

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: INVUE

Report Number: P162500

Luminaire Tested: **EMM-F04-LED-E1-SL3-HSS-8030**

Issue Date: 03/03/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P162500  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33727)  
Test Lab: INNOVATION CENTER-P3  
Issue Date: 03/03/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: EMM-F04-LED-E1-SL3-HSS-8030  
Description: EPIC MODERN MEDIUM DECORATIVE LED LUMINAIRE  
(4) LIGHTBARS WITH AccuLED OPTICS - TYPE 3 W/ SPILL LIGHT CONTROL AND HOUSE SIDE SHIELD  
Light Source: (28) 3000K CCT, 80 CRI LEDs  
Ballast/Driver: -

**Summary**

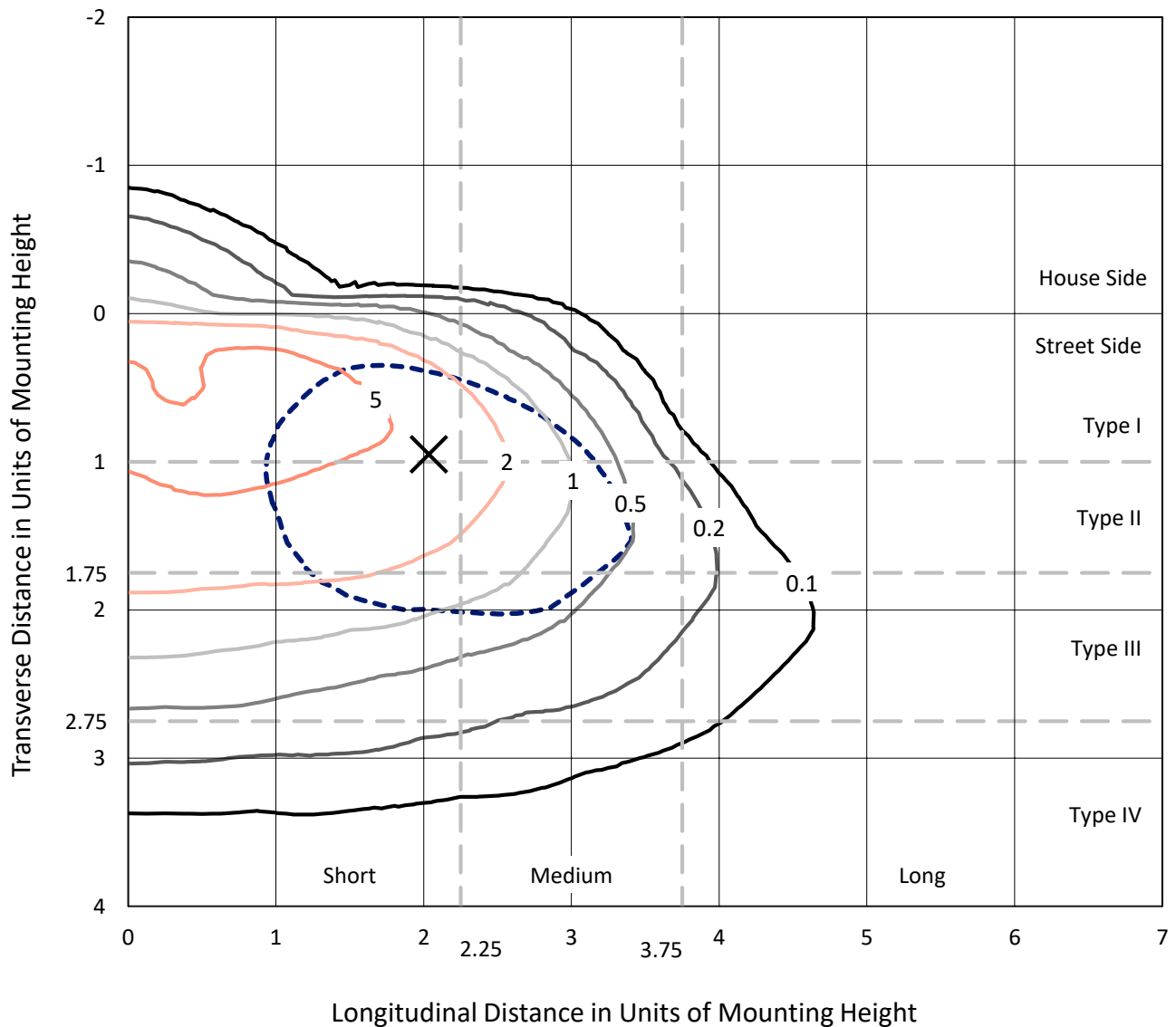
Lumens per Lamp: N/A  
Luminaire Lumens: 4594.2 lumens  
Efficiency: N/A  
Efficacy: 45.0 lumens/watt  
Luminous Opening: Rectangular w/ Sides (W: 0.67' x L: 1' x H: 0.1')  
IES Classification: Type III - Short - Non-Cutoff  
BUG Rating: B0 - U0 - G2  
  
Input Watts (W): 102.2  
Input Voltage (V): NR  
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

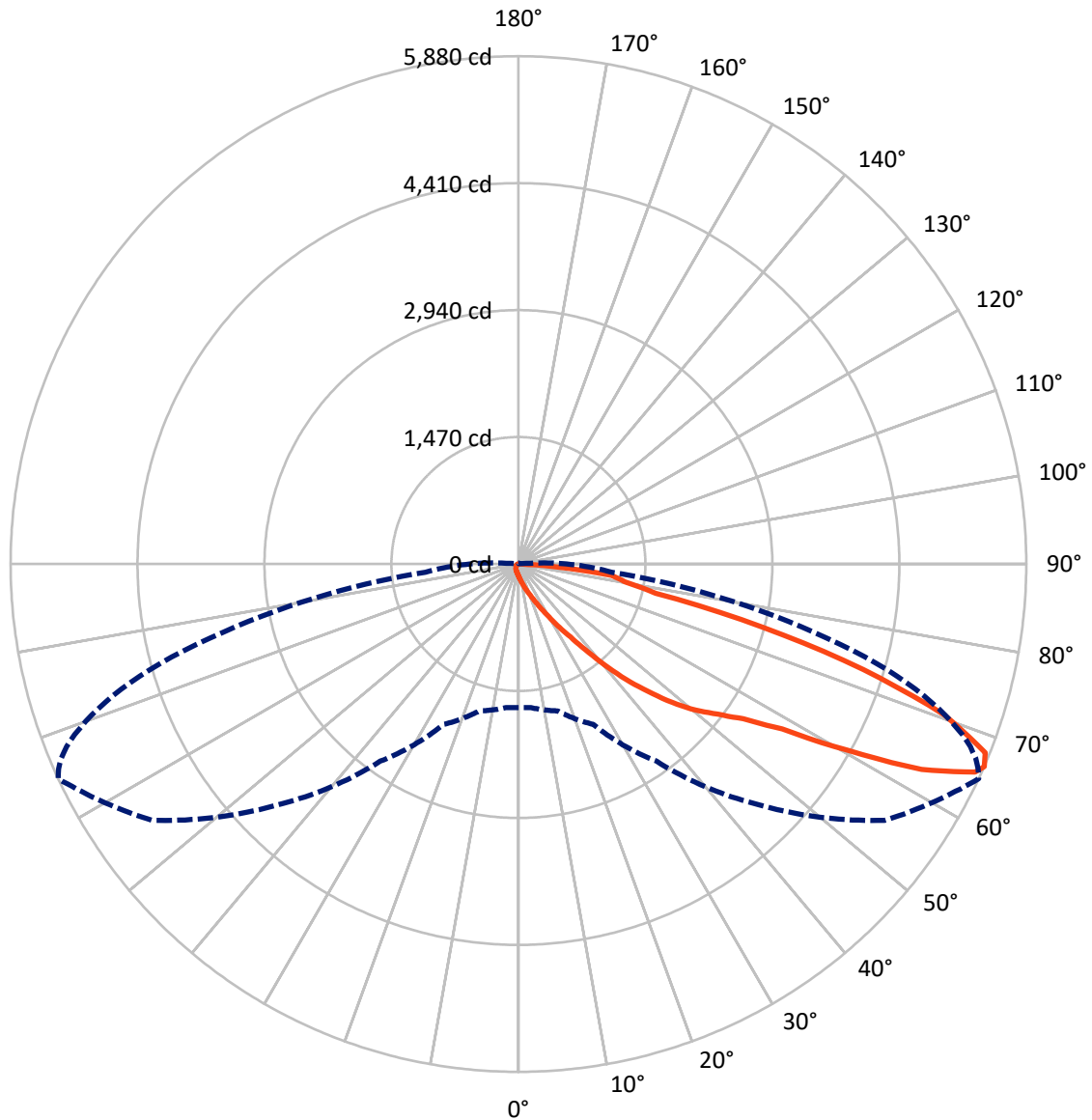
× Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 7.6 fc  
 Type III - Short - Non-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 65-Deg Lateral    - - - Horizontal Cone Through 66-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	99.6	0.0	99.6
	% Fixture	2.2	0.0	2.2
<b>Street Side</b>	Lumens	4494.6	0.0	4494.6
	% Fixture	97.8	0.0	97.8
<b>Total</b>	Lumens	4594.2	0.0	4594.2
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	15.5	0.3
10°-20°	65.8	1.4
20°-30°	142.0	3.1
30°-40°	303.2	6.6
40°-50°	670.5	14.6
50°-60°	1136.2	24.7
60°-70°	1516.2	33.0
70°-80°	667.9	14.5
80°-90°	76.9	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°	4594.2	100.0
0°-180°	4594.2	100.0



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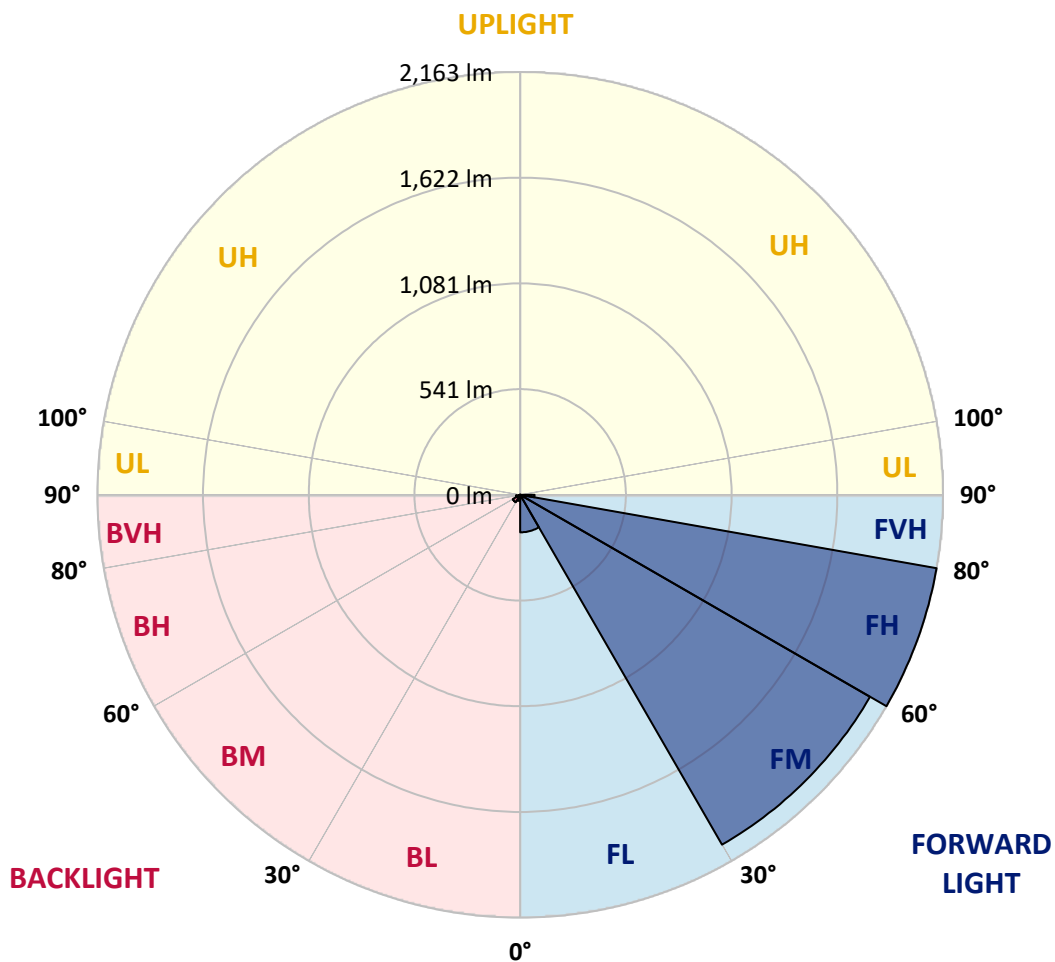
CATALOG NUMBER: EMM-F04-LED-E1-SL3-HSS-8030

**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	191.9	4.2			
FM	(30°-60°)	2066.1	45.0			
FH	(60°-80°)	2162.7	47.1			G2/5000
FVH	(80°-90°)	73.9	1.6			G1/100
BL	(0°-30°)	31.4	0.7	B0/110		
BM	(30°-60°)	43.7	1.0	B0/220		
BH	(60°-80°)	21.4	0.5	B0/110		G0/110
BVH	(80°-90°)	3.1	0.1			G0/10
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B0-U0-G2**

Type III Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	66°	67°	68°
0°	138.7	138.7	138.7	138.7	138.7	138.7	138.7	138.7	138.7	138.7	138.7
2.5°	174.9	174.0	170.5	170.5	165.2	161.6	157.2	152.8	152.8	151.9	151.1
5°	231.4	226.1	225.2	215.5	207.5	196.1	185.5	171.3	169.5	167.8	166.9
7.5°	294.1	293.3	285.3	273.8	257.9	236.7	215.5	192.6	189.0	187.3	183.8
10°	375.4	370.9	360.4	340.9	317.1	288.8	254.4	218.1	213.8	210.2	208.5
12.5°	453.1	445.2	438.9	414.2	384.2	342.7	301.2	249.1	245.5	241.2	234.1
15°	525.5	518.5	507.9	486.7	453.1	400.9	352.5	288.8	280.0	273.8	268.5
17.5°	582.1	577.6	565.3	541.4	505.2	459.3	400.9	329.4	322.4	314.5	304.7
20°	635.9	629.8	610.3	577.6	538.8	503.4	458.4	382.5	372.7	363.0	352.5
22.5°	687.2	680.9	649.2	595.3	553.8	538.8	522.8	442.5	427.5	419.5	408.9
25°	758.7	745.4	696.0	610.3	554.7	566.1	593.5	520.2	506.1	494.6	477.9
27.5°	854.9	837.3	759.6	632.4	558.2	596.2	674.8	614.7	599.7	586.5	567.9
30°	963.6	952.1	859.4	685.4	583.9	640.3	765.8	734.8	717.2	701.3	679.2
32.5°	1073.2	1057.3	965.4	786.1	652.7	726.0	879.7	874.4	851.4	836.5	812.6
35°	1169.4	1161.4	1093.4	951.3	809.9	876.2	1031.6	1037.8	1017.5	1001.6	975.1
37.5°	1234.8	1234.8	1221.5	1128.8	1059.9	1109.4	1255.1	1256.0	1235.6	1199.4	1186.2
40°	1268.3	1278.0	1325.7	1343.4	1339.9	1403.5	1548.3	1532.4	1515.6	1497.1	1452.9
42.5°	1337.3	1346.1	1447.6	1569.5	1649.0	1732.9	1832.7	1827.4	1807.1	1773.5	1732.9
45°	1453.9	1465.3	1586.3	1779.7	1943.1	2062.3	2126.0	2101.3	2080.9	2049.1	2027.9
47.5°	1602.2	1624.2	1761.2	2000.6	2197.5	2394.4	2460.7	2395.4	2377.6	2352.9	2318.5
50°	1760.3	1781.5	1927.3	2201.0	2423.6	2658.6	2768.9	2658.6	2632.9	2625.0	2586.1
52.5°	1897.2	1914.8	2055.3	2355.6	2596.7	2872.3	3033.0	2887.3	2868.8	2842.2	2814.0
55°	1978.5	1992.6	2124.2	2429.7	2714.2	3064.8	3288.3	3160.2	3132.8	3122.2	3081.6
57.5°	2005.9	2020.0	2138.3	2439.5	2777.7	3240.6	3598.3	3602.8	3570.1	3532.1	3519.7
60°	2005.9	2021.7	2121.5	2415.6	2839.6	3427.8	4011.7	4380.0	4309.4	4302.3	4257.2
62.5°	1922.8	1937.9	2038.6	2342.3	2922.7	3680.4	4587.5	5237.6	5217.2	5171.4	5097.1
65°	1742.6	1751.5	1850.3	2155.1	2890.8	3912.8	5086.5	5808.2	5775.5	5685.4	5590.0
66°	1661.4	1668.4	1761.2	2048.2	2786.6	3944.5	5174.9	5879.7	5825.8	5749.8	5642.2
67.5°	1543.9	1556.2	1621.6	1849.5	2536.7	3834.1	5119.2	5829.4	5782.5	5690.7	5583.0
70°	1030.7	1021.9	1252.5	1419.4	1932.6	3124.0	4592.9	5234.1	5235.0	5191.7	5148.4
72.5°	489.3	494.6	561.8	873.5	1264.8	2087.0	3655.7	4177.7	4237.7	4160.1	4106.2
75°	351.5	359.5	400.1	534.3	754.2	1252.5	2369.7	2921.7	2923.5	2785.7	2662.9
77.5°	102.5	106.8	150.1	329.4	565.3	845.3	1361.0	1624.2	1586.3	1487.4	1394.7
80°	42.4	42.4	44.1	105.1	226.9	574.1	952.1	1250.7	1246.2	1208.2	1153.5
82.5°	15.9	16.8	21.2	43.3	53.9	141.3	635.1	1085.5	1082.8	1028.9	990.1
85°	1.8	1.8	5.3	18.6	20.3	26.5	127.2	478.7	476.1	478.7	419.5
87.5°	0.0	0.0	0.9	1.8	2.7	3.5	5.3	18.6	20.3	19.4	17.7
90°	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):**

	69°	70°	71°	72°	73°	74°	75°	76°	77°	78°	79°
0°	138.7	138.7	138.7	138.7	138.7	138.7	138.7	138.7	138.7	138.7	138.7
2.5°	151.1	149.3	149.3	148.4	148.4	148.4	147.5	146.6	146.6	145.8	144.8
5°	165.2	163.4	162.5	160.7	159.9	158.9	157.2	156.3	154.6	153.7	152.8
7.5°	182.0	178.5	177.5	174.9	172.2	170.5	168.7	166.0	164.2	160.7	159.9
10°	203.2	198.7	195.2	191.6	189.0	184.6	182.0	178.5	174.9	172.2	169.5
12.5°	230.5	224.3	219.1	215.5	209.3	204.0	198.7	196.1	189.0	185.5	181.1
15°	260.6	253.5	247.3	240.2	235.9	226.9	219.9	212.0	208.5	202.2	195.2
17.5°	299.4	287.9	278.2	271.2	262.3	253.5	245.5	237.6	226.9	219.9	211.1
20°	340.9	331.2	318.0	305.6	295.0	284.4	272.9	262.3	252.6	241.2	230.5
22.5°	393.9	379.8	363.9	351.5	337.4	325.9	310.0	295.9	280.0	264.9	252.6
25°	461.1	442.5	427.5	409.9	393.1	375.4	356.0	338.2	318.0	303.9	282.6
27.5°	544.1	526.5	506.1	483.2	466.3	439.9	414.2	392.1	368.3	346.2	322.4
30°	650.1	624.5	603.3	581.2	547.6	522.0	492.0	461.9	429.3	407.2	370.9
32.5°	777.3	749.9	718.1	686.2	655.4	619.2	582.1	544.9	508.7	468.1	431.0
35°	932.7	900.0	863.8	829.4	781.6	742.8	696.0	644.8	604.1	557.3	510.5
37.5°	1138.5	1084.6	1052.8	1016.6	952.1	899.2	847.0	795.8	724.2	674.8	608.6
40°	1396.4	1364.6	1312.5	1254.2	1195.9	1126.1	1055.5	987.4	904.5	835.5	758.7
42.5°	1699.4	1652.6	1599.5	1515.6	1456.5	1374.3	1294.0	1203.9	1102.2	1014.0	923.9
45°	1983.7	1928.1	1887.5	1803.6	1741.7	1644.6	1547.4	1452.0	1334.6	1220.7	1116.4
47.5°	2291.1	2245.2	2178.1	2110.1	2047.4	1937.9	1832.7	1717.0	1593.4	1458.2	1323.1
50°	2561.4	2525.2	2479.3	2397.1	2327.4	2235.5	2111.9	1985.5	1829.2	1694.9	1541.3
52.5°	2791.0	2762.8	2698.3	2640.0	2577.3	2490.7	2380.3	2259.3	2090.6	1943.1	1768.2
55°	3062.2	3041.9	2985.4	2949.1	2893.5	2810.4	2707.1	2594.9	2416.6	2255.8	2058.0
57.5°	3506.4	3490.6	3441.1	3426.1	3371.4	3298.9	3171.7	3051.6	2843.1	2643.5	2417.4
60°	4242.2	4210.4	4138.0	4100.9	3985.1	3888.0	3722.9	3557.7	3306.0	3051.6	2779.5
62.5°	5030.1	4940.9	4803.0	4684.7	4520.4	4351.7	4130.9	3878.3	3583.3	3281.3	2968.6
65°	5454.9	5303.0	5129.0	4940.9	4728.0	4479.8	4201.6	3898.7	3581.5	3262.7	2932.3
66°	5503.5	5332.1	5147.5	4938.2	4701.5	4437.4	4154.8	3836.8	3507.4	3196.4	2866.1
67.5°	5442.5	5263.2	5068.1	4835.7	4579.6	4305.8	4009.0	3678.7	3361.6	3046.3	2724.8
70°	5015.9	4837.5	4663.5	4418.9	4145.9	3870.3	3589.5	3220.3	2920.0	2630.3	2344.1
72.5°	4005.5	3884.4	3712.2	3502.9	3237.0	2913.8	2679.7	2349.4	2088.8	1808.0	1586.3
75°	2503.1	2332.7	2119.7	1853.0	1649.9	1387.5	1250.7	999.9	851.4	721.6	596.2
77.5°	1279.9	1151.8	1002.5	852.3	708.3	565.3	437.2	309.2	208.5	144.8	107.8
80°	1057.3	944.2	820.6	683.6	556.5	431.9	310.9	212.0	135.2	88.3	68.9
82.5°	873.5	778.1	667.8	540.6	430.1	339.2	235.9	153.7	95.4	61.9	48.6
85°	371.9	337.4	260.6	206.7	155.4	114.8	80.4	53.9	38.0	30.9	28.2
87.5°	15.9	17.7	16.8	13.3	9.8	9.8	8.8	7.1	7.1	7.1	7.1
90°	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):**

	80°	81°	82°	83°	84°	85°	95°	105°	115°	125°	135°
0°	138.7	138.7	138.7	138.7	138.7	138.7	138.7	138.7	138.7	138.7	138.7
2.5°	144.8	144.0	143.1	143.1	142.2	141.3	136.0	131.6	126.3	122.8	119.3
5°	151.1	150.1	148.4	147.5	145.8	144.8	133.4	123.6	115.7	109.5	105.1
7.5°	157.2	156.3	153.7	151.1	150.1	148.4	129.9	117.5	106.8	99.8	95.4
10°	165.2	162.5	159.9	156.3	153.7	151.1	126.3	110.4	98.9	92.7	88.3
12.5°	176.7	172.2	167.8	163.4	159.9	155.4	124.6	104.2	92.7	85.7	81.3
15°	189.9	183.8	178.5	173.1	166.9	162.5	121.0	98.9	87.4	80.4	75.1
17.5°	202.2	195.2	187.3	179.3	173.1	166.9	117.5	93.6	82.1	75.1	69.8
20°	219.9	209.3	199.6	189.9	181.1	173.1	112.1	88.3	77.8	69.8	64.5
22.5°	239.4	226.9	214.6	201.4	189.9	179.3	107.8	83.9	73.3	65.4	59.2
25°	264.1	249.1	232.2	215.5	202.2	188.1	103.3	79.5	68.9	60.9	54.7
27.5°	298.6	277.3	258.8	237.6	217.3	201.4	99.8	76.0	64.5	56.5	50.4
30°	345.3	314.5	285.3	262.3	238.5	215.5	96.2	71.5	60.9	52.1	45.1
32.5°	397.4	361.3	327.7	293.3	263.2	236.7	92.7	68.0	56.5	47.7	41.5
35°	461.9	416.0	370.9	331.2	295.0	259.7	89.2	64.5	53.0	43.3	37.1
37.5°	554.7	497.3	438.1	386.8	340.0	293.3	86.6	60.9	48.6	38.8	32.7
40°	681.9	607.6	535.3	465.5	404.5	346.2	83.1	57.4	45.1	35.3	29.2
42.5°	819.6	729.5	634.1	555.5	471.6	398.3	79.5	53.9	41.5	31.8	25.6
45°	991.0	878.8	763.2	656.2	553.8	459.3	76.0	50.4	37.1	28.2	22.1
47.5°	1178.2	1035.2	904.5	770.2	648.3	535.3	71.5	47.7	33.5	24.7	19.4
50°	1370.8	1219.8	1054.6	901.8	756.9	611.2	67.2	43.3	30.0	22.1	15.9
52.5°	1578.3	1400.0	1231.3	1041.3	872.7	711.0	62.7	39.8	27.4	19.4	13.3
55°	1842.4	1642.8	1444.9	1232.1	1028.9	826.7	58.3	35.3	23.9	16.8	10.6
57.5°	2174.6	1937.9	1694.9	1454.7	1208.2	978.6	54.7	30.9	20.3	14.1	8.8
60°	2488.1	2211.6	1917.5	1641.0	1362.8	1095.2	49.4	27.4	17.7	11.5	8.8
62.5°	2650.6	2335.3	2018.2	1713.5	1416.7	1136.7	44.1	22.9	15.0	9.8	8.0
65°	2610.8	2289.4	1982.0	1674.6	1384.0	1110.2	38.8	20.3	13.3	8.8	8.0
66°	2553.4	2235.5	1926.3	1634.0	1356.7	1082.0	36.2	19.4	12.4	8.8	7.1
67.5°	2428.0	2120.7	1825.6	1553.6	1281.6	1028.1	32.7	17.7	11.5	8.0	7.1
70°	2073.9	1794.7	1558.9	1316.9	1095.2	866.5	26.5	15.0	9.8	7.1	7.1
72.5°	1372.6	1182.7	1025.4	882.3	737.5	572.3	22.1	12.4	8.0	7.1	6.2
75°	517.5	468.1	401.9	361.3	315.3	276.5	17.7	8.0	6.2	6.2	6.2
77.5°	91.9	84.8	75.1	68.9	63.6	58.3	14.1	5.3	5.3	6.2	6.2
80°	61.9	57.4	52.1	47.7	44.1	39.8	9.8	4.5	5.3	5.3	6.2
82.5°	44.1	41.5	38.8	35.3	32.7	29.2	6.2	4.5	5.3	5.3	5.3
85°	26.5	24.7	22.9	21.2	18.6	17.7	4.5	4.5	4.5	5.3	5.3
87.5°	7.1	6.2	7.1	7.1	5.3	6.2	3.5	3.5	3.5	4.5	4.5
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P162500

CATALOG NUMBER: EMM-F04-LED-E1-SL3-HSS-8030

**CANDELA DISTRIBUTION (continued):**

	145°	155°	165°	175°	180°
0°	138.7	138.7	138.7	138.7	138.7
2.5°	117.5	117.5	115.7	118.4	118.4
5°	101.5	101.5	100.7	101.5	101.5
7.5°	92.7	91.9	91.9	91.9	92.7
10°	84.8	83.9	83.9	83.9	83.9
12.5°	77.8	76.8	76.0	76.8	76.8
15°	71.5	69.8	69.8	69.8	69.8
17.5°	66.2	64.5	63.6	63.6	63.6
20°	60.9	58.3	58.3	58.3	58.3
22.5°	55.6	53.0	53.0	53.0	53.0
25°	50.4	47.7	47.7	47.7	47.7
27.5°	45.9	43.3	43.3	43.3	43.3
30°	40.6	38.8	38.8	39.8	38.8
32.5°	37.1	34.5	34.5	35.3	35.3
35°	32.7	30.9	30.9	30.9	30.9
37.5°	28.2	26.5	26.5	26.5	26.5
40°	24.7	22.9	22.1	22.9	22.9
42.5°	21.2	19.4	18.6	18.6	18.6
45°	18.6	15.9	15.0	15.9	15.9
47.5°	15.0	13.3	13.3	14.1	14.1
50°	11.5	11.5	12.4	14.1	14.1
52.5°	10.6	10.6	12.4	14.1	14.1
55°	9.8	10.6	12.4	13.3	14.1
57.5°	8.8	10.6	12.4	13.3	13.3
60°	8.8	9.8	11.5	13.3	13.3
62.5°	8.0	8.8	10.6	12.4	12.4
65°	8.0	8.8	10.6	12.4	12.4
66°	8.0	8.8	10.6	12.4	12.4
67.5°	8.0	8.8	10.6	12.4	12.4
70°	8.0	8.8	10.6	11.5	11.5
72.5°	7.1	8.0	9.8	11.5	11.5
75°	7.1	8.0	9.8	11.5	11.5
77.5°	7.1	8.0	9.8	11.5	11.5
80°	7.1	8.0	9.8	10.6	11.5
82.5°	6.2	8.0	8.8	10.6	10.6
85°	6.2	7.1	8.8	9.8	10.6
87.5°	5.3	6.2	7.1	8.8	8.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)