

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: P821384

Luminaire Tested: **TT-D2-740-12VDC-RW-PM-HSS**

Issue Date: 12/2/2020

Test Information

Test Method: LM-79-08
Report Number: P821384
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2010-017-5)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: MCGRAW-EDISON
Catalog Number: TT-D2-740-12VDC-RW-PM-HSS
Description: TOPTIER LED SITE LUMINAIRE
4000K, 70 CRI LEDS AND RECTANGULAR DISTRIBUTION WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

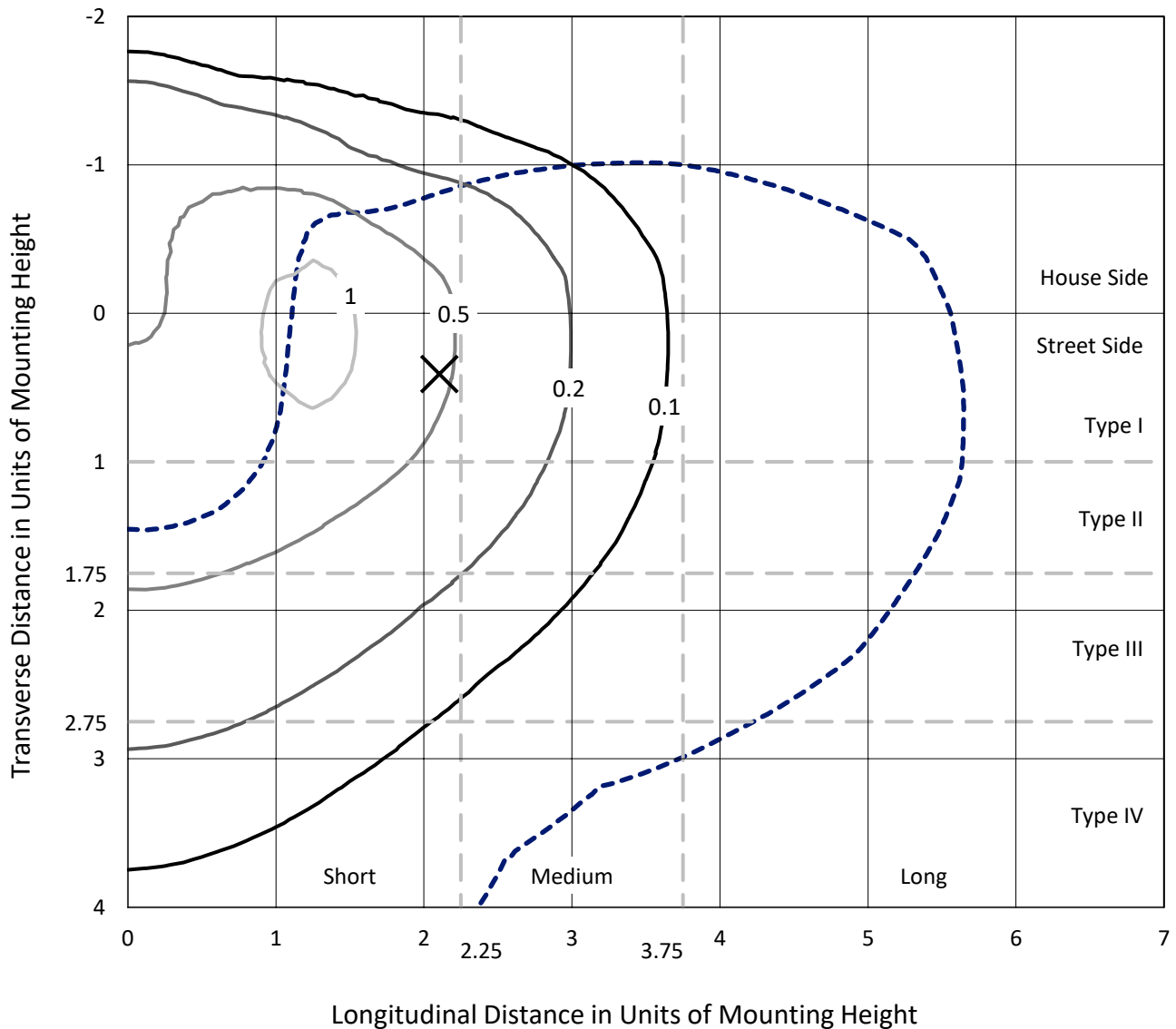
Lumens per Lamp: N/A
Luminaire Lumens: 3327.9 lumens
Efficiency: N/A
Efficacy: 87.6 lumens/watt
Luminous Opening: Circular (Dia: 1.12' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U2 - G2

Input Watts (W): 38
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

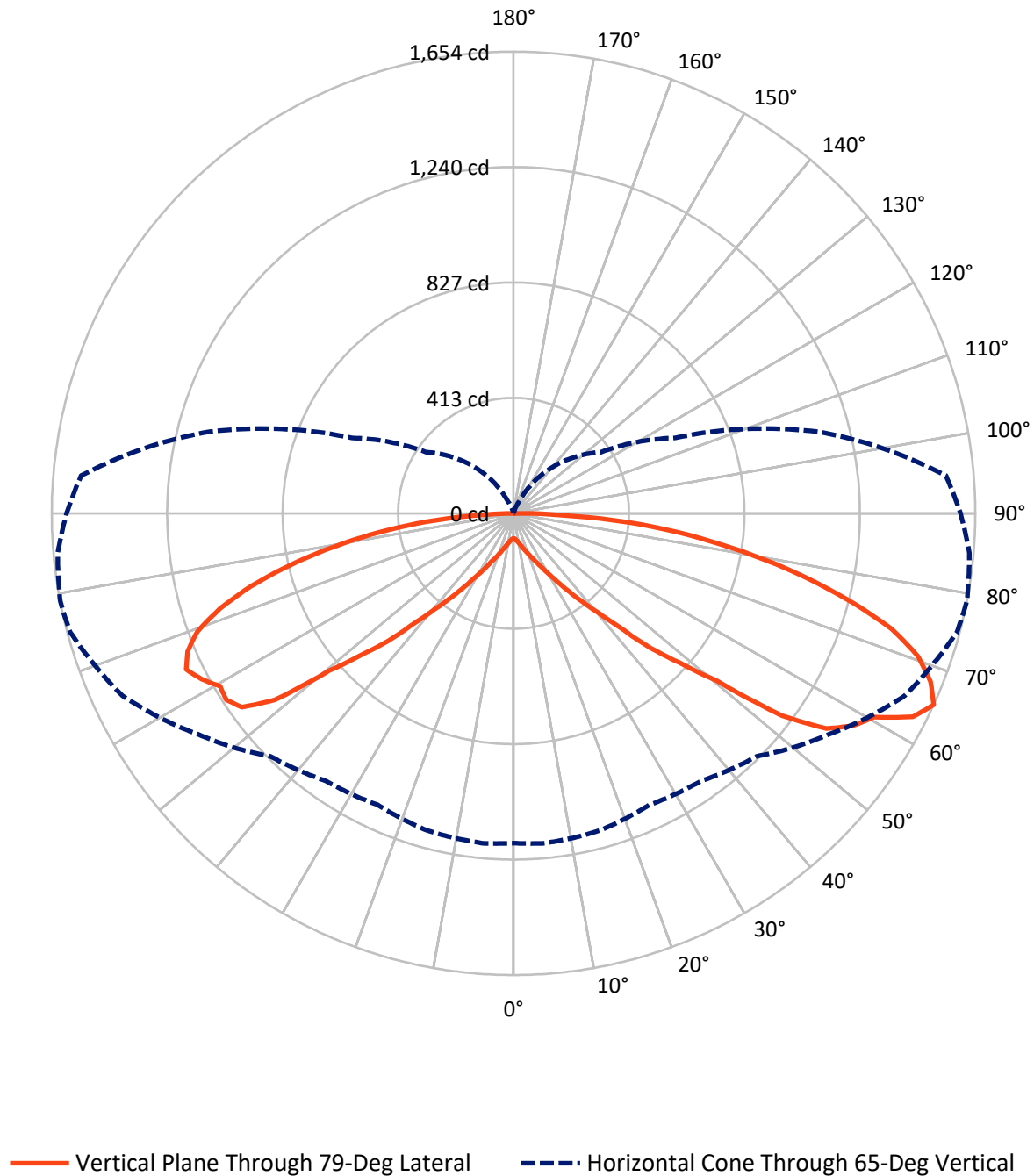
✕ Max cd
 - - - 1/2 Max cd



Based on 15 foot mounting height. Maximum calculated value = 1.2 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



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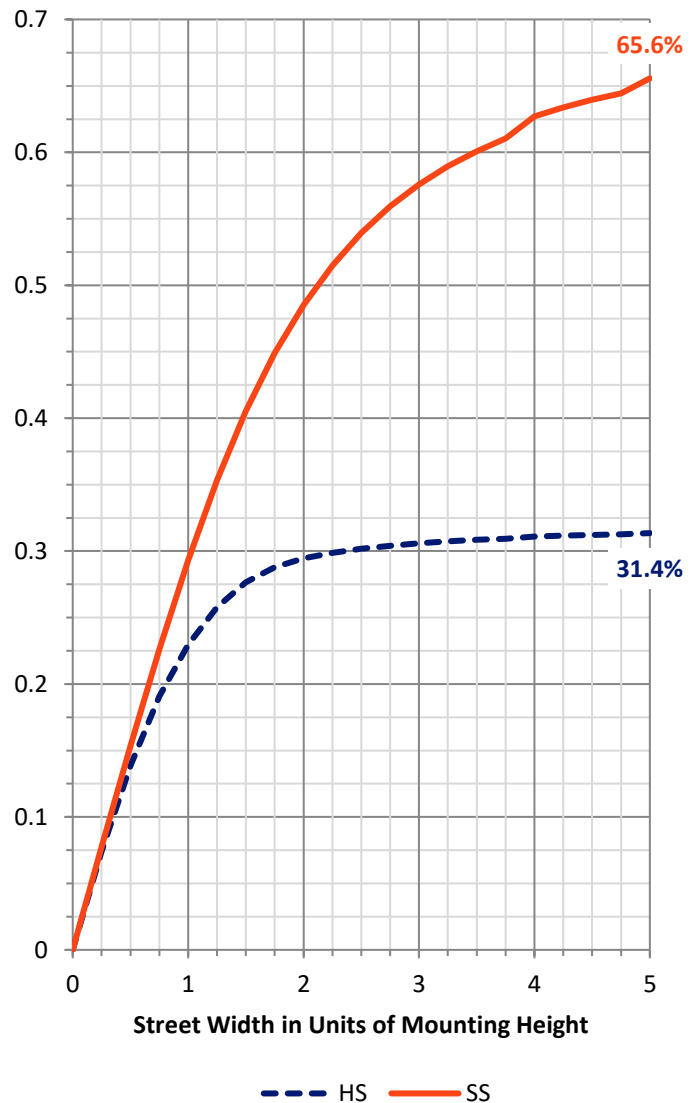
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1050.9	1.3	1052.2
	% Fixture	31.6	0.0	31.6
Street Side	Lumens	2261.1	14.7	2275.7
	% Fixture	67.9	0.4	68.4
Total	Lumens	3312.0	15.9	3327.9
	% Fixture	99.5	0.5	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	9.5	0.3
10°-20°	35.8	1.1
20°-30°	82.7	2.5
30°-40°	177.1	5.3
40°-50°	379.4	11.4
50°-60°	716.6	21.5
60°-70°	890.6	26.8
70°-80°	762.4	22.9
80°-90°	257.9	7.7
90°-100°	11.1	0.3
100°-110°	3.2	0.1
110°-120°	0.7	0.0
120°-130°	0.4	0.0
130°-140°	0.2	0.0
140°-150°	0.2	0.0
150°-160°	0.1	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-90°	3312.0	99.5
0°-180°	3327.9	100.0

Coefficient of Utilization



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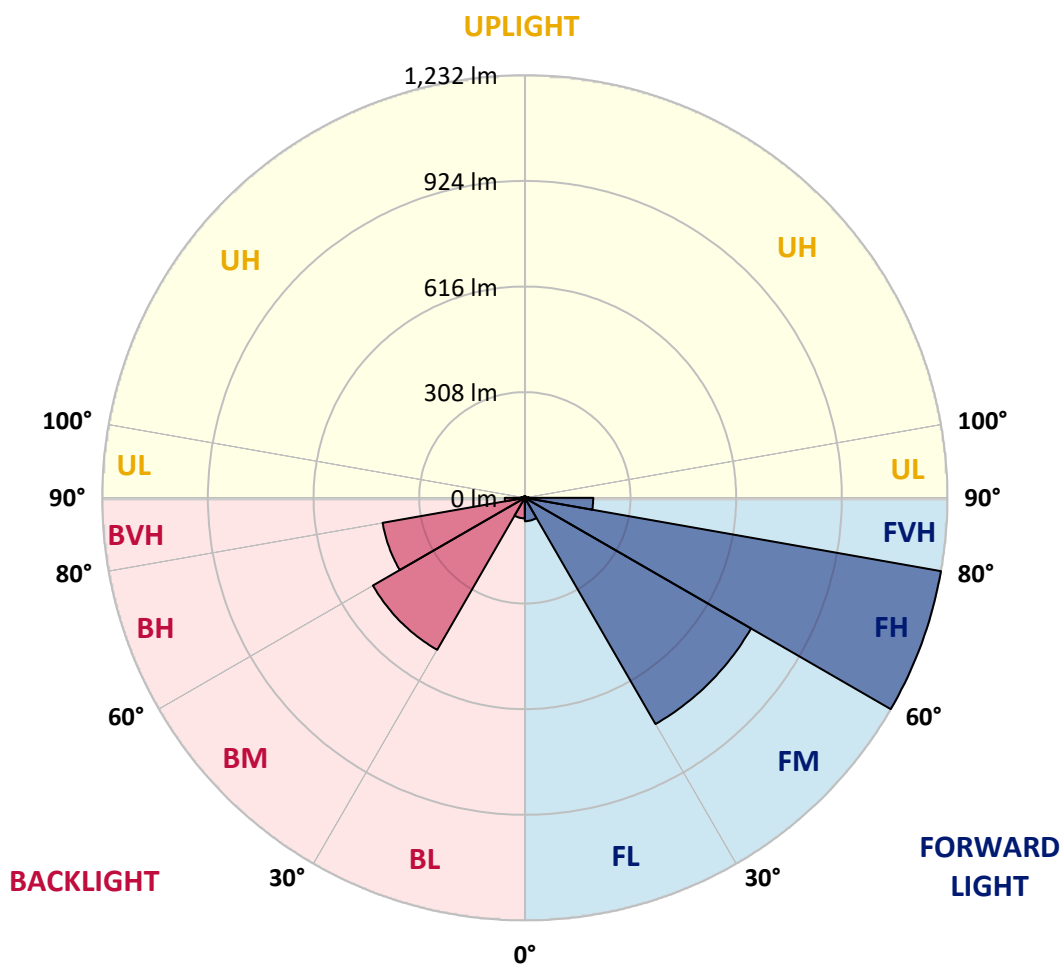
CATALOG NUMBER: TT-D2-740-12VDC-RW-PM-HSS

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	68.1	2.0			
FM	(30°-60°)	761.6	22.9			
FH	(60°-80°)	1231.9	37.0			G1/1800
FVH	(80°-90°)	199.5	6.0			G2/225
BL	(0°-30°)	60.0	1.8	B0/110		
BM	(30°-60°)	511.5	15.4	B1/1000		
BH	(60°-80°)	421.0	12.7	B1/500		G1/500
BVH	(80°-90°)	58.4	1.8			G1/100
UL	(90°-100°)	11.1	0.3		U2/50	
UH	(100°-180°)	4.8	0.1		U1/10	

BUG Rating: B1-U2-G2

Type IV Short



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	79°	85°
0°	90.4	90.4	90.4	90.4	90.4	90.4	90.4	90.4	90.4	90.4	90.4
2.5°	95.4	95.4	95.4	94.5	94.5	94.5	93.7	92.9	92.0	92.0	92.0
5°	100.3	100.3	100.3	100.3	99.5	98.7	97.9	97.0	96.2	96.2	95.4
7.5°	107.0	106.1	107.0	106.1	106.1	105.3	104.5	103.7	102.0	102.0	101.2
10°	113.6	113.6	113.6	113.6	113.6	112.8	112.0	111.1	110.3	109.5	108.6
12.5°	121.9	121.9	121.9	121.1	121.9	121.1	120.2	120.2	119.4	117.8	117.8
15°	130.2	130.2	130.2	130.2	131.0	131.0	131.0	130.2	130.2	129.4	128.5
17.5°	140.1	139.3	140.1	140.1	141.0	141.8	142.6	143.5	143.5	142.6	142.6
20°	150.9	150.1	150.9	150.9	152.6	154.2	156.7	158.4	159.2	157.6	157.6
22.5°	162.5	161.7	163.4	163.4	165.9	168.3	172.5	174.1	176.6	175.8	175.8
25°	176.6	175.8	176.6	177.5	180.8	184.9	189.9	194.1	196.5	196.5	197.4
27.5°	192.4	192.4	193.2	194.1	197.4	204.0	211.5	218.9	224.7	223.9	224.7
30°	214.0	214.0	215.6	216.4	220.6	228.1	238.0	248.0	256.2	256.2	257.9
32.5°	238.0	237.2	239.7	240.5	244.6	254.6	268.7	284.4	295.2	295.2	296.9
35°	267.0	266.2	268.7	268.7	273.7	287.8	306.0	327.6	345.8	346.6	349.1
37.5°	303.5	301.9	301.9	304.3	310.1	328.4	353.3	383.1	402.2	403.9	408.0
40°	346.6	345.8	347.5	346.6	354.1	376.5	408.0	442.8	465.2	469.4	474.3
42.5°	399.7	401.4	398.9	398.9	408.0	433.7	471.0	511.7	552.3	557.3	559.8
45°	464.4	467.7	464.4	463.6	471.9	501.7	553.1	624.4	671.7	688.3	693.3
47.5°	542.3	544.0	539.9	538.2	547.3	585.5	651.8	731.4	787.0	799.4	812.7
50°	629.4	626.9	623.6	621.1	638.5	685.8	762.9	845.0	940.4	942.1	947.0
52.5°	719.0	711.5	712.3	711.5	735.6	787.0	889.8	1029.1	1174.3	1204.1	1207.4
55°	808.5	799.4	798.6	806.9	840.9	914.7	1044.1	1224.8	1342.6	1360.8	1358.4
57.5°	898.1	894.0	892.3	899.8	949.5	1037.4	1183.4	1336.0	1436.3	1434.6	1417.2
60°	991.0	994.3	988.5	1002.6	1054.0	1141.9	1248.1	1396.5	1489.4	1481.9	1464.5
62.5°	1086.4	1094.6	1088.8	1090.5	1123.7	1188.4	1292.8	1465.3	1593.9	1604.6	1584.7
65°	1180.9	1186.7	1177.6	1151.9	1170.1	1230.6	1379.9	1545.8	1643.6	1653.6	1638.6
67.5°	1260.5	1266.3	1234.8	1194.2	1196.6	1240.6	1371.6	1530.0	1617.1	1610.5	1586.4
70°	1328.5	1317.7	1266.3	1196.6	1167.6	1188.4	1311.9	1452.1	1540.8	1537.5	1509.3
72.5°	1350.9	1336.8	1249.7	1141.9	1084.7	1092.2	1212.4	1337.6	1409.8	1415.6	1381.6
75°	1315.2	1291.2	1171.8	1036.6	962.8	967.8	1070.6	1185.9	1243.9	1237.3	1210.7
77.5°	1186.7	1162.6	1033.3	889.0	816.8	824.3	905.6	996.0	1044.1	1041.6	1023.3
80°	985.2	963.6	850.0	715.7	650.2	654.3	716.5	787.8	825.1	833.4	823.5
82.5°	728.1	713.2	632.7	524.1	471.0	470.2	517.5	572.2	608.7	626.1	619.5
85°	450.3	442.8	398.1	327.6	290.2	289.4	317.6	358.2	391.4	414.6	399.7
87.5°	179.1	176.6	163.4	131.9	115.3	109.5	102.8	128.5	131.0	155.1	154.2
90°	44.0	43.1	42.3	39.8	35.7	30.7	24.9	18.2	11.6	9.1	5.0
92.5°	39.0	39.0	38.1	35.7	32.3	27.4	22.4	16.6	10.8	8.3	4.1
95°	31.5	31.5	30.7	29.0	25.7	22.4	17.4	13.3	8.3	6.6	3.3
97.5°	24.0	23.2	23.2	21.6	19.9	16.6	13.3	10.0	6.6	5.0	2.5
100°	17.4	17.4	16.6	15.8	14.1	12.4	10.0	7.5	4.1	3.3	1.7
102.5°	12.4	11.6	11.6	11.6	10.0	8.3	6.6	5.0	3.3	2.5	0.8
105°	8.3	7.5	7.5	7.5	6.6	5.8	4.1	3.3	1.7	1.7	0.8
107.5°	5.0	5.0	5.0	5.0	4.1	3.3	2.5	1.7	0.8	0.8	0.8
110°	2.5	2.5	2.5	3.3	2.5	2.5	1.7	0.8	0.8	0.8	0.8



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CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	79°	85°
112.5°	1.7	1.7	1.7	1.7	1.7	1.7	0.8	0.8	0.8	0.8	0.8
115°	0.8	0.8	0.8	1.7	1.7	0.8	0.8	0.0	0.0	0.8	0.8
117.5°	0.0	0.0	0.8	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.8
120°	0.0	0.0	0.8	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.8
122.5°	0.0	0.0	0.8	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.8
125°	0.0	0.0	0.0	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.8
127.5°	0.0	0.0	0.0	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.8
130°	0.0	0.0	0.0	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.8
132.5°	0.0	0.0	0.0	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.8
135°	0.0	0.0	0.0	0.8	0.8	0.0	0.0	0.0	0.0	0.0	0.0
137.5°	0.0	0.0	0.0	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0
140°	0.0	0.0	0.0	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0
142.5°	0.0	0.0	0.0	0.0	0.8	0.8	0.0	0.0	0.0	0.0	0.0
145°	0.0	0.0	0.0	0.8	0.8	0.8	0.8	0.0	0.0	0.0	0.0
147.5°	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0	0.0	0.0	0.0
150°	0.0	0.0	0.0	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0
152.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
155°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
157.5°	0.0	0.0	0.0	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0
160°	0.0	0.0	0.0	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0
162.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.8	0.0	0.8	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

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CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	90.4	90.4	90.4	90.4	90.4	90.4	90.4	90.4	90.4	90.4	90.4
2.5°	91.2	91.2	91.2	90.4	90.4	90.4	89.6	89.6	88.7	88.7	88.7
5°	94.5	94.5	93.7	93.7	92.9	92.0	92.0	91.2	91.2	90.4	90.4
7.5°	100.3	100.3	99.5	98.7	97.0	96.2	95.4	94.5	94.5	93.7	93.7
10°	107.8	107.8	106.1	104.5	102.8	101.2	100.3	98.7	97.9	97.9	97.9
12.5°	116.9	116.1	114.4	112.0	110.3	107.8	106.1	104.5	102.8	102.8	102.8
15°	127.7	127.7	124.4	121.9	118.6	115.3	112.8	110.3	108.6	107.8	107.8
17.5°	141.0	141.0	136.8	132.7	128.5	124.4	121.1	117.8	116.1	115.3	115.3
20°	155.9	155.9	151.8	146.8	141.0	135.2	130.2	126.0	123.6	122.7	122.7
22.5°	174.1	174.1	168.3	161.7	154.2	146.0	139.3	134.3	131.9	130.2	130.2
25°	194.9	193.2	187.4	179.1	168.3	158.4	149.3	144.3	141.0	138.5	139.3
27.5°	223.1	220.6	213.1	199.0	185.8	172.5	161.7	155.1	150.9	149.3	150.1
30°	255.4	252.9	242.1	226.4	206.5	189.1	175.8	168.3	164.2	161.7	162.5
32.5°	294.4	291.1	277.8	256.2	233.0	208.1	191.6	182.4	178.3	175.8	175.0
35°	345.8	341.7	325.1	295.2	262.9	233.0	209.8	198.2	194.1	191.6	192.4
37.5°	403.9	398.1	375.7	339.2	298.5	260.4	233.9	218.9	214.0	209.8	209.8
40°	470.2	463.6	434.5	386.4	337.5	290.2	256.2	239.7	233.9	233.9	233.9
42.5°	553.1	546.5	513.3	442.8	378.1	322.6	282.0	262.9	257.1	258.7	258.7
45°	681.7	672.5	619.5	526.6	431.2	355.8	308.5	286.9	282.8	286.9	286.9
47.5°	799.4	787.8	709.9	604.5	483.5	388.9	335.0	310.1	308.5	317.6	317.6
50°	931.3	916.3	834.3	667.6	525.8	425.4	359.1	329.2	330.1	343.3	347.5
52.5°	1186.7	1170.9	1029.1	782.0	571.4	438.7	369.0	333.4	333.4	348.3	354.1
55°	1338.5	1306.1	1121.2	856.6	590.4	454.4	364.9	316.8	315.1	331.7	336.7
57.5°	1388.2	1355.0	1140.3	835.1	578.0	434.5	340.8	272.0	268.7	290.2	288.6
60°	1428.8	1384.9	1109.6	762.9	507.5	392.2	294.4	202.3	188.2	207.3	206.5
62.5°	1543.3	1496.0	1111.2	678.3	424.6	327.6	221.4	113.6	84.6	99.5	92.9
65°	1600.5	1554.1	1128.6	638.5	382.3	271.2	158.4	46.4	3.3	3.3	1.7
67.5°	1551.6	1510.1	1106.3	628.6	376.5	269.5	160.9	45.6	0.0	0.0	0.0
70°	1480.3	1440.5	1054.8	593.8	357.4	259.6	157.6	45.6	0.0	0.0	0.0
72.5°	1355.0	1314.4	966.1	544.0	328.4	238.0	146.0	43.1	0.0	0.0	0.0
75°	1190.0	1159.3	853.3	479.3	289.4	209.8	129.4	38.1	0.0	0.0	0.0
77.5°	1007.6	971.1	715.7	398.9	242.1	174.1	109.5	31.5	0.0	0.0	0.0
80°	808.5	782.0	563.9	312.6	187.4	136.0	85.4	24.0	0.0	0.0	0.0
82.5°	601.2	578.8	417.1	223.9	133.5	94.5	58.9	15.8	0.0	0.0	0.0
85°	394.7	388.9	267.9	136.0	79.6	52.2	31.5	7.5	0.0	0.0	0.0
87.5°	142.6	147.6	97.9	39.0	21.6	9.1	4.1	0.8	0.0	0.0	0.0
90°	0.8	0.8	0.8	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.0
92.5°	0.8	0.8	0.8	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.0
95°	0.8	0.8	0.8	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.0
97.5°	0.8	0.8	0.8	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.0
100°	0.8	0.8	0.8	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.0
102.5°	0.8	0.8	0.8	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.0
105°	0.8	0.8	0.8	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.0
107.5°	0.8	0.8	0.8	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.0
110°	0.8	0.8	0.8	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.0



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CATALOG NUMBER: TT-D2-740-12VDC-RW-PM-HSS

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
112.5°	0.8	0.8	0.8	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.0
115°	0.8	0.8	0.8	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.0
117.5°	0.8	0.8	0.8	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.0
120°	0.8	0.8	0.8	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.0
122.5°	0.8	0.8	0.8	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.0
125°	0.8	0.8	0.8	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.0
127.5°	0.8	0.8	0.8	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.0
130°	0.8	0.8	0.8	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.0
132.5°	0.8	0.8	0.8	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.0
135°	0.8	0.8	0.8	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.0
137.5°	0.0	0.8	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.0	0.0
140°	0.0	0.8	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.0	0.0
142.5°	0.0	0.0	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.0	0.0
145°	0.8	0.8	0.8	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.0
147.5°	0.0	0.8	0.8	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.0
150°	0.0	0.8	0.8	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.0
152.5°	0.0	0.0	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.0	0.0
155°	0.0	0.0	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.0	0.0
157.5°	0.0	0.0	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.0	0.0
160°	0.0	0.0	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.0	0.0
162.5°	0.0	0.0	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.0	0.0
167.5°	0.0	0.0	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.8	0.8	0.8	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

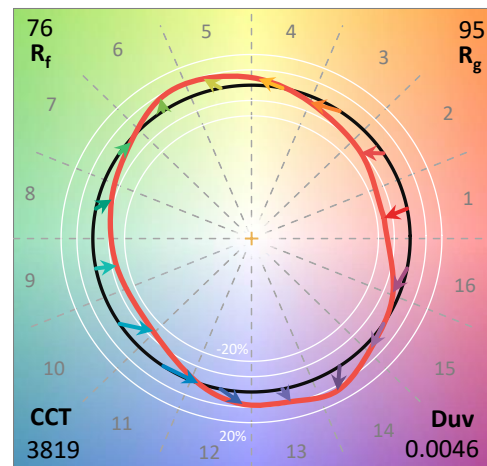
Test Information

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

REPORT NUMBER: SP1-2407-176-5

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

REPORT NUMBER: SP1-2407-176-5

CIE 1931 Chromaticity Diagram



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



REPORT NUMBER: SP1-2407-176-5

Photopic Flux vs. Wavelength

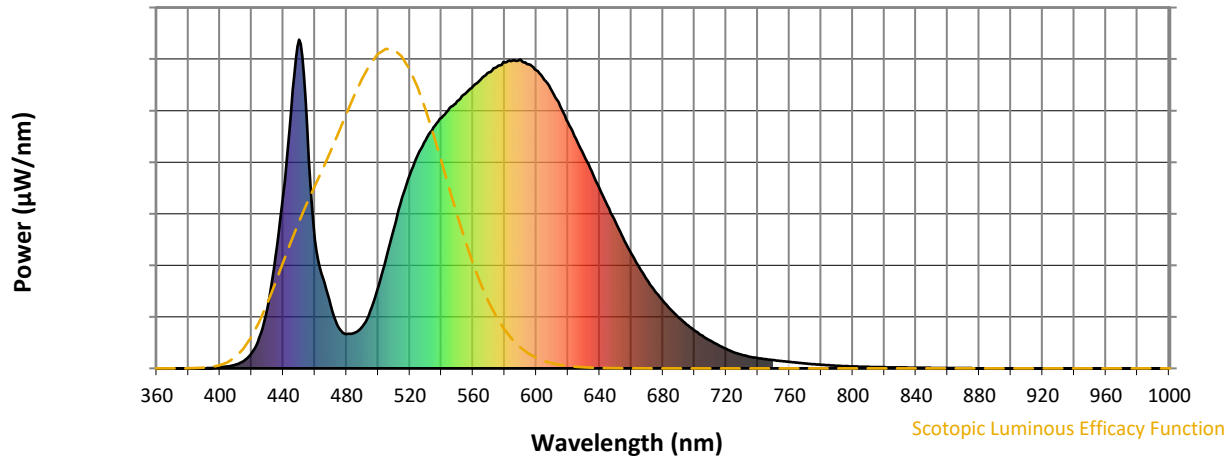


Photopic Lumens: NR

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			

REPORT NUMBER: SP1-2407-176-5

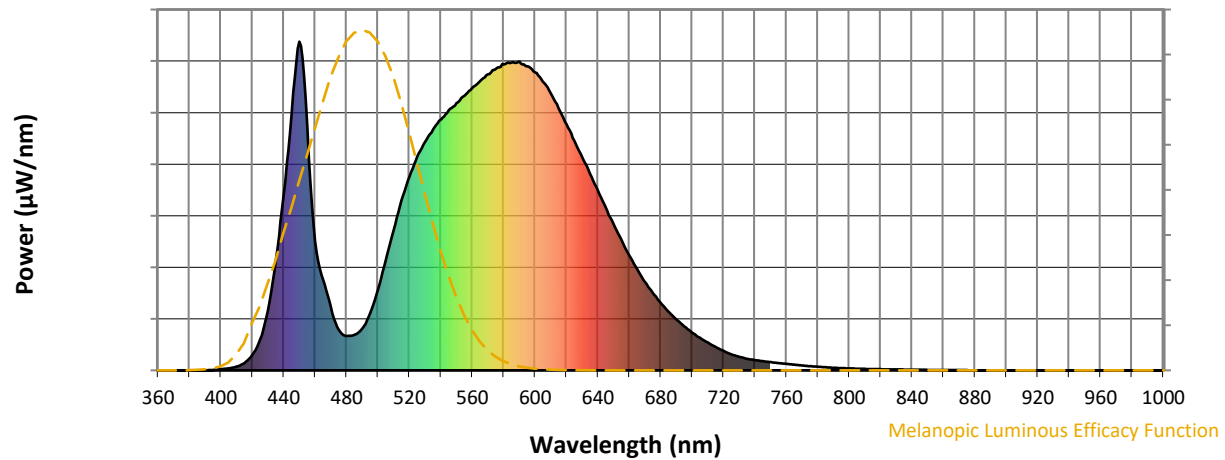
Scotopic Flux vs. Wavelength


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

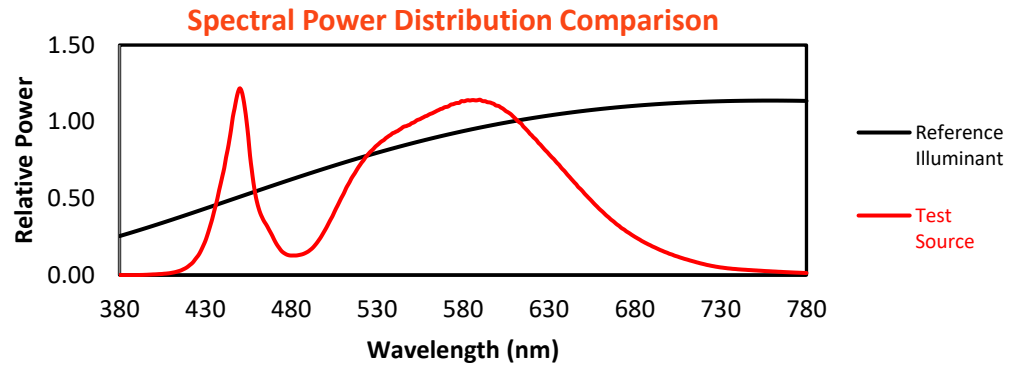
λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)
360	0	NR	490	127	NR	620	748	NR	750	25	NR	880	0	NR
365	0	NR	495	173	NR	625	699	NR	755	22	NR	885	0	NR
370	0	NR	500	246	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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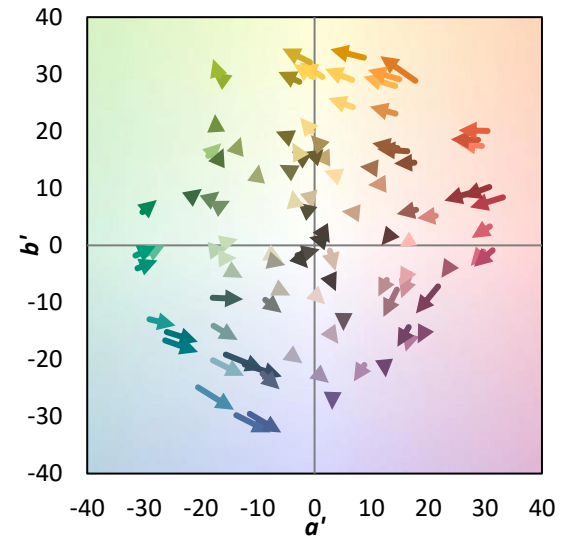
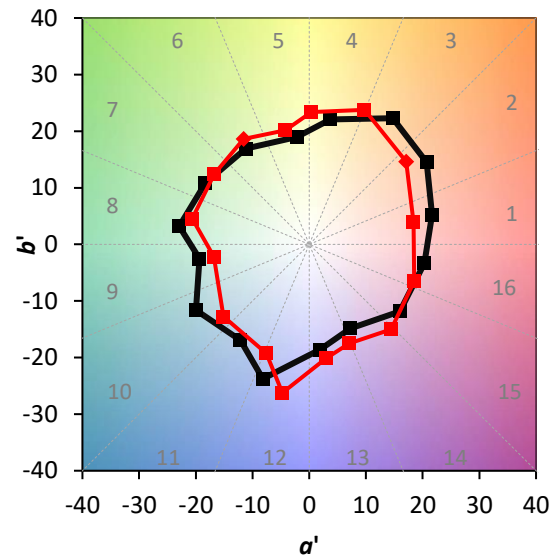
TM-30-18

Summary

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

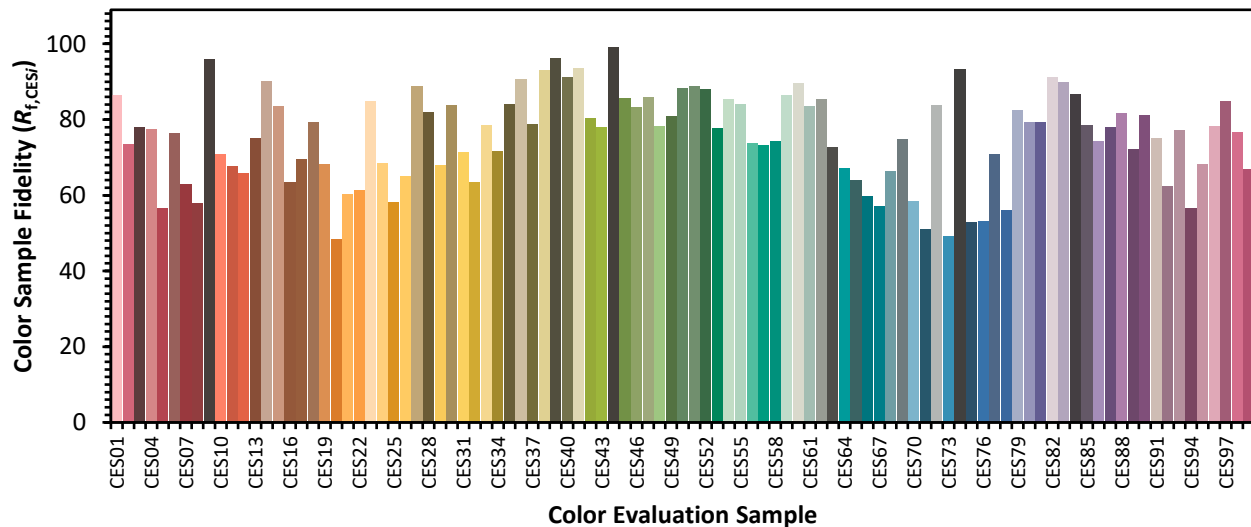


Color Vector Graphics

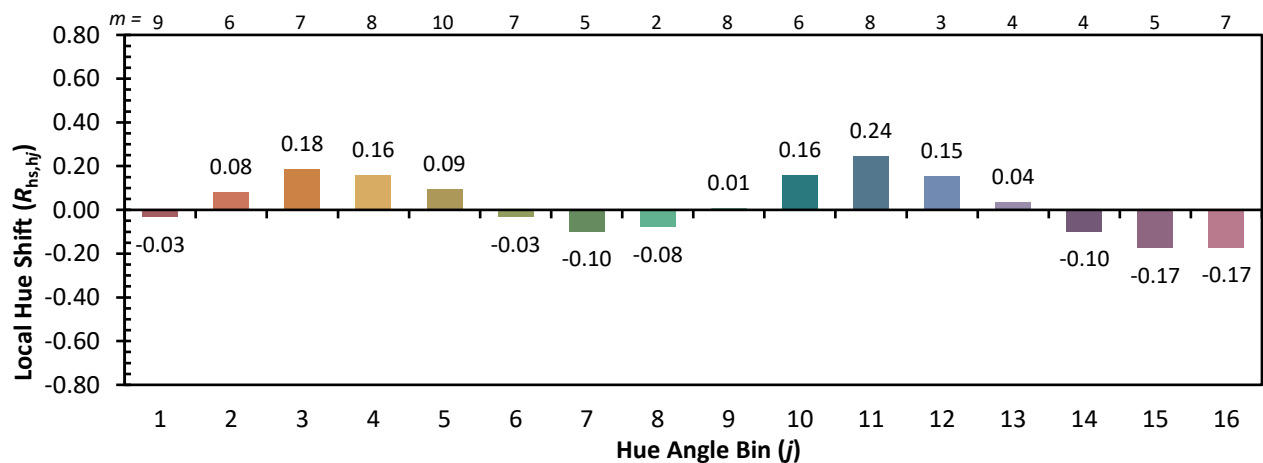


Individual Sample Fidelity Index ($R_{f,i}$)

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)