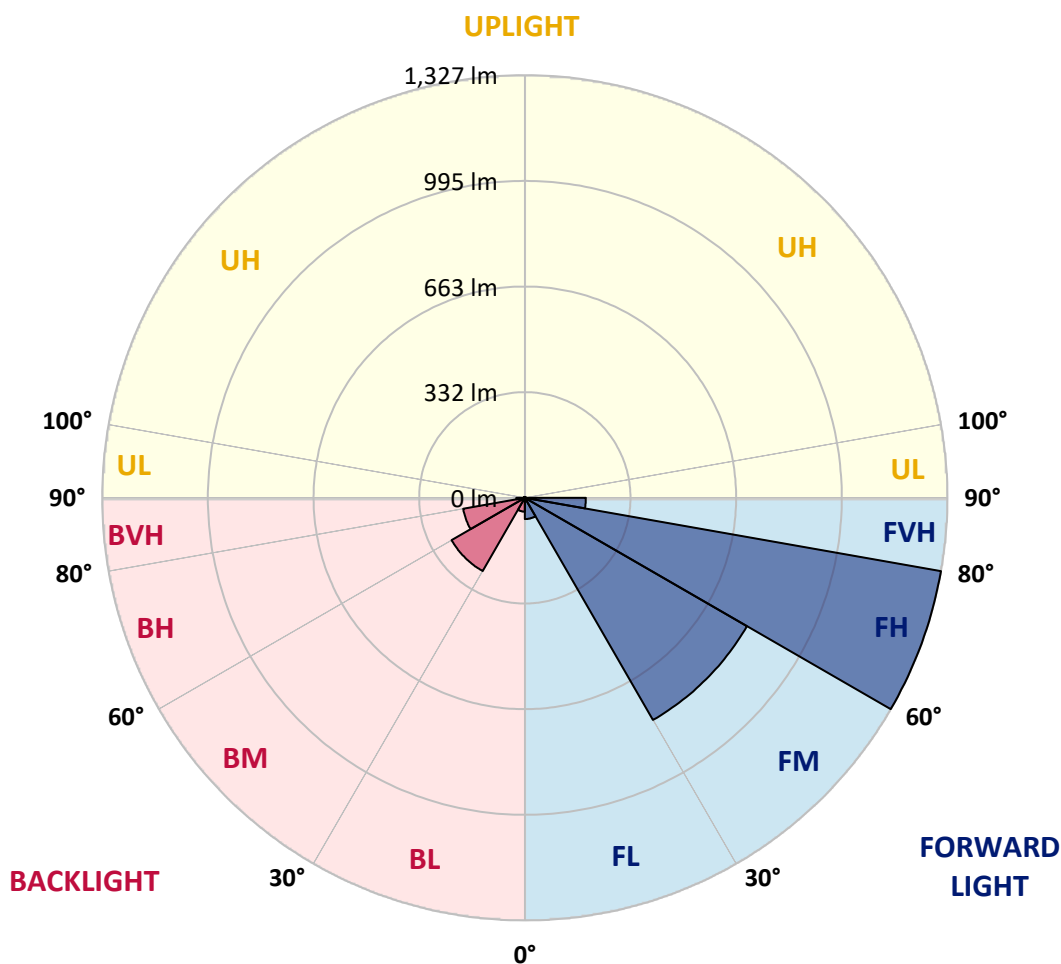
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	66.8	2.3			
FM	(30°-60°)	805.3	27.5			
FH	(60°-80°)	1326.8	45.3			G1/1800
FVH	(80°-90°)	191.6	6.5			G2/225
BL	(0°-30°)	43.4	1.5	B0/110		
BM	(30°-60°)	265.5	9.1	B1/1000		
BH	(60°-80°)	196.6	6.7	B1/500		G1/500
BVH	(80°-90°)	26.8	0.9			G1/100
UL	(90°-100°)	4.6	0.2		U1/10	
UH	(100°-180°)	2.5	0.1		U1/10	

BUG Rating: B1-U1-G2

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	41°	45°	55°	65°	75°	85°
0°	80.2	80.2	80.2	80.2	80.2	80.2	80.2	80.2	80.2	80.2	80.2
2.5°	87.0	86.4	86.4	85.8	85.8	84.5	84.5	83.9	83.3	82.7	81.4
5°	93.2	92.6	92.6	92.0	91.4	90.1	89.5	88.3	87.0	85.8	84.5
7.5°	100.7	100.1	100.1	99.4	98.2	96.3	95.7	93.8	92.0	90.1	88.3
10°	110.0	109.4	109.4	108.1	106.9	105.0	103.8	101.3	99.4	96.3	93.2
12.5°	119.9	119.3	119.3	118.1	115.6	114.4	113.1	110.0	106.9	103.2	99.4
15°	131.1	131.1	131.1	130.5	128.0	125.5	124.3	120.6	116.8	111.2	106.3
17.5°	145.4	144.8	144.8	143.6	140.5	139.2	137.3	133.0	127.4	121.2	115.0
20°	162.8	162.2	161.0	160.3	157.2	156.0	153.5	148.5	141.1	133.0	124.3
22.5°	180.2	180.2	179.6	180.2	177.7	176.5	173.4	166.6	157.9	146.0	135.5
25°	200.1	200.7	202.0	203.8	200.7	199.5	197.0	188.3	177.7	162.8	147.9
27.5°	225.0	225.0	228.1	231.2	228.7	228.1	224.4	215.0	200.1	182.1	164.7
30°	251.7	252.3	257.3	262.9	261.6	261.6	258.5	248.0	229.9	208.8	184.6
32.5°	282.8	285.3	290.2	296.4	300.8	300.8	299.6	288.4	267.2	238.6	208.8
35°	323.8	319.4	328.8	338.1	347.4	349.3	349.9	339.3	315.1	279.0	238.6
37.5°	359.2	358.6	372.9	389.0	404.6	410.8	412.7	402.7	371.6	324.4	271.0
40°	400.2	404.0	423.2	447.5	473.6	484.1	489.1	477.9	439.4	378.5	308.3
42.5°	443.1	454.3	478.5	515.2	555.0	570.5	576.1	565.5	520.2	446.2	355.5
45°	493.5	509.0	541.3	593.5	645.7	668.7	681.1	677.4	630.8	538.8	416.4
47.5°	555.6	566.8	610.9	681.1	755.1	793.0	810.4	821.0	754.5	634.5	469.8
50°	625.8	627.7	688.6	777.5	885.6	936.0	966.4	961.4	882.5	744.5	537.6
52.5°	696.7	694.8	774.4	894.9	1036.6	1102.5	1123.0	1143.5	1065.8	912.3	646.3
55°	777.5	773.7	873.8	1026.7	1202.6	1289.6	1347.4	1376.0	1253.5	1023.0	693.6
57.5°	844.6	856.4	981.9	1165.9	1411.4	1520.8	1558.7	1543.1	1356.7	1078.9	716.6
60°	929.7	947.1	1090.1	1348.0	1592.2	1673.7	1708.5	1637.6	1422.6	1121.2	732.7
62.5°	1009.9	1032.3	1208.8	1495.9	1705.3	1779.9	1788.6	1711.6	1515.2	1204.4	780.0
65°	1085.1	1110.6	1326.9	1583.5	1804.2	1866.3	1881.2	1820.3	1613.4	1253.5	798.6
67.5°	1154.1	1180.8	1387.8	1653.8	1848.3	1896.1	1899.2	1806.6	1582.9	1228.0	768.8
70°	1206.9	1218.7	1417.0	1651.9	1796.1	1814.7	1802.3	1709.1	1511.4	1175.8	725.9
72.5°	1217.5	1226.2	1376.6	1559.9	1651.3	1668.7	1658.7	1576.7	1399.0	1082.6	656.3
75°	1164.0	1165.9	1267.8	1394.6	1461.1	1482.2	1469.2	1393.4	1229.9	950.9	564.9
77.5°	1024.2	1027.9	1089.5	1174.6	1230.5	1248.6	1238.6	1169.0	1030.4	798.6	467.4
80°	811.7	819.1	863.2	922.3	973.2	991.9	980.1	924.1	811.0	627.7	364.8
82.5°	553.1	562.4	602.8	651.9	696.7	714.7	704.8	669.3	584.8	452.4	260.4
85°	279.7	289.6	331.3	377.2	416.4	435.7	432.6	417.6	359.8	279.0	157.2
87.5°	44.1	48.5	65.9	87.6	111.9	129.9	118.7	117.5	93.2	74.6	37.9
90°	18.0	18.0	17.4	16.8	14.9	13.7	13.1	10.6	8.1	5.0	1.9
92.5°	16.2	16.2	15.5	14.3	13.1	12.4	11.2	9.3	6.8	4.4	1.9
95°	13.1	13.1	12.4	11.8	10.6	9.9	8.7	7.5	5.6	3.7	1.9
97.5°	9.9	9.9	9.3	8.7	8.1	6.8	6.8	5.6	3.7	2.5	1.2
100°	7.5	7.5	6.8	6.2	5.6	5.0	5.0	3.7	2.5	1.9	1.2
102.5°	5.0	5.0	5.0	4.4	3.7	3.7	3.1	2.5	1.9	1.2	1.2
105°	3.1	3.1	3.1	3.1	2.5	1.9	1.9	1.2	1.2	1.2	1.2
107.5°	1.9	1.9	1.9	1.9	1.2	1.2	1.2	1.2	1.2	1.2	1.2
110°	1.2	1.2	1.2	0.6	0.6	0.6	0.6	0.6	0.6	1.2	0.6



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CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	41°	45°	55°	65°	75°	85°
112.5°	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
115°	0.0	0.0	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
117.5°	0.0	0.0	0.0	0.0	0.0	0.6	0.6	0.6	0.6	0.6	0.6
120°	0.0	0.0	0.0	0.0	0.0	0.6	0.6	0.6	0.6	0.6	0.6
122.5°	0.0	0.0	0.0	0.0	0.0	0.6	0.6	0.6	0.6	0.6	0.6
125°	0.0	0.0	0.0	0.6	0.0	0.6	0.6	0.6	0.6	0.6	0.6
127.5°	0.0	0.0	0.0	0.6	0.0	0.0	0.6	0.6	0.6	0.6	0.6
130°	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.6	0.6	0.6	0.6
132.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.6	0.6	0.6	0.6
135°	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.6	0.6	0.6	0.6
137.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.6	0.6	0.6	0.6
140°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.6	0.6	0.6
142.5°	0.6	0.6	0.0	0.0	0.0	0.0	0.6	0.6	0.6	0.6	0.6
145°	0.6	0.6	0.0	0.0	0.0	0.0	0.6	0.6	0.6	0.6	0.6
147.5°	0.6	0.6	0.0	0.0	0.0	0.0	0.6	0.6	0.6	0.6	0.6
150°	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.6	0.6	0.6	0.6
152.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.6	0.6	0.6
155°	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.6	0.6	0.6	0.6
157.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.6	0.6	0.6	0.6
160°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.6	0.6	0.6
162.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.6	0.6	0.6	0.6
165°	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.6	0.6	0.6	0.6
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.6	0.6	0.6	0.6
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.6	0.6	0.6	0.6
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.6	0.6	0.6	0.6
175°	0.0	0.0	0.0	0.0	0.0	0.6	0.6	0.6	0.6	0.6	0.6
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.6	0.6	0.6	0.6
180°	0.0	0.0	0.0	0.0	0.0	0.0	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°	80.2	80.2	80.2	80.2	80.2	80.2	80.2	80.2	80.2	80.2	80.2
2.5°	81.4	80.8	79.5	78.9	77.7	77.7	77.1	76.4	76.4	76.4	76.4
5°	83.3	82.7	81.4	80.2	78.9	77.7	77.1	76.4	76.4	76.4	75.8
7.5°	87.0	85.8	83.9	82.0	80.2	78.9	78.3	77.7	77.1	77.1	77.1
10°	91.4	90.1	87.0	85.1	82.7	80.8	80.2	79.5	78.9	78.9	78.9
12.5°	97.0	95.1	91.4	88.3	85.8	83.9	82.7	82.0	82.0	81.4	82.0
15°	103.8	101.3	96.3	92.6	89.5	87.6	86.4	85.8	85.8	85.8	85.1
17.5°	111.2	108.1	101.9	97.6	93.8	92.0	90.7	90.1	90.1	90.1	90.1
20°	119.9	115.6	108.8	103.2	99.4	97.0	95.7	95.7	95.1	95.7	95.7
22.5°	129.3	124.3	115.6	109.4	104.4	101.9	100.7	100.7	100.7	101.3	101.9
25°	140.5	134.2	123.7	115.6	110.0	107.5	106.3	106.9	106.9	107.5	107.5
27.5°	155.4	146.0	133.0	123.1	116.8	113.7	112.5	113.1	113.7	113.7	113.7
30°	172.2	161.0	142.9	132.4	124.9	121.2	119.9	120.6	121.2	122.4	121.8
32.5°	192.7	179.0	157.9	142.9	134.9	130.5	129.3	128.6	129.9	131.1	131.1
35°	217.5	200.1	175.3	157.9	146.0	140.5	139.2	138.6	139.2	140.5	141.7
37.5°	244.2	223.1	192.7	174.6	161.6	155.4	152.3	149.8	150.4	151.0	152.9
40°	274.7	248.6	212.5	190.8	179.0	171.5	167.2	163.4	164.7	164.7	165.3
42.5°	313.2	280.3	237.4	210.1	197.6	189.6	182.7	178.4	175.9	176.5	174.0
45°	363.6	322.5	268.5	237.4	220.0	207.6	199.5	190.8	184.6	185.8	182.1
47.5°	405.2	356.1	297.7	263.5	244.9	229.3	212.5	200.1	191.4	190.2	187.7
50°	456.2	397.1	331.3	292.1	272.2	248.6	228.7	207.6	193.3	189.6	190.2
52.5°	541.9	469.2	379.1	330.6	295.8	267.9	237.4	208.2	188.9	183.3	185.2
55°	573.0	493.5	404.0	362.3	328.1	284.6	241.1	201.4	176.5	171.5	172.2
57.5°	579.8	493.5	405.8	372.3	343.7	298.3	239.3	185.8	152.9	148.5	147.9
60°	583.6	490.3	399.0	364.8	333.7	285.3	215.0	149.8	117.5	114.4	112.5
62.5°	618.4	516.5	405.8	359.2	315.1	250.5	163.4	95.7	65.3	64.6	63.4
65°	628.9	525.8	414.5	362.9	294.6	194.5	97.0	32.3	6.8	7.5	6.2
67.5°	602.8	504.6	402.1	357.4	288.4	189.6	93.2	27.3	0.0	0.0	0.0
70°	566.8	474.2	380.3	338.1	275.3	182.1	91.4	27.3	0.0	0.0	0.0
72.5°	509.6	430.7	345.5	312.0	252.9	167.2	85.1	26.1	0.0	0.0	0.0
75°	442.5	374.8	302.7	276.6	224.4	146.7	76.4	23.6	0.0	0.0	0.0
77.5°	370.4	312.6	252.9	233.1	189.6	124.9	64.6	19.9	0.0	0.0	0.0
80°	290.9	247.3	199.5	185.8	149.8	99.4	51.6	15.5	0.0	0.0	0.0
82.5°	209.4	179.6	147.3	136.1	110.0	72.1	37.3	10.6	0.0	0.0	0.0
85°	129.3	112.5	95.1	88.3	69.6	44.7	22.4	5.6	0.0	0.0	0.0
87.5°	38.5	37.3	33.6	32.9	23.6	13.7	5.0	0.6	0.0	0.0	0.0
90°	0.6	0.6	0.6	0.6	0.6	0.0	0.0	0.0	0.0	0.0	0.0
92.5°	0.6	0.6	0.6	0.6	0.6	0.0	0.0	0.0	0.0	0.0	0.0
95°	0.6	0.6	0.6	0.6	0.6	0.0	0.0	0.0	0.0	0.0	0.0
97.5°	0.6	0.6	0.6	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100°	0.6	0.6	0.6	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
102.5°	0.6	0.6	0.6	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
105°	0.6	0.6	0.6	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
107.5°	0.6	0.6	0.6	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110°	0.6	0.6	0.6	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CATALOG NUMBER: TT-D1-740-12VDC-T4-PM-HSS

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
112.5°	0.6	0.6	0.6	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
115°	0.6	0.6	0.6	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
117.5°	0.6	0.6	0.6	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
120°	0.6	0.6	0.6	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
122.5°	0.6	0.6	0.6	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
125°	0.6	0.6	0.6	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
127.5°	0.6	0.6	0.6	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
130°	0.6	0.6	0.6	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
132.5°	0.6	0.6	0.6	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
135°	0.6	0.6	0.6	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
137.5°	0.6	0.6	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
140°	0.6	0.6	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
142.5°	0.6	0.6	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
145°	0.6	0.6	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
147.5°	0.6	0.6	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
150°	0.6	0.6	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
152.5°	0.6	0.6	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
155°	0.6	0.6	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
157.5°	0.6	0.6	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
160°	0.6	0.6	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
162.5°	0.6	0.6	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	0.6	0.6	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
167.5°	0.6	0.6	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.6	0.6	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	0.6	0.6	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.6	0.6	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.6	0.6	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	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

Streetworks

Report Number: SP1-2407-176-5

Test Date: 09/24/2024

Luminaire Tested: MEM2-HTN-VA-30-740-U-WQ

Data in this report applies to families of products including MEM2-HTN-VA-30-740-U-WQ

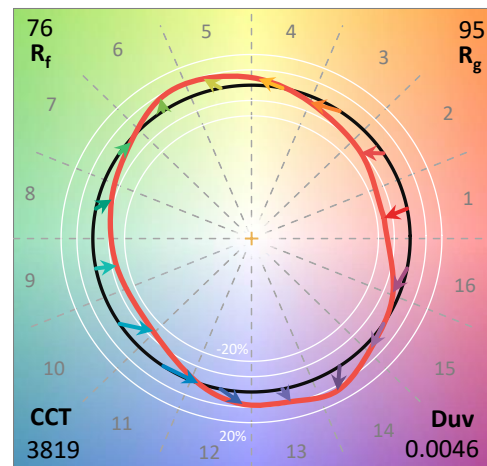
Test Information

Test Method: LM-79-2019
 Report Number: SP1-2407-176-5
 Test Lab: COOPER LIGHTING SOLUTIONS
 Photometer: SP1 - 76IN SPHERE
 Measurement Geometry: 4π
 Issue Date: 09/27/2024
 Manufacturer: COOPER LIGHTING SOLUTIONS
 Product Line: Streetworks
 Catalog Number: **MEM2-HTN-VA-30-740-U-WQ**
 Description: EPIC MODERN VISUAL COMFORT 30W WAVESTREAM WIDE

Spectral Parameters

CCT (K): 3819
 CIE u' : 0.2261
 CIE v' : 0.5108
 Duv: 0.0046
 CIE x: 0.3926
 CIE y: 0.3942
 CIE z: 0.2132
 Peak Wavelength (nm): 450
 Dominant Wavelength (nm): 577
 Purity: 36.15483
 R_f: 75.6
 R_g: 94.8

CRI (Ra): 72.9
 R1: 70.1
 R2: 78.4
 R3: 85.0
 R4: 72.9
 R5: 69.1
 R6: 69.2
 R7: 82.8
 R8: 55.4
 R9: -21.5
 R10: 48.5
 R11: 68.4
 R12: 39.0
 R13: 71.1
 R14: 91.3
 R15: 63.2



Test Conditions

Stabilization Time: 30M
 Operation Time: 1H 30M
 Sphere Temperature (°C): 25.2

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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	10/24/2023	10/24/2024
DC Power Source	IN0208	10/24/2023	10/24/2024
Sphere Thermometer	IN0085	10/24/2023	10/24/2024
Room Thermometer	IN0046	10/24/2023	10/24/2024

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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: SP1-2407-176-5

Photopic Flux vs. Wavelength

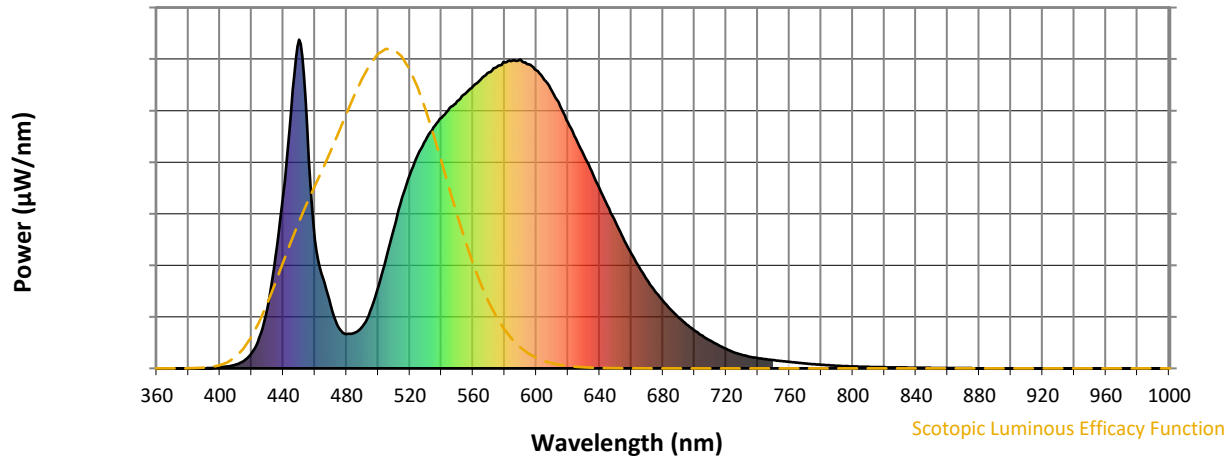


Photopic Lumens: NR

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	127	NR	620	748	NR	750	25	NR	880	0	NR
365	0	NR	495	173	NR	625	699	NR	755	22	NR	885	0	NR
370	0	NR	500	246	NR	630	648	NR	760	20	NR	890	0	NR
375	0	NR	505	335	NR	635	599	NR	765	17	NR	895	0	NR
380	0	NR	510	427	NR	640	547	NR	770	15	NR	900	0	NR
385	0	NR	515	517	NR	645	495	NR	775	13	NR	905	0	NR
390	0	NR	520	589	NR	650	445	NR	780	11	NR	910	0	NR
395	1	NR	525	649	NR	655	396	NR	785	9	NR	915	0	NR
400	4	NR	530	695	NR	660	349	NR	790	8	NR	920	0	NR
405	6	NR	535	733	NR	665	308	NR	795	7	NR	925	0	NR
410	11	NR	540	763	NR	670	269	NR	800	6	NR	930	0	NR
415	23	NR	545	792	NR	675	235	NR	805	5	NR	935	0	NR
420	46	NR	550	813	NR	680	205	NR	810	5	NR	940	0	NR
425	95	NR	555	835	NR	685	178	NR	815	4	NR	945	0	NR
430	183	NR	560	859	NR	690	155	NR	820	3	NR	950	0	NR
435	338	NR	565	880	NR	695	134	NR	825	3	NR	955	0	NR
440	534	NR	570	900	NR	700	115	NR	830	3	NR	960	0	NR
445	782	NR	575	918	NR	705	99	NR	835	2	NR	965	0	NR
450	1000	NR	580	931	NR	710	84	NR	840	2	NR	970	0	NR
455	739	NR	585	937	NR	715	71	NR	845	2	NR	975	0	NR
460	393	NR	590	939	NR	720	59	NR	850	1	NR	980	0	NR
465	276	NR	595	925	NR	725	49	NR	855	1	NR	985	0	NR
470	190	NR	600	907	NR	730	41	NR	860	1	NR	990	0	NR
475	123	NR	605	878	NR	735	35	NR	865	1	NR	995	0	NR
480	105	NR	610	842	NR	740	31	NR	870	1	NR	1000	0	NR
485	108	NR	615	797	NR	745	28	NR	875	1	NR			

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Scotopic Flux vs. Wavelength



Scotopic Lumens: NR

S/P: 1.45

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	127	NR	620	748	NR	750	25	NR	880	0	NR
365	0	NR	495	173	NR	625	699	NR	755	22	NR	885	0	NR
370	0	NR	500	246	NR	630	648	NR	760	20	NR	890	0	NR
375	0	NR	505	335	NR	635	599	NR	765	17	NR	895	0	NR
380	0	NR	510	427	NR	640	547	NR	770	15	NR	900	0	NR
385	0	NR	515	517	NR	645	495	NR	775	13	NR	905	0	NR
390	0	NR	520	589	NR	650	445	NR	780	11	NR	910	0	NR
395	1	NR	525	649	NR	655	396	NR	785	9	NR	915	0	NR
400	4	NR	530	695	NR	660	349	NR	790	8	NR	920	0	NR
405	6	NR	535	733	NR	665	308	NR	795	7	NR	925	0	NR
410	11	NR	540	763	NR	670	269	NR	800	6	NR	930	0	NR
415	23	NR	545	792	NR	675	235	NR	805	5	NR	935	0	NR
420	46	NR	550	813	NR	680	205	NR	810	5	NR	940	0	NR
425	95	NR	555	835	NR	685	178	NR	815	4	NR	945	0	NR
430	183	NR	560	859	NR	690	155	NR	820	3	NR	950	0	NR
435	338	NR	565	880	NR	695	134	NR	825	3	NR	955	0	NR
440	534	NR	570	900	NR	700	115	NR	830	3	NR	960	0	NR
445	782	NR	575	918	NR	705	99	NR	835	2	NR	965	0	NR
450	1000	NR	580	931	NR	710	84	NR	840	2	NR	970	0	NR
455	739	NR	585	937	NR	715	71	NR	845	2	NR	975	0	NR
460	393	NR	590	939	NR	720	59	NR	850	1	NR	980	0	NR
465	276	NR	595	925	NR	725	49	NR	855	1	NR	985	0	NR
470	190	NR	600	907	NR	730	41	NR	860	1	NR	990	0	NR
475	123	NR	605	878	NR	735	35	NR	865	1	NR	995	0	NR
480	105	NR	610	842	NR	740	31	NR	870	1	NR	1000	0	NR
485	108	NR	615	797	NR	745	28	NR	875	1	NR			

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Melanopic Flux vs. Wavelength


Melanopic Lumens: NR
M/P: 2.76

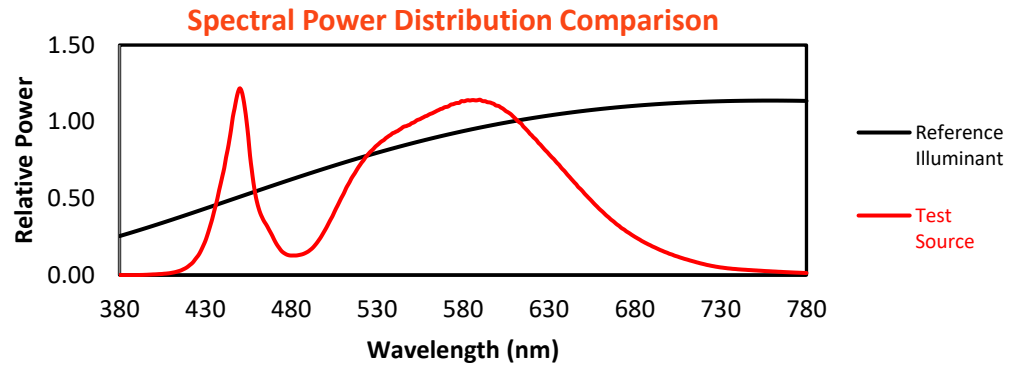
λ (nm)	Power $\text{W}^{\wedge}/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^{\wedge}/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^{\wedge}/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^{\wedge}/\text{nm}$	Lumens (ϕ/nm)	λ (nm)	Power $\text{W}^{\wedge}/\text{nm}$	Lumens (ϕ/nm)
360	0	NR	490	127	NR	620	748	NR	750	25	NR	880	0	NR
365	0	NR	495	173	NR	625	699	NR	755	22	NR	885	0	NR
370	0	NR	500	246	NR	630	648	NR	760	20	NR	890	0	NR
375	0	NR	505	335	NR	635	599	NR	765	17	NR	895	0	NR
380	0	NR	510	427	NR	640	547	NR	770	15	NR	900	0	NR
385	0	NR	515	517	NR	645	495	NR	775	13	NR	905	0	NR
390	0	NR	520	589	NR	650	445	NR	780	11	NR	910	0	NR
395	1	NR	525	649	NR	655	396	NR	785	9	NR	915	0	NR
400	4	NR	530	695	NR	660	349	NR	790	8	NR	920	0	NR
405	6	NR	535	733	NR	665	308	NR	795	7	NR	925	0	NR
410	11	NR	540	763	NR	670	269	NR	800	6	NR	930	0	NR
415	23	NR	545	792	NR	675	235	NR	805	5	NR	935	0	NR
420	46	NR	550	813	NR	680	205	NR	810	5	NR	940	0	NR
425	95	NR	555	835	NR	685	178	NR	815	4	NR	945	0	NR
430	183	NR	560	859	NR	690	155	NR	820	3	NR	950	0	NR
435	338	NR	565	880	NR	695	134	NR	825	3	NR	955	0	NR
440	534	NR	570	900	NR	700	115	NR	830	3	NR	960	0	NR
445	782	NR	575	918	NR	705	99	NR	835	2	NR	965	0	NR
450	1000	NR	580	931	NR	710	84	NR	840	2	NR	970	0	NR
455	739	NR	585	937	NR	715	71	NR	845	2	NR	975	0	NR
460	393	NR	590	939	NR	720	59	NR	850	1	NR	980	0	NR
465	276	NR	595	925	NR	725	49	NR	855	1	NR	985	0	NR
470	190	NR	600	907	NR	730	41	NR	860	1	NR	990	0	NR
475	123	NR	605	878	NR	735	35	NR	865	1	NR	995	0	NR
480	105	NR	610	842	NR	740	31	NR	870	1	NR	1000	0	NR
485	108	NR	615	797	NR	745	28	NR	875	1	NR			

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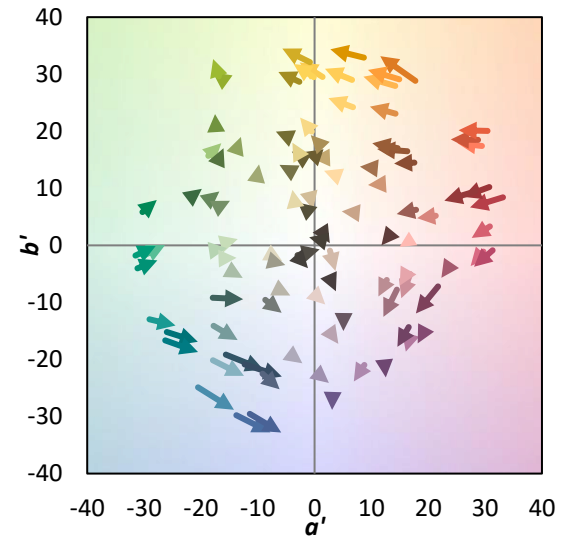
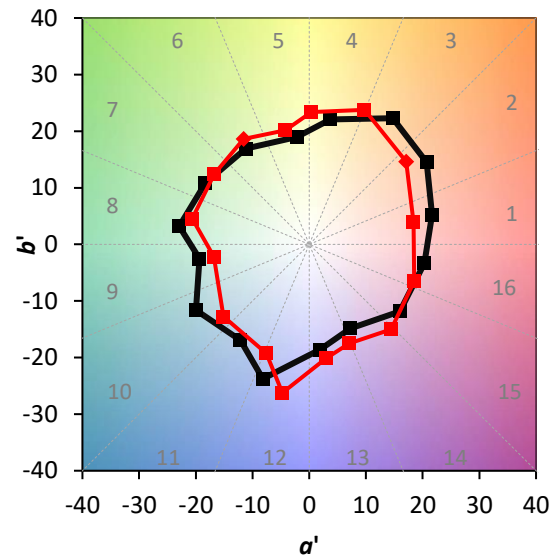
TM-30-18

Summary

$R_f = 75.6$
 $R_g = 94.8$
 $CIE R_a = 72.9$
 $R_g = -21.5$

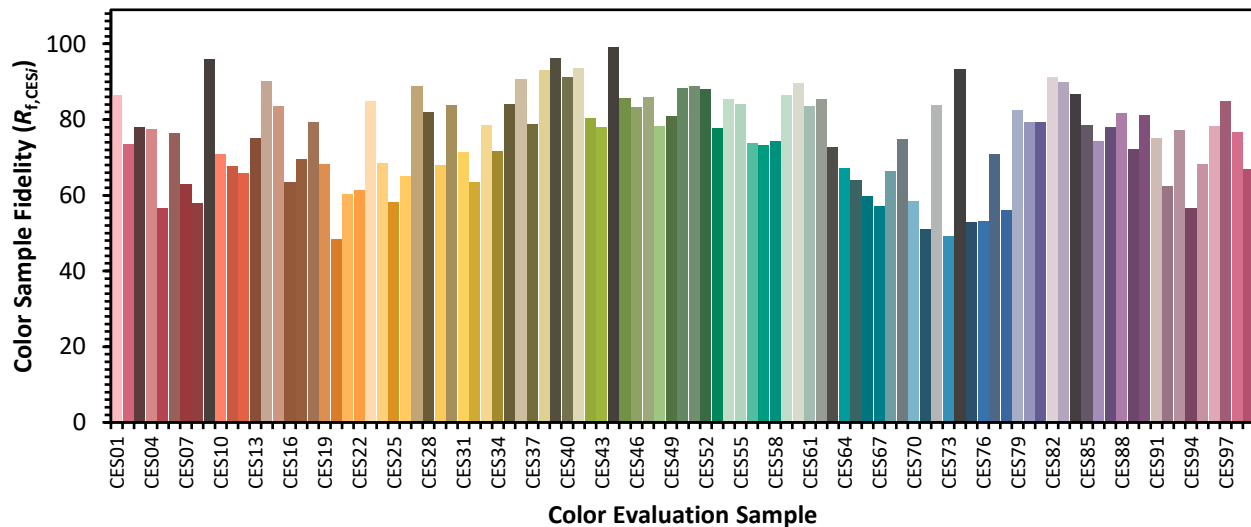


Color Vector Graphics

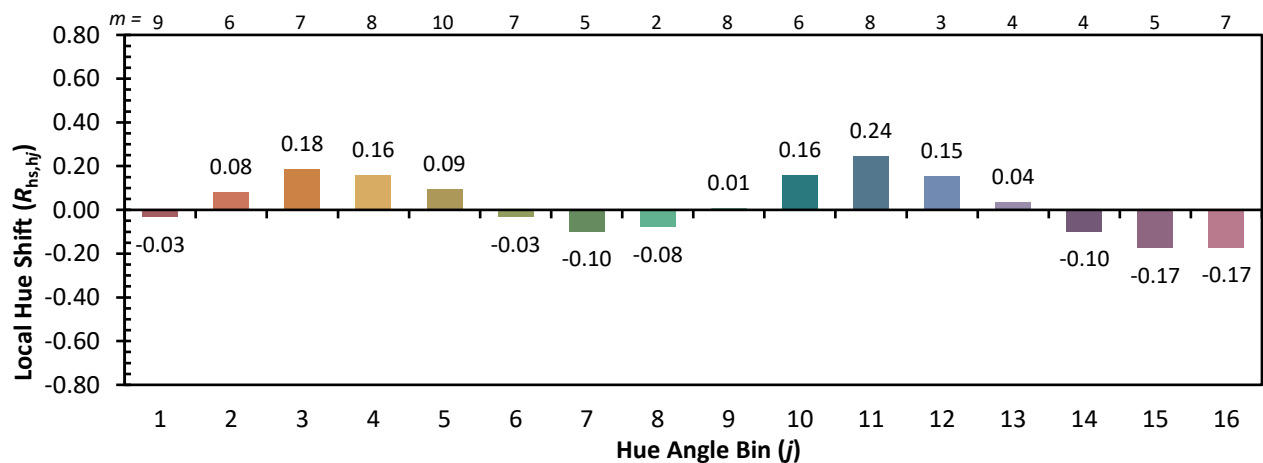


Individual Sample Fidelity Index ($R_{f,i}$)

CES01 = 85	CES26 = 65	CES51 = 89	CES76 = 53
CES02 = 61	CES27 = 89	CES52 = 88	CES77 = 71
CES03 = 30	CES28 = 82	CES53 = 78	CES78 = 56
CES04 = 70	CES29 = 68	CES54 = 85	CES79 = 83
CES05 = 48	CES30 = 84	CES55 = 84	CES80 = 79
CES06 = 50	CES31 = 71	CES56 = 74	CES81 = 79
CES07 = 40	CES32 = 63	CES57 = 73	CES82 = 91
CES08 = 39	CES33 = 79	CES58 = 74	CES83 = 90
CES09 = 29	CES34 = 72	CES59 = 86	CES84 = 87
CES10 = 74	CES35 = 84	CES60 = 90	CES85 = 78
CES11 = 57	CES36 = 91	CES61 = 84	CES86 = 74
CES12 = 63	CES37 = 79	CES62 = 85	CES87 = 78
CES13 = 42	CES38 = 93	CES63 = 73	CES88 = 82
CES14 = 74	CES39 = 96	CES64 = 67	CES89 = 72
CES15 = 71	CES40 = 91	CES65 = 64	CES90 = 81
CES16 = 47	CES41 = 93	CES66 = 60	CES91 = 75
CES17 = 49	CES42 = 80	CES67 = 57	CES92 = 62
CES18 = 56	CES43 = 78	CES68 = 66	CES93 = 77
CES19 = 72	CES44 = 99	CES69 = 75	CES94 = 57
CES20 = 65	CES45 = 86	CES70 = 58	CES95 = 68
CES21 = 86	CES46 = 83	CES71 = 51	CES96 = 78
CES22 = 78	CES47 = 86	CES72 = 84	CES97 = 85
CES23 = 92	CES48 = 78	CES73 = 49	CES98 = 77
CES24 = 91	CES49 = 81	CES74 = 93	CES99 = 67
CES25 = 72	CES50 = 88	CES75 = 53	



Color Rendition by Hue-Angle Bin



Measure Comparisons



(END OF REPORT)