

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: P162660

Luminaire Tested: **EMM-F04-LED-E1-SL4-HSS-8030**

Issue Date: 03/03/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P162660  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33728)  
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-SL4-HSS-8030  
Description: EPIC MODERN MEDIUM DECORATIVE LED LUMINAIRE  
(4) LIGHTBARS WITH AccuLED OPTICS - TYPE 4 W/ SPILL LIGHT CONTROL AND HOUSE SIDE SHIELD  
Light Source: (28) 3000K CCT, 80 CRI LEDs  
Ballast/Driver: -

**Summary**

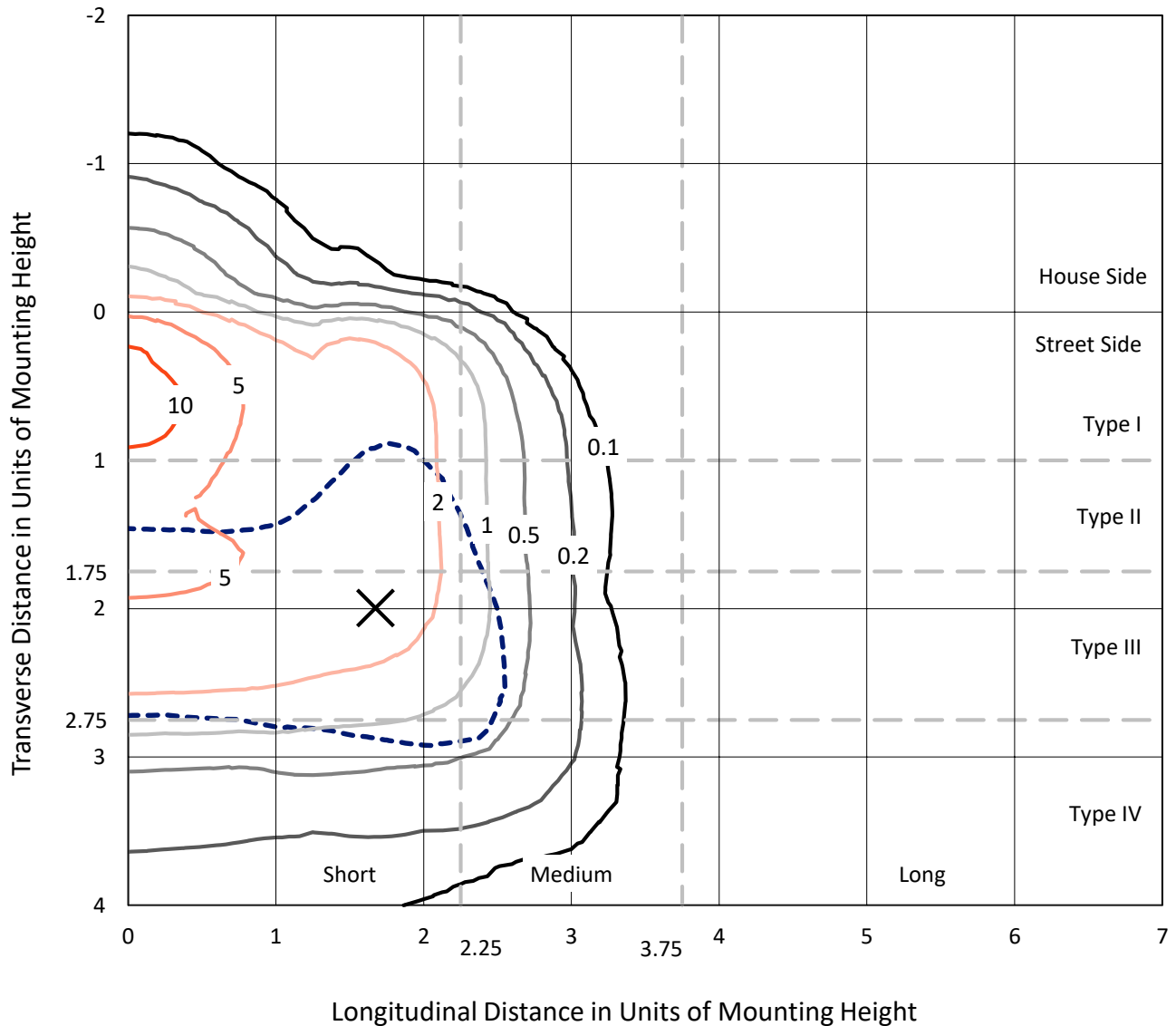
Lumens per Lamp: N/A  
Luminaire Lumens: 5391.7 lumens  
Efficiency: N/A  
Efficacy: 52.8 lumens/watt  
Luminous Opening: Rectangular w/ Sides (W: 0.67' x L: 1' x H: 0.1')  
IES Classification: Type IV - Short - Semi-Cutoff  
BUG Rating: B0 - U0 - G2  
  
Input Watts (W): 102.2  
Input Voltage (V): NR  
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

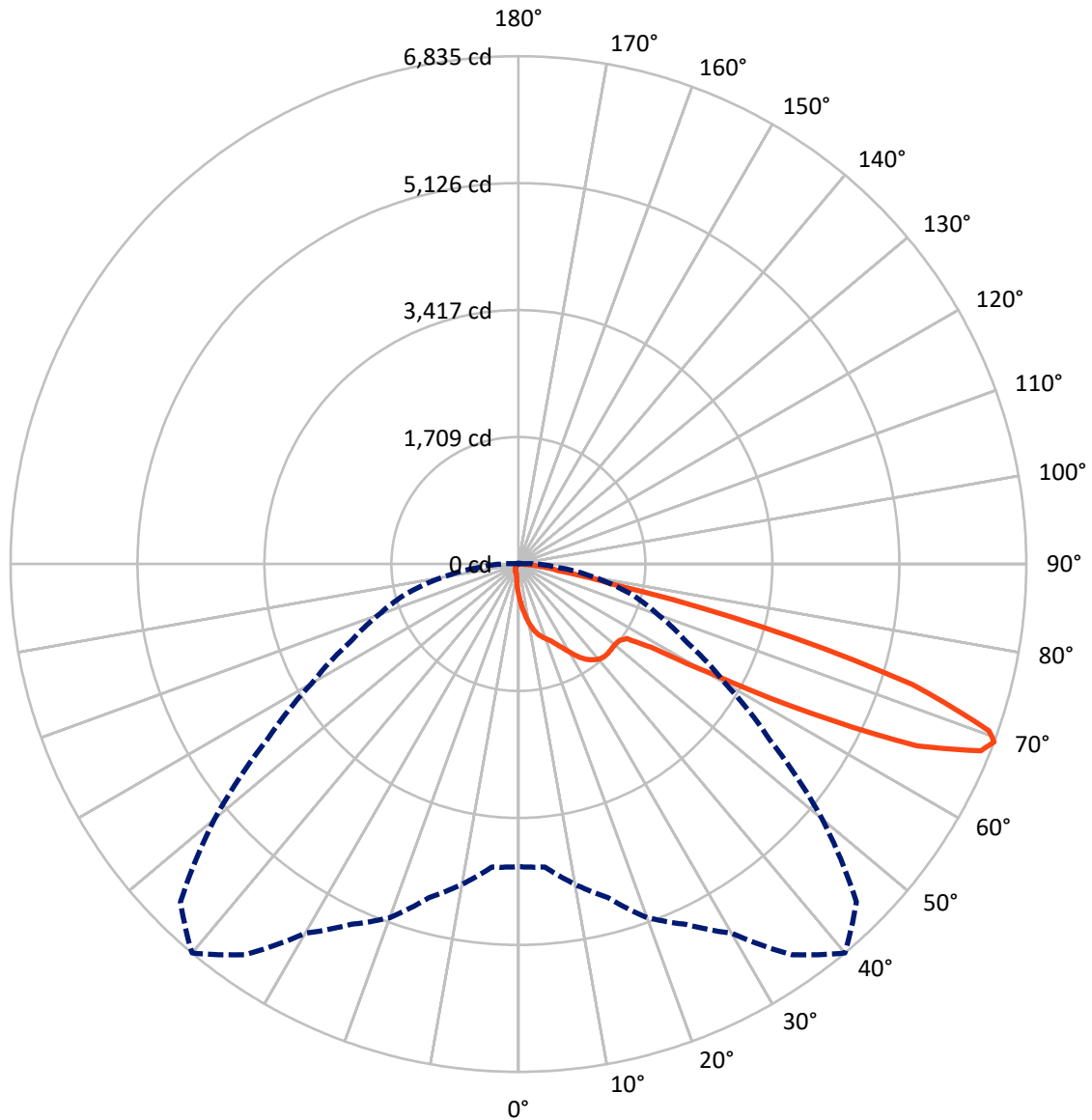
× Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 12.1 fc  
 Type IV - Short - Semi-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 40-Deg Lateral    - - - Horizontal Cone Through 69-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	160.6	0.0	160.6
	% Fixture	3.0	0.0	3.0
<b>Street Side</b>	Lumens	5231.1	0.0	5231.1
	% Fixture	97.0	0.0	97.0
<b>Total</b>	Lumens	5391.7	0.0	5391.7
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	41.9	0.8
10°-20°	144.3	2.7
20°-30°	276.2	5.1
30°-40°	459.3	8.5
40°-50°	621.5	11.5
50°-60°	971.9	18.0
60°-70°	1998.2	37.1
70°-80°	804.1	14.9
80°-90°	74.4	1.4
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°	5391.7	100.0
0°-180°	5391.7	100.0



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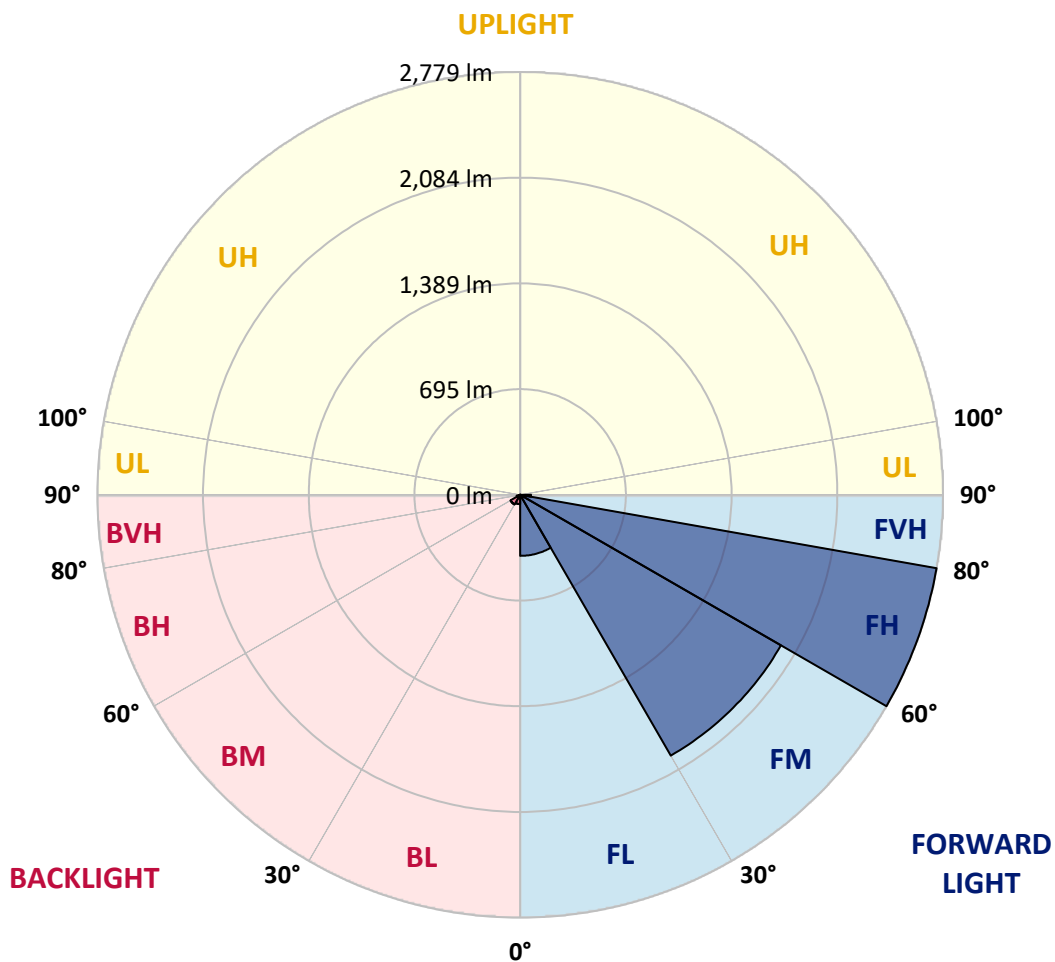
CATALOG NUMBER: EMM-F04-LED-E1-SL4-HSS-8030

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

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	401.2	7.4			
FM	(30°-60°)	1979.4	36.7			
FH	(60°-80°)	2778.9	51.5			G2/5000
FVH	(80°-90°)	71.6	1.3			G1/100
BL	(0°-30°)	61.1	1.1	B0/110		
BM	(30°-60°)	73.3	1.4	B0/220		
BH	(60°-80°)	23.4	0.4	B0/110		G0/110
BVH	(80°-90°)	2.8	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 IV Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	407.2	407.2	407.2	407.2	407.2	407.2	407.2	407.2	407.2	407.2	407.2
2.5°	543.2	537.0	530.0	530.0	521.1	521.1	515.8	501.6	499.9	492.0	484.0
5°	693.3	688.0	679.2	671.3	664.2	651.9	643.0	626.2	607.6	590.0	574.1
7.5°	840.0	837.3	821.4	818.8	807.3	786.9	769.3	744.6	712.8	688.0	658.9
10°	976.0	969.8	966.2	951.3	934.5	912.4	885.0	854.9	817.9	779.0	737.5
12.5°	1083.7	1080.2	1064.3	1058.1	1040.5	1018.3	983.9	945.1	908.0	857.6	809.0
15°	1164.1	1157.9	1147.3	1137.6	1116.4	1096.9	1065.2	1022.8	977.8	922.9	864.7
17.5°	1231.3	1219.8	1217.1	1202.1	1180.0	1157.0	1121.7	1082.8	1029.9	975.1	911.5
20°	1321.3	1305.4	1300.1	1278.0	1252.5	1220.7	1180.0	1131.4	1075.8	1015.7	950.3
22.5°	1427.3	1415.9	1404.3	1384.9	1352.2	1307.2	1248.0	1195.0	1124.3	1058.1	987.4
25°	1577.5	1567.7	1549.2	1522.7	1482.1	1428.2	1356.7	1278.9	1195.9	1111.2	1028.1
27.5°	1723.2	1714.3	1701.1	1680.8	1634.9	1575.7	1487.4	1388.5	1283.4	1180.9	1089.0
30°	1860.1	1852.1	1838.9	1818.6	1778.0	1719.6	1619.9	1513.9	1383.2	1263.9	1153.5
32.5°	2007.6	2004.9	1990.0	1960.8	1925.5	1846.8	1738.2	1624.2	1491.8	1354.0	1225.0
35°	2174.6	2154.2	2140.1	2110.9	2050.9	1966.9	1839.8	1715.3	1575.7	1434.3	1290.4
37.5°	2315.9	2296.4	2278.8	2241.6	2168.3	2061.5	1917.5	1780.6	1636.7	1492.7	1346.1
40°	2419.2	2409.5	2388.3	2339.7	2257.5	2130.3	1974.9	1825.6	1680.8	1536.0	1391.1
42.5°	2496.0	2481.0	2457.2	2406.8	2309.6	2164.8	1997.9	1844.2	1701.1	1562.5	1420.2
45°	2524.3	2512.0	2489.9	2435.0	2330.0	2174.6	1997.0	1838.9	1702.0	1570.4	1439.6
47.5°	2507.5	2495.1	2475.7	2424.5	2321.2	2163.0	1981.1	1823.9	1693.2	1573.0	1457.4
50°	2451.9	2444.8	2429.7	2386.6	2293.7	2140.9	1966.9	1816.0	1691.4	1586.3	1482.1
52.5°	2446.6	2442.2	2423.6	2380.3	2285.8	2133.9	1965.2	1820.3	1706.4	1603.0	1499.7
55°	2989.7	2927.0	2786.6	2667.4	2471.3	2238.1	2054.4	1891.9	1770.0	1669.3	1596.9
57.5°	4249.3	4155.6	3971.0	3744.1	3293.6	2851.1	2496.9	2240.8	2114.5	2068.6	2096.0
60°	4839.2	4822.4	4793.4	4685.6	4455.0	4074.4	3650.4	3192.0	3008.3	2992.4	3048.1
62.5°	5119.2	5108.7	5117.5	5104.2	5032.7	4921.4	4799.5	4601.7	4419.7	4302.3	4053.1
65°	5248.2	5255.2	5305.6	5345.4	5354.2	5383.4	5472.5	5719.0	5899.1	5596.2	4904.6
67.5°	4920.5	4962.1	5077.7	5222.5	5392.2	5556.4	5821.5	6340.8	6710.9	6354.9	5372.8
69°	4073.5	4093.8	4376.4	4649.4	5063.6	5353.3	5737.5	6418.5	6834.5	6432.6	5335.6
70°	3207.0	3225.6	3528.5	3899.5	4599.9	4972.6	5475.2	6286.9	6718.8	6329.2	5144.9
72.5°	1446.7	1420.2	1527.2	1725.9	2487.2	3078.9	3957.8	5093.6	5543.2	5070.7	3849.1
75°	1010.5	998.9	1010.5	1011.3	1129.6	1457.4	1838.9	2761.0	3414.6	2946.4	1838.9
77.5°	782.6	774.6	766.7	757.9	772.0	864.7	901.8	979.5	1271.9	1202.9	701.3
80°	619.2	612.1	631.5	625.3	625.3	635.9	628.8	599.7	544.9	505.2	452.2
82.5°	287.9	289.7	289.7	314.5	378.9	442.5	462.8	433.6	385.1	327.7	264.1
85°	27.4	30.9	52.1	80.4	159.9	180.2	181.1	150.1	150.1	118.4	95.4
87.5°	0.0	0.9	0.9	0.9	8.0	22.1	18.6	5.3	2.7	2.7	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



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	407.2	407.2	407.2	407.2	407.2	407.2	407.2	407.2	407.2	407.2	407.2
2.5°	469.9	467.3	456.6	446.0	436.3	425.8	416.0	406.2	395.7	387.8	378.0
5°	549.4	530.0	507.9	486.7	465.5	443.4	420.5	400.1	378.9	359.5	340.9
7.5°	629.8	591.8	561.8	523.8	489.3	454.8	423.1	390.4	360.4	332.1	305.6
10°	697.8	651.9	605.0	556.5	506.9	461.1	416.9	378.0	338.2	303.9	271.2
12.5°	753.4	695.1	637.7	576.7	521.1	462.8	408.1	361.3	314.5	275.5	242.0
15°	803.8	736.6	667.8	597.1	526.5	460.1	399.2	340.9	293.3	249.1	211.1
17.5°	844.4	767.5	689.8	610.3	534.3	456.6	387.8	326.8	271.2	225.2	188.1
20°	879.7	799.3	715.4	626.2	539.6	455.8	378.0	309.2	251.8	203.2	166.9
22.5°	912.4	832.0	741.9	646.6	547.6	454.8	369.2	295.9	234.9	186.4	150.1
25°	949.5	864.7	770.2	667.8	561.8	458.4	363.9	285.3	219.9	170.5	136.9
27.5°	991.0	901.8	803.8	694.2	580.2	465.5	362.1	273.8	206.7	155.4	126.3
30°	1049.3	946.0	837.3	720.7	597.1	473.4	360.4	266.7	193.4	144.0	115.7
32.5°	1100.5	989.3	874.4	748.1	615.6	481.4	359.5	257.0	181.1	132.5	107.8
35°	1154.4	1028.9	906.2	774.6	631.5	490.2	358.6	250.0	169.5	121.0	99.8
37.5°	1201.2	1062.6	930.9	797.5	649.2	498.1	359.5	243.8	158.9	111.3	92.7
40°	1240.9	1096.9	958.3	818.8	667.8	510.5	360.4	237.6	148.4	102.5	86.6
42.5°	1276.2	1129.6	987.4	842.6	688.9	524.7	365.6	232.2	139.5	94.5	80.4
45°	1303.6	1159.6	1019.3	876.2	723.4	547.6	375.4	228.7	130.7	87.4	75.1
47.5°	1331.9	1203.9	1073.2	929.2	773.7	583.9	392.1	227.9	123.6	82.1	70.7
50°	1370.8	1248.0	1120.8	983.0	819.6	620.9	412.5	228.7	114.8	76.8	66.2
52.5°	1399.0	1293.0	1182.7	1076.7	929.2	734.0	491.1	244.7	110.4	72.5	60.9
55°	1566.0	1547.4	1550.1	1567.7	1453.9	1248.9	821.4	353.3	129.9	82.1	60.1
57.5°	2208.1	2273.5	2311.4	2310.6	2122.4	1760.3	1103.2	454.0	144.8	95.4	71.5
60°	3052.4	3003.0	2933.3	2761.0	2511.0	2009.4	1233.9	488.5	125.4	76.0	65.4
62.5°	3798.8	3509.1	3252.1	2973.0	2645.3	2096.0	1260.3	485.8	109.5	57.4	45.9
65°	4264.3	3743.1	3328.1	2978.3	2592.3	2023.5	1192.3	446.0	92.7	46.8	38.0
67.5°	4375.6	3616.9	3029.5	2583.5	2165.7	1574.8	875.3	335.6	72.5	38.8	33.5
69°	4132.7	3215.0	2510.2	2004.1	1575.7	1044.8	541.4	212.0	55.6	35.3	30.9
70°	3801.5	2796.3	2044.7	1608.3	1166.8	734.0	378.9	149.3	45.1	32.7	28.2
72.5°	2445.7	1468.8	1005.2	699.5	481.4	292.4	148.4	67.2	34.5	27.4	22.9
75°	948.6	543.2	393.9	299.4	234.1	162.5	90.1	43.3	29.2	22.9	17.7
77.5°	467.3	357.8	292.4	200.5	116.6	72.5	48.6	33.5	23.9	16.8	11.5
80°	369.2	245.5	146.6	90.9	68.9	52.1	37.1	27.4	17.7	10.6	8.0
82.5°	189.0	103.3	76.0	61.9	51.2	40.6	30.0	19.4	11.5	7.1	6.2
85°	59.2	43.3	38.8	38.0	35.3	29.2	21.2	12.4	7.1	4.5	4.5
87.5°	4.5	6.2	8.0	6.2	7.1	6.2	8.0	5.3	3.5	3.5	2.7
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):**

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	407.2	407.2	407.2	407.2	407.2	407.2	407.2	407.2	407.2	407.2	407.2
2.5°	370.9	360.4	350.7	344.5	332.9	328.6	324.1	322.4	314.5	316.2	309.2
5°	324.1	305.6	291.5	277.3	264.1	254.4	246.5	236.7	228.7	225.2	218.1
7.5°	281.8	257.9	239.4	224.3	208.5	196.1	185.5	178.5	171.3	164.2	160.7
10°	244.7	219.1	197.9	182.8	167.8	157.2	149.3	144.0	139.5	136.9	136.0
12.5°	210.2	185.5	166.0	152.8	141.3	136.0	132.5	129.9	128.9	128.1	128.1
15°	183.8	158.9	144.0	134.2	128.9	126.3	125.4	123.6	121.9	121.0	121.0
17.5°	158.9	140.5	129.9	124.6	121.9	120.1	118.4	116.6	114.8	113.9	113.9
20°	142.2	127.2	121.9	118.4	115.7	113.9	111.3	109.5	108.6	107.8	106.8
22.5°	128.9	119.3	115.7	113.1	109.5	106.8	105.1	103.3	101.5	100.7	99.8
25°	119.3	113.1	110.4	106.8	103.3	100.7	98.0	95.4	93.6	92.7	90.9
27.5°	112.1	107.8	104.2	99.8	96.2	93.6	90.9	88.3	86.6	84.8	83.9
30°	106.0	101.5	97.2	93.6	89.2	86.6	83.1	80.4	79.5	77.8	76.0
32.5°	99.8	95.4	90.9	86.6	82.1	78.6	76.8	73.3	71.5	70.7	68.9
35°	92.7	88.3	83.1	79.5	75.1	71.5	68.9	66.2	64.5	62.7	61.9
37.5°	86.6	81.3	76.0	71.5	68.0	64.5	61.9	59.2	57.4	55.6	54.7
40°	79.5	74.2	68.9	64.5	60.9	58.3	55.6	53.0	51.2	50.4	50.4
42.5°	73.3	67.2	61.9	58.3	55.6	52.1	49.4	46.8	45.9	45.1	45.9
45°	67.2	60.9	56.5	53.0	50.4	46.8	44.1	42.4	41.5	42.4	43.3
47.5°	61.9	55.6	51.2	48.6	45.9	43.3	40.6	38.8	38.8	40.6	42.4
50°	56.5	50.4	46.8	45.1	42.4	39.8	36.2	35.3	36.2	38.0	39.8
52.5°	51.2	44.1	41.5	40.6	38.0	35.3	32.7	31.8	32.7	34.5	33.5
55°	45.9	38.8	38.0	37.1	34.5	30.9	28.2	28.2	28.2	27.4	25.6
57.5°	44.1	34.5	33.5	32.7	30.0	26.5	24.7	22.9	22.1	19.4	18.6
60°	45.9	30.9	30.9	29.2	26.5	22.9	20.3	17.7	15.9	14.1	14.1
62.5°	37.1	28.2	27.4	25.6	22.1	18.6	15.9	13.3	12.4	11.5	11.5
65°	30.0	25.6	23.9	21.2	18.6	15.0	12.4	10.6	9.8	9.8	10.6
67.5°	27.4	22.9	20.3	17.7	15.0	11.5	9.8	8.8	8.8	9.8	9.8
69°	25.6	21.2	18.6	15.9	13.3	10.6	8.8	8.8	8.8	8.8	9.8
70°	23.9	20.3	17.7	15.0	11.5	8.8	8.0	8.0	8.8	8.8	9.8
72.5°	18.6	15.9	15.0	12.4	8.8	8.0	7.1	8.0	8.0	8.8	8.8
75°	14.1	11.5	11.5	9.8	7.1	6.2	6.2	7.1	7.1	8.0	8.0
77.5°	9.8	8.0	8.0	7.1	6.2	5.3	5.3	6.2	7.1	7.1	8.0
80°	7.1	6.2	5.3	6.2	5.3	4.5	5.3	6.2	6.2	7.1	7.1
82.5°	5.3	5.3	5.3	5.3	4.5	4.5	5.3	5.3	6.2	7.1	7.1
85°	4.5	4.5	4.5	4.5	4.5	4.5	4.5	5.3	5.3	6.2	6.2
87.5°	2.7	2.7	2.7	3.5	3.5	4.5	4.5	4.5	4.5	5.3	5.3
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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 CATALOG NUMBER: EMM-F04-LED-E1-SL4-HSS-8030

**CANDELA DISTRIBUTION (continued):**

	165°	170°	175°	180°
0°	407.2	407.2	407.2	407.2
2.5°	307.4	306.5	302.9	303.9
5°	215.5	210.2	213.8	212.8
7.5°	158.1	157.2	156.3	158.1
10°	135.2	135.2	134.2	135.2
12.5°	127.2	127.2	127.2	127.2
15°	121.0	121.0	120.1	120.1
17.5°	113.9	113.9	113.9	113.1
20°	106.8	106.0	106.0	106.0
22.5°	98.9	98.0	98.0	98.0
25°	90.9	90.1	90.1	90.1
27.5°	83.1	82.1	81.3	81.3
30°	75.1	74.2	73.3	73.3
32.5°	67.2	66.2	65.4	65.4
35°	60.1	60.1	59.2	58.3
37.5°	53.9	53.9	53.9	53.9
40°	49.4	50.4	50.4	50.4
42.5°	46.8	47.7	48.6	49.4
45°	45.1	46.8	47.7	47.7
47.5°	44.1	45.1	45.9	45.9
50°	40.6	39.8	39.8	39.8
52.5°	32.7	30.9	30.0	29.2
55°	23.9	22.9	21.2	21.2
57.5°	16.8	16.8	15.9	15.9
60°	13.3	13.3	12.4	13.3
62.5°	11.5	11.5	11.5	11.5
65°	10.6	10.6	10.6	10.6
67.5°	10.6	10.6	10.6	10.6
69°	9.8	9.8	9.8	9.8
70°	9.8	9.8	9.8	9.8
72.5°	8.8	8.8	8.8	8.8
75°	8.0	8.8	8.8	8.8
77.5°	8.0	8.0	8.0	8.0
80°	7.1	7.1	8.0	8.0
82.5°	7.1	7.1	7.1	7.1
85°	6.2	6.2	7.1	7.1
87.5°	5.3	5.3	6.2	6.2
90°	0.0	0.0	0.0	0.0

(END OF REPORT)