

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: P162603

Luminaire Tested: **ECM-F02-LED-E1-SL4-HSS-7050**

Issue Date: 03/03/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P162603  
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: ECM-F02-LED-E1-SL4-HSS-7050  
Description: EPIC CLASSICAL MEDIUM DECORATIVE LED LUMINAIRE  
(2) LIGHTBARS WITH AccuLED OPTICS - TYPE 4 W/ SPILL LIGHT CONTROL AND HOUSE SIDE SHIELD  
Light Source: (14) 5000K CCT, 70 CRI LEDs  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3277.5 lumens  
Efficiency: N/A  
Efficacy: 59.6 lumens/watt  
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 1' x H: 0.1')  
IES Classification: Type IV - Short - Semi-Cutoff  
BUG Rating: B0 - U0 - G1

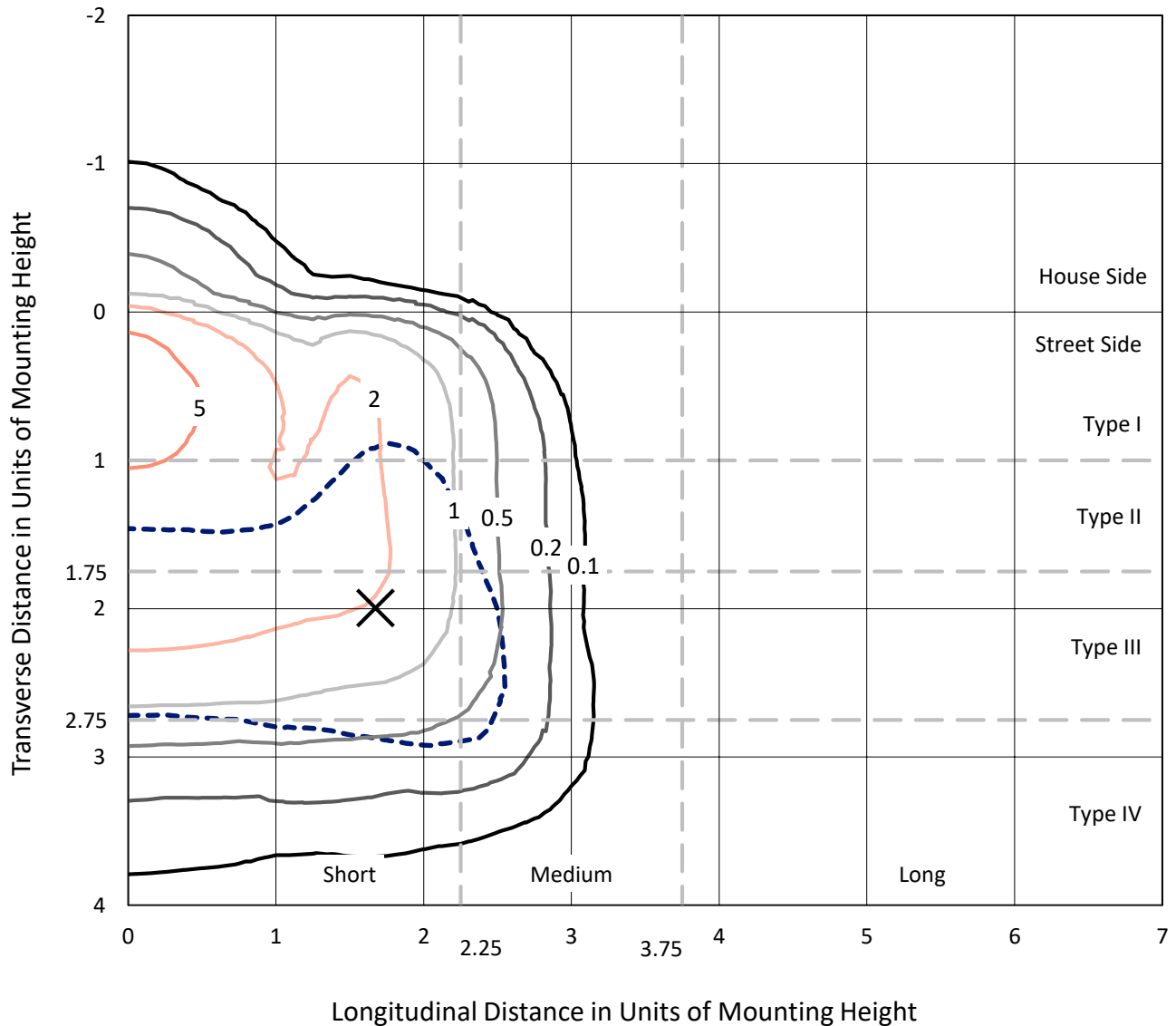
Input Watts (W): 55  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



REPORT NUMBER: P162603  
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### Iso-Footcandle Lines of Horizontal Illumination

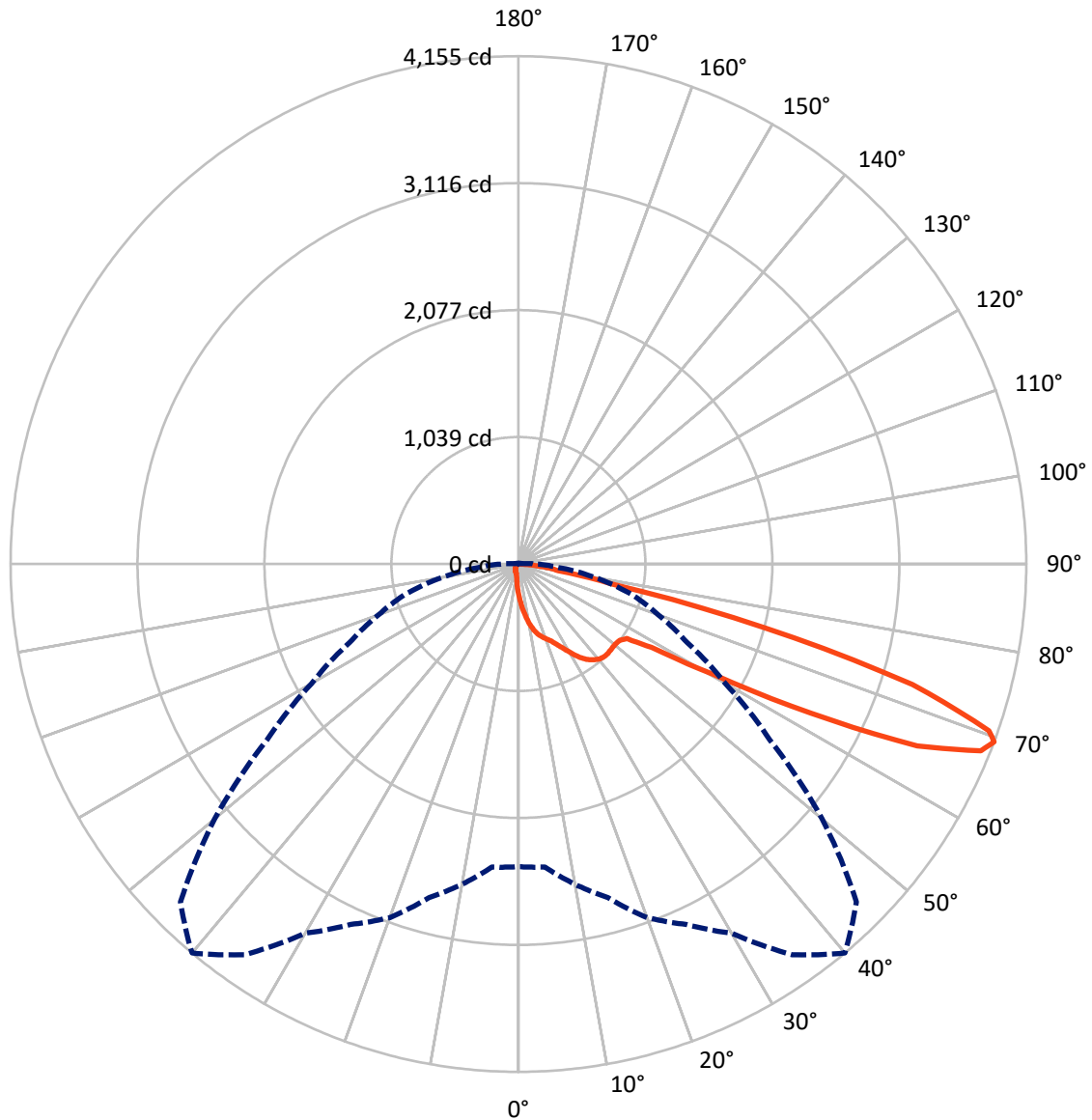
✕ Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 7.3 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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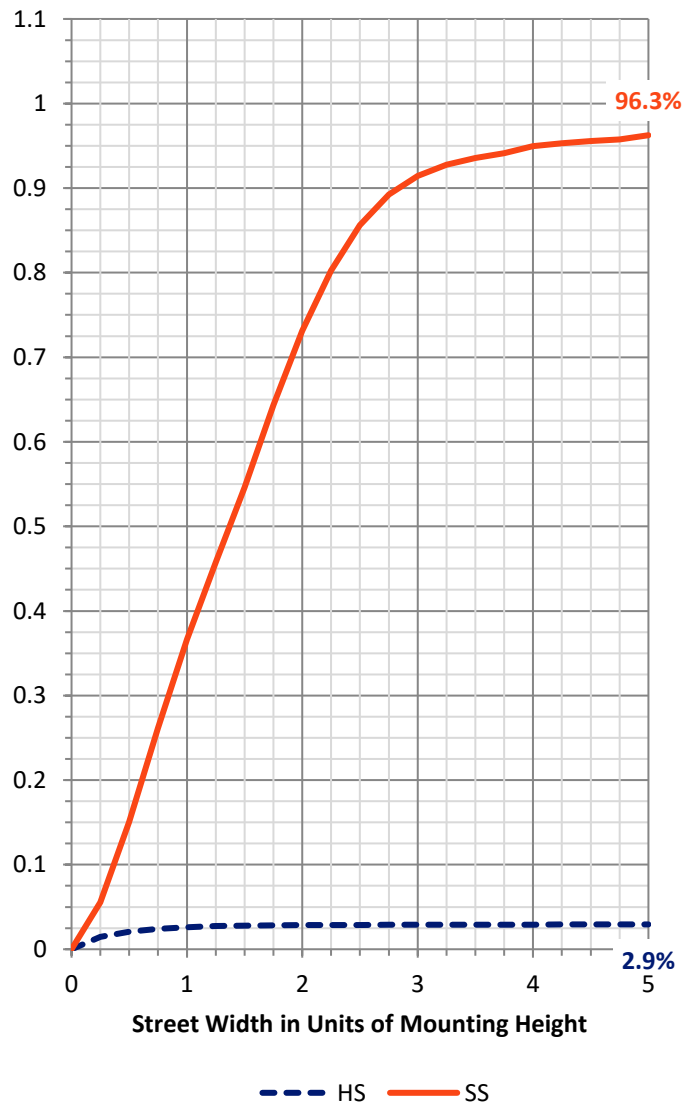
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	97.6	0.0	97.6
	% Fixture	3.0	0.0	3.0
<b>Street Side</b>	Lumens	3179.9	0.0	3179.9
	% Fixture	97.0	0.0	97.0
<b>Total</b>	Lumens	3277.5	0.0	3277.5
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	25.4	0.8
10°-20°	87.7	2.7
20°-30°	167.9	5.1
30°-40°	279.2	8.5
40°-50°	377.8	11.5
50°-60°	590.8	18.0
60°-70°	1214.7	37.1
70°-80°	488.8	14.9
80°-90°	45.2	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°	3277.5	100.0
0°-180°	3277.5	100.0



REPORT NUMBER: P162603

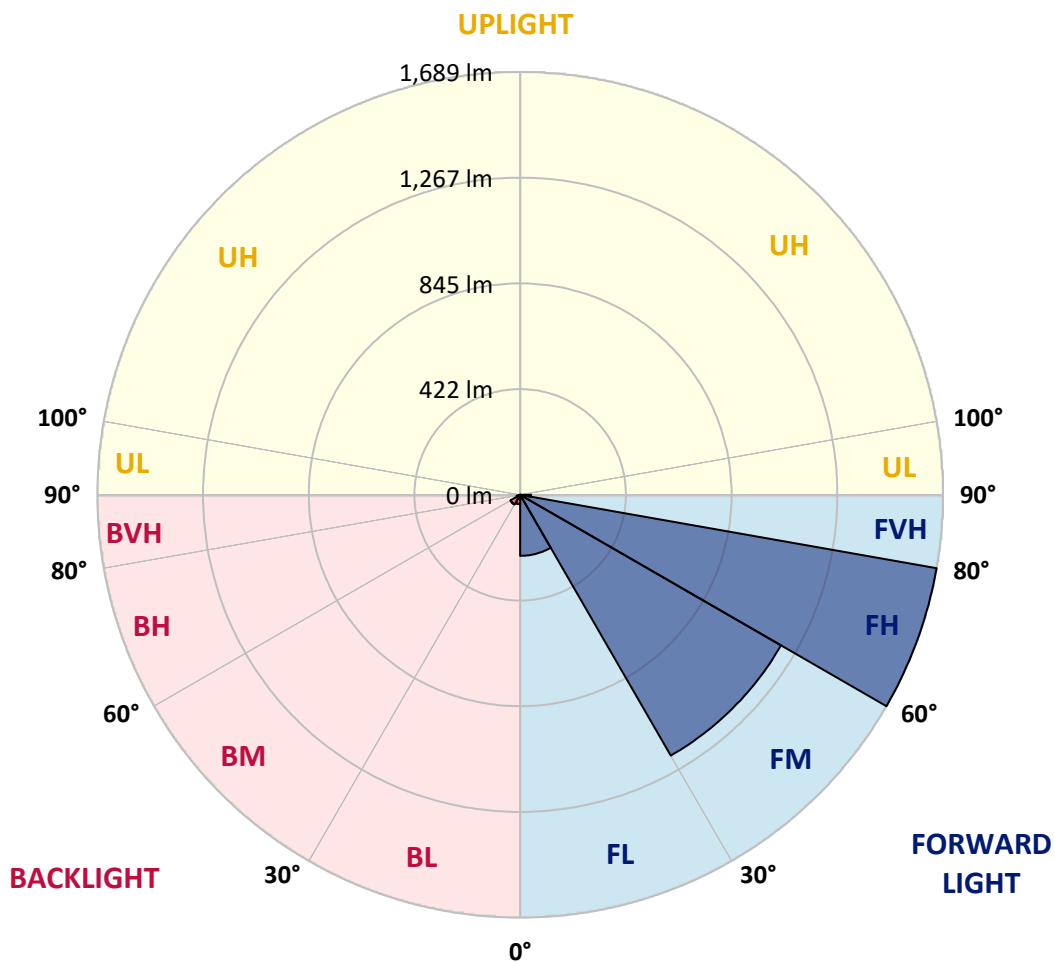
CATALOG NUMBER: ECM-F02-LED-E1-SL4-HSS-7050

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

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	243.9	7.4			
FM (30°-60°)	1203.2	36.7			
FH (60°-80°)	1689.3	51.5			G1/1800
FVH (80°-90°)	43.5	1.3			G1/100
BL (0°-30°)	37.1	1.1	B0/110		
BM (30°-60°)	44.6	1.4	B0/220		
BH (60°-80°)	14.2	0.4	B0/110		G0/110
BVH (80°-90°)	1.7	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-G1**

Type IV Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	247.5	247.5	247.5	247.5	247.5	247.5	247.5	247.5	247.5	247.5	247.5
2.5°	330.2	326.5	322.2	322.2	316.7	316.7	313.5	304.9	303.9	299.1	294.2
5°	421.4	418.2	412.9	408.1	403.8	396.3	390.9	380.7	369.4	358.7	349.0
7.5°	510.6	509.0	499.3	497.7	490.7	478.4	467.6	452.6	433.3	418.2	400.6
10°	593.3	589.5	587.4	578.3	568.0	554.6	538.0	519.7	497.2	473.6	448.3
12.5°	658.8	656.7	647.0	643.2	632.5	619.0	598.1	574.5	552.0	521.3	491.8
15°	707.6	703.9	697.4	691.6	678.7	666.8	647.5	621.8	594.4	561.0	525.6
17.5°	748.5	741.5	739.8	730.7	717.3	703.4	681.9	658.2	626.0	592.7	554.1
20°	803.2	793.5	790.3	776.9	761.4	742.0	717.3	687.8	653.9	617.5	577.7
22.5°	867.6	860.7	853.7	841.9	822.0	794.6	758.6	726.5	683.5	643.2	600.2
25°	958.9	953.0	941.7	925.6	900.9	868.2	824.7	777.4	727.0	675.5	625.0
27.5°	1047.5	1042.1	1034.1	1021.7	993.8	957.9	904.2	844.0	780.2	717.9	662.0
30°	1130.7	1125.9	1117.9	1105.5	1080.8	1045.3	984.7	920.3	840.8	768.3	701.2
32.5°	1220.4	1218.8	1209.7	1191.9	1170.5	1122.7	1056.6	987.4	906.8	823.1	744.7
35°	1321.9	1309.5	1300.9	1283.2	1246.7	1195.7	1118.4	1042.7	957.9	871.9	784.4
37.5°	1407.8	1396.0	1385.3	1362.7	1318.1	1253.2	1165.6	1082.4	994.9	907.4	818.3
40°	1470.6	1464.7	1451.8	1422.3	1372.3	1295.0	1200.5	1109.8	1021.7	933.7	845.6
42.5°	1517.3	1508.2	1493.7	1463.1	1404.0	1316.0	1214.5	1121.1	1034.1	949.8	863.3
45°	1534.5	1527.0	1513.6	1480.2	1416.4	1321.9	1214.0	1117.9	1034.6	954.7	875.1
47.5°	1524.3	1516.8	1505.0	1473.8	1411.0	1314.9	1204.3	1108.7	1029.3	956.2	885.9
50°	1490.5	1486.2	1477.0	1450.8	1394.3	1301.4	1195.7	1103.9	1028.2	964.3	900.9
52.5°	1487.2	1484.6	1473.3	1447.0	1389.5	1297.2	1194.6	1106.6	1037.3	974.5	911.7
55°	1817.4	1779.3	1693.9	1621.5	1502.3	1360.5	1248.9	1150.0	1076.0	1014.7	970.7
57.5°	2583.1	2526.1	2413.9	2276.0	2002.1	1733.2	1517.8	1362.2	1285.4	1257.5	1274.1
60°	2941.7	2931.5	2913.8	2848.3	2708.2	2476.8	2219.1	1940.4	1828.7	1819.1	1852.9
62.5°	3111.9	3105.5	3110.9	3102.8	3059.3	2991.6	2917.6	2797.3	2686.7	2615.3	2463.9
65°	3190.3	3194.6	3225.2	3249.4	3254.7	3272.5	3326.7	3476.5	3586.0	3401.9	2981.5
67.5°	2991.1	3016.4	3086.7	3174.7	3277.8	3377.7	3538.8	3854.5	4079.5	3863.1	3266.0
69°	2476.2	2488.6	2660.4	2826.3	3078.1	3254.2	3487.7	3901.7	4154.6	3910.3	3243.5
70°	1949.5	1960.8	2145.0	2370.5	2796.3	3022.8	3328.3	3821.7	4084.3	3847.5	3127.5
72.5°	879.4	863.3	928.3	1049.1	1511.9	1871.6	2405.9	3096.3	3369.7	3082.4	2339.8
75°	614.2	607.2	614.2	614.8	686.7	885.9	1117.9	1678.4	2075.7	1791.1	1117.9
77.5°	475.7	470.9	466.1	460.7	469.3	525.6	548.2	595.4	773.2	731.3	426.3
80°	376.4	372.1	383.9	380.1	380.1	386.5	382.3	364.6	331.3	307.1	274.9
82.5°	175.0	176.1	176.1	191.2	230.3	269.0	281.3	263.6	234.1	199.2	160.5
85°	16.7	18.8	31.7	48.8	97.2	109.6	110.1	91.3	91.3	71.9	58.0
87.5°	0.0	0.6	0.6	0.6	4.9	13.4	11.3	3.2	1.6	1.6	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



REPORT NUMBER: P162603  
 CATALOG NUMBER: ECM-F02-LED-E1-SL4-HSS-7050

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	247.5	247.5	247.5	247.5	247.5	247.5	247.5	247.5	247.5	247.5	247.5
2.5°	285.6	284.1	277.6	271.1	265.2	258.8	252.9	247.0	240.5	235.7	229.8
5°	334.0	322.2	308.7	295.9	283.0	269.5	255.6	243.2	230.3	218.5	207.3
7.5°	382.8	359.7	341.5	318.4	297.4	276.5	257.2	237.3	219.1	201.9	185.8
10°	424.2	396.3	367.8	338.3	308.2	280.3	253.4	229.8	205.6	184.7	164.8
12.5°	458.0	422.5	387.6	350.6	316.7	281.3	248.1	219.6	191.2	167.5	147.1
15°	488.6	447.8	405.9	362.9	320.0	279.7	242.7	207.3	178.3	151.4	128.3
17.5°	513.3	466.6	419.3	371.0	324.8	277.6	235.7	198.7	164.8	136.9	114.4
20°	534.8	485.9	434.9	380.7	328.0	277.1	229.8	187.9	153.0	123.5	101.5
22.5°	554.6	505.8	451.0	393.0	332.9	276.5	224.4	179.9	142.8	113.3	91.3
25°	577.2	525.6	468.2	405.9	341.5	278.6	221.2	173.4	133.7	103.6	83.2
27.5°	602.4	548.2	488.6	422.0	352.7	283.0	220.1	166.4	125.6	94.5	76.8
30°	637.8	575.1	509.0	438.1	362.9	287.8	219.1	162.1	117.6	87.5	70.3
32.5°	669.0	601.4	531.6	454.8	374.2	292.6	218.5	156.3	110.1	80.5	65.5
35°	701.7	625.5	550.9	470.9	383.9	298.0	218.0	152.0	103.1	73.6	60.7
37.5°	730.2	645.9	565.9	484.8	394.6	302.8	218.5	148.2	96.6	67.7	56.4
40°	754.3	666.8	582.6	497.7	405.9	310.3	219.1	144.5	90.2	62.3	52.6
42.5°	775.8	686.7	600.2	512.2	418.8	319.0	222.3	141.2	84.8	57.4	48.8
45°	792.5	704.9	619.6	532.6	439.7	332.9	228.2	139.0	79.5	53.1	45.6
47.5°	809.6	731.8	652.4	564.8	470.4	354.9	238.4	138.5	75.2	49.9	43.0
50°	833.3	758.6	681.3	597.6	498.2	377.5	250.7	139.0	69.8	46.7	40.3
52.5°	850.5	786.0	718.9	654.5	564.8	446.2	298.5	148.7	67.1	44.0	37.0
55°	951.9	940.6	942.3	953.0	883.8	759.2	499.3	214.8	78.9	49.9	36.5
57.5°	1342.3	1382.0	1405.1	1404.6	1290.2	1070.1	670.6	276.0	88.0	58.0	43.5
60°	1855.5	1825.5	1783.1	1678.4	1526.4	1221.5	750.1	296.9	76.2	46.2	39.8
62.5°	2309.2	2133.2	1976.9	1807.3	1608.0	1274.1	766.2	295.3	66.6	34.9	27.9
65°	2592.2	2275.4	2023.1	1810.5	1575.8	1230.1	724.8	271.1	56.4	28.5	23.1
67.5°	2659.9	2198.7	1841.6	1570.5	1316.5	957.3	532.1	204.0	44.0	23.6	20.4
69°	2512.2	1954.4	1525.9	1218.3	957.9	635.1	329.1	128.9	33.8	21.5	18.8
70°	2310.9	1699.9	1242.9	977.7	709.3	446.2	230.3	90.8	27.4	19.9	17.2
72.5°	1486.7	892.9	611.0	425.2	292.6	177.7	90.2	40.8	21.0	16.7	13.9
75°	576.6	330.2	239.4	182.0	142.3	98.8	54.8	26.3	17.7	13.9	10.7
77.5°	284.1	217.5	177.7	121.9	70.9	44.0	29.5	20.4	14.5	10.2	7.0
80°	224.4	149.3	89.1	55.3	41.9	31.7	22.5	16.7	10.7	6.4	4.9
82.5°	114.9	62.8	46.2	37.6	31.1	24.7	18.2	11.8	7.0	4.3	3.8
85°	36.0	26.3	23.6	23.1	21.5	17.7	12.9	7.5	4.3	2.7	2.7
87.5°	2.7	3.8	4.9	3.8	4.3	3.8	4.9	3.2	2.1	2.1	1.6
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: ECM-F02-LED-E1-SL4-HSS-7050

**CANDELA DISTRIBUTION (continued):**

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	247.5	247.5	247.5	247.5	247.5	247.5	247.5	247.5	247.5	247.5	247.5
2.5°	225.5	219.1	213.2	209.4	202.4	199.7	197.0	196.0	191.2	192.2	187.9
5°	197.0	185.8	177.2	168.6	160.5	154.6	149.8	143.9	139.0	136.9	132.6
7.5°	171.3	156.8	145.5	136.4	126.7	119.2	112.8	108.5	104.1	99.8	97.7
10°	148.7	133.2	120.3	111.1	102.0	95.6	90.8	87.5	84.8	83.2	82.7
12.5°	127.8	112.8	100.9	92.9	85.9	82.7	80.5	78.9	78.4	77.9	77.9
15°	111.7	96.6	87.5	81.6	78.4	76.8	76.2	75.2	74.1	73.6	73.6
17.5°	96.6	85.4	78.9	75.7	74.1	73.0	71.9	70.9	69.8	69.2	69.2
20°	86.5	77.3	74.1	71.9	70.3	69.2	67.7	66.6	66.0	65.5	64.9
22.5°	78.4	72.5	70.3	68.7	66.6	64.9	63.9	62.8	61.7	61.2	60.7
25°	72.5	68.7	67.1	64.9	62.8	61.2	59.6	58.0	56.9	56.4	55.3
27.5°	68.2	65.5	63.4	60.7	58.5	56.9	55.3	53.7	52.6	51.6	51.0
30°	64.4	61.7	59.1	56.9	54.2	52.6	50.5	48.8	48.3	47.3	46.2
32.5°	60.7	58.0	55.3	52.6	49.9	47.8	46.7	44.6	43.5	43.0	41.9
35°	56.4	53.7	50.5	48.3	45.6	43.5	41.9	40.3	39.2	38.1	37.6
37.5°	52.6	49.4	46.2	43.5	41.3	39.2	37.6	36.0	34.9	33.8	33.3
40°	48.3	45.1	41.9	39.2	37.0	35.5	33.8	32.2	31.1	30.6	30.6
42.5°	44.6	40.8	37.6	35.5	33.8	31.7	30.0	28.5	27.9	27.4	27.9
45°	40.8	37.0	34.3	32.2	30.6	28.5	26.8	25.8	25.2	25.8	26.3
47.5°	37.6	33.8	31.1	29.5	27.9	26.3	24.7	23.6	23.6	24.7	25.8
50°	34.3	30.6	28.5	27.4	25.8	24.2	22.0	21.5	22.0	23.1	24.2
52.5°	31.1	26.8	25.2	24.7	23.1	21.5	19.9	19.3	19.9	21.0	20.4
55°	27.9	23.6	23.1	22.5	21.0	18.8	17.2	17.2	17.2	16.7	15.6
57.5°	26.8	21.0	20.4	19.9	18.2	16.1	15.0	13.9	13.4	11.8	11.3
60°	27.9	18.8	18.8	17.7	16.1	13.9	12.4	10.7	9.7	8.6	8.6
62.5°	22.5	17.2	16.7	15.6	13.4	11.3	9.7	8.1	7.5	7.0	7.0
65°	18.2	15.6	14.5	12.9	11.3	9.1	7.5	6.4	5.9	5.9	6.4
67.5°	16.7	13.9	12.4	10.7	9.1	7.0	5.9	5.4	5.4	5.9	5.9
69°	15.6	12.9	11.3	9.7	8.1	6.4	5.4	5.4	5.4	5.4	5.9
70°	14.5	12.4	10.7	9.1	7.0	5.4	4.9	4.9	5.4	5.4	5.9
72.5°	11.3	9.7	9.1	7.5	5.4	4.9	4.3	4.9	4.9	5.4	5.4
75°	8.6	7.0	7.0	5.9	4.3	3.8	3.8	4.3	4.3	4.9	4.9
77.5°	5.9	4.9	4.9	4.3	3.8	3.2	3.2	3.8	4.3	4.3	4.9
80°	4.3	3.8	3.2	3.8	3.2	2.7	3.2	3.8	3.8	4.3	4.3
82.5°	3.2	3.2	3.2	3.2	2.7	2.7	3.2	3.2	3.8	4.3	4.3
85°	2.7	2.7	2.7	2.7	2.7	2.7	2.7	3.2	3.2	3.8	3.8
87.5°	1.6	1.6	1.6	2.1	2.1	2.7	2.7	2.7	2.7	3.2	3.2
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: P162603

CATALOG NUMBER: ECM-F02-LED-E1-SL4-HSS-7050

**CANDELA DISTRIBUTION (continued):**

	165°	170°	175°	180°
0°	247.5	247.5	247.5	247.5
2.5°	186.9	186.3	184.2	184.7
5°	131.0	127.8	129.9	129.4
7.5°	96.1	95.6	95.0	96.1
10°	82.2	82.2	81.6	82.2
12.5°	77.3	77.3	77.3	77.3
15°	73.6	73.6	73.0	73.0
17.5°	69.2	69.2	69.2	68.7
20°	64.9	64.4	64.4	64.4
22.5°	60.1	59.6	59.6	59.6
25°	55.3	54.8	54.8	54.8
27.5°	50.5	49.9	49.4	49.4
30°	45.6	45.1	44.6	44.6
32.5°	40.8	40.3	39.8	39.8
35°	36.5	36.5	36.0	35.5
37.5°	32.8	32.8	32.8	32.8
40°	30.0	30.6	30.6	30.6
42.5°	28.5	29.0	29.5	30.0
45°	27.4	28.5	29.0	29.0
47.5°	26.8	27.4	27.9	27.9
50°	24.7	24.2	24.2	24.2
52.5°	19.9	18.8	18.2	17.7
55°	14.5	13.9	12.9	12.9
57.5°	10.2	10.2	9.7	9.7
60°	8.1	8.1	7.5	8.1
62.5°	7.0	7.0	7.0	7.0
65°	6.4	6.4	6.4	6.4
67.5°	6.4	6.4	6.4	6.4
69°	5.9	5.9	5.9	5.9
70°	5.9	5.9	5.9	5.9
72.5°	5.4	5.4	5.4	5.4
75°	4.9	5.4	5.4	5.4
77.5°	4.9	4.9	4.9	4.9
80°	4.3	4.3	4.9	4.9
82.5°	4.3	4.3	4.3	4.3
85°	3.8	3.8	4.3	4.3
87.5°	3.2	3.2	3.8	3.8
90°	0.0	0.0	0.0	0.0

(END OF REPORT)