

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: P162623

Luminaire Tested: **ECM-F04-LED-E1-SL4-HSS-7050**

Issue Date: 03/03/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P162623  
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-F04-LED-E1-SL4-HSS-7050  
Description: EPIC CLASSICAL MEDIUM DECORATIVE LED LUMINAIRE  
(4) LIGHTBARS WITH AccuLED OPTICS - TYPE 4 W/ SPILL LIGHT CONTROL AND HOUSE SIDE SHIELD  
Light Source: (28) 5000K CCT, 70 CRI LEDs  
Ballast/Driver: -

**Summary**

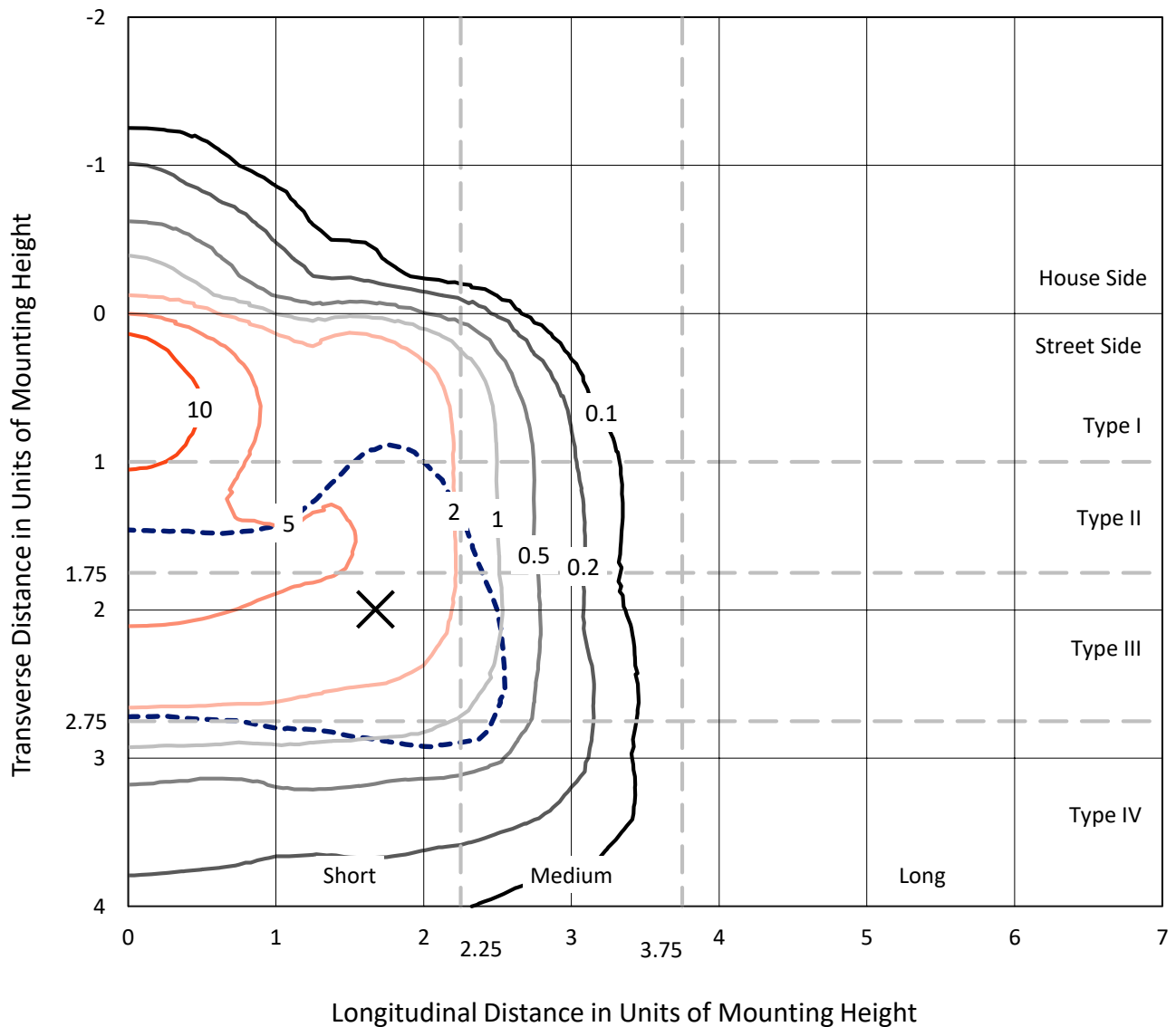
Lumens per Lamp: N/A  
Luminaire Lumens: 6555.1 lumens  
Efficiency: N/A  
Efficacy: 64.1 lumens/watt  
Luminous Opening: Rectangular w/ Sides (W: 0.67' x L: 1' x H: 0.1')  
IES Classification: Type IV - Short - Semi-Cutoff  
BUG Rating: B0 - U0 - G2  
  
Input Watts (W): 102.2  
Input Voltage (V): NR  
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

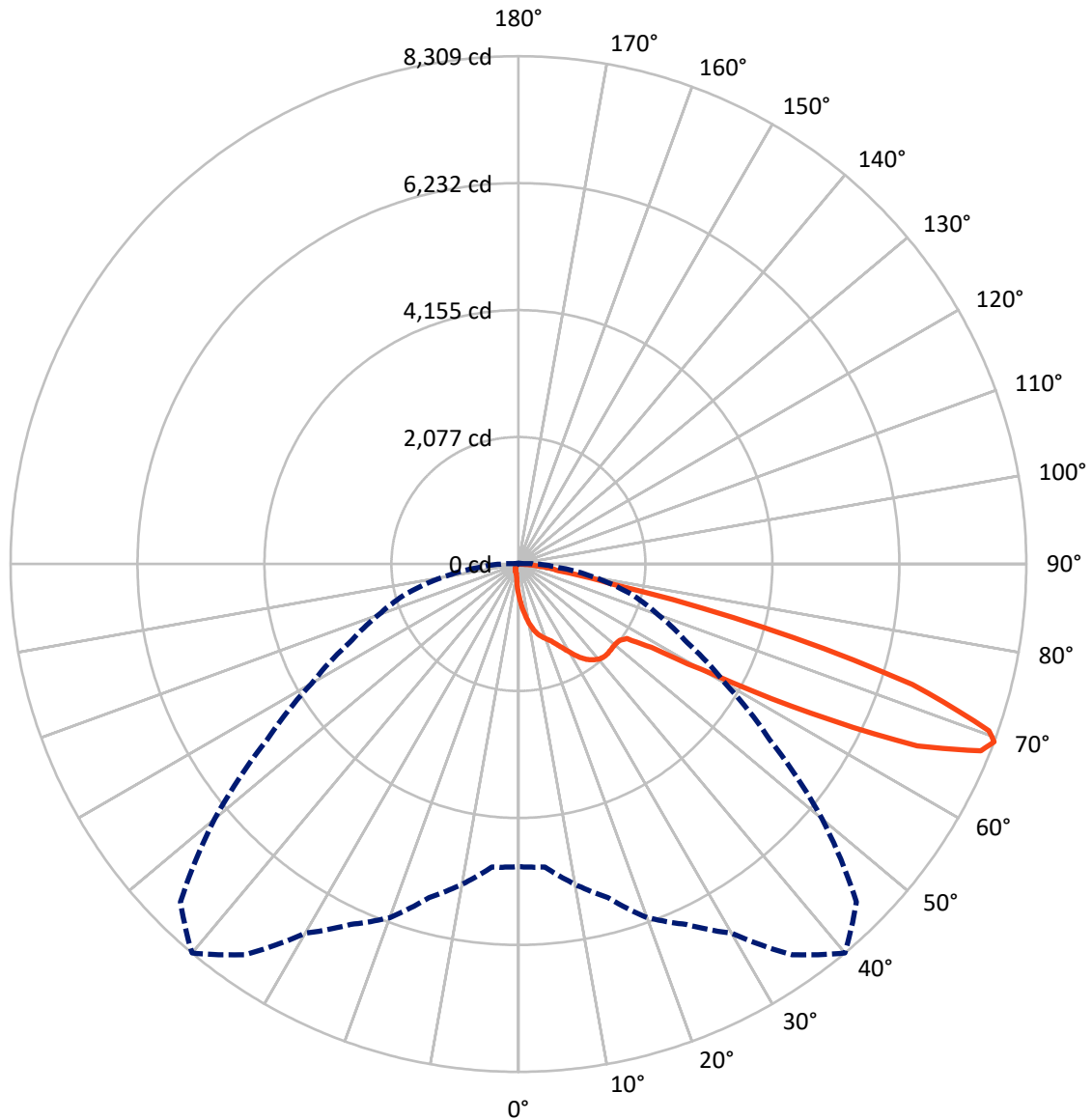
✕ Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 14.7 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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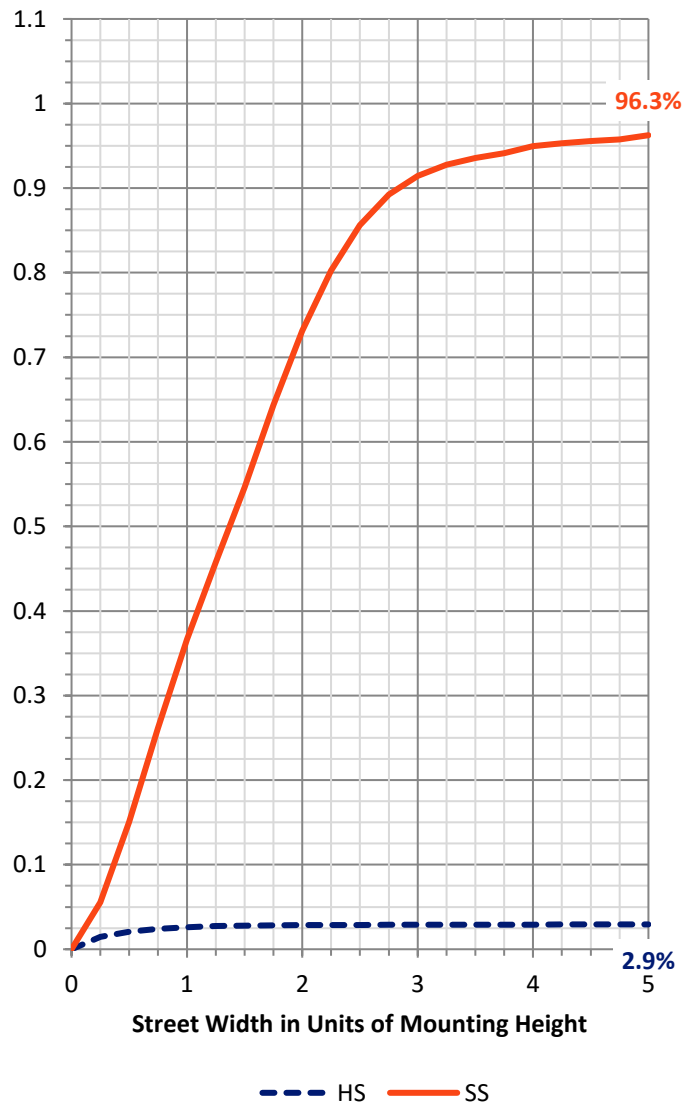
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	195.2	0.0	195.2
	% Fixture	3.0	0.0	3.0
<b>Street Side</b>	Lumens	6359.9	0.0	6359.9
	% Fixture	97.0	0.0	97.0
<b>Total</b>	Lumens	6555.1	0.0	6555.1
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	50.9	0.8
10°-20°	175.4	2.7
20°-30°	335.8	5.1
30°-40°	558.4	8.5
40°-50°	755.6	11.5
50°-60°	1181.6	18.0
60°-70°	2429.4	37.1
70°-80°	977.6	14.9
80°-90°	90.4	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°	6555.1	100.0
0°-180°	6555.1	100.0



REPORT NUMBER: P162623

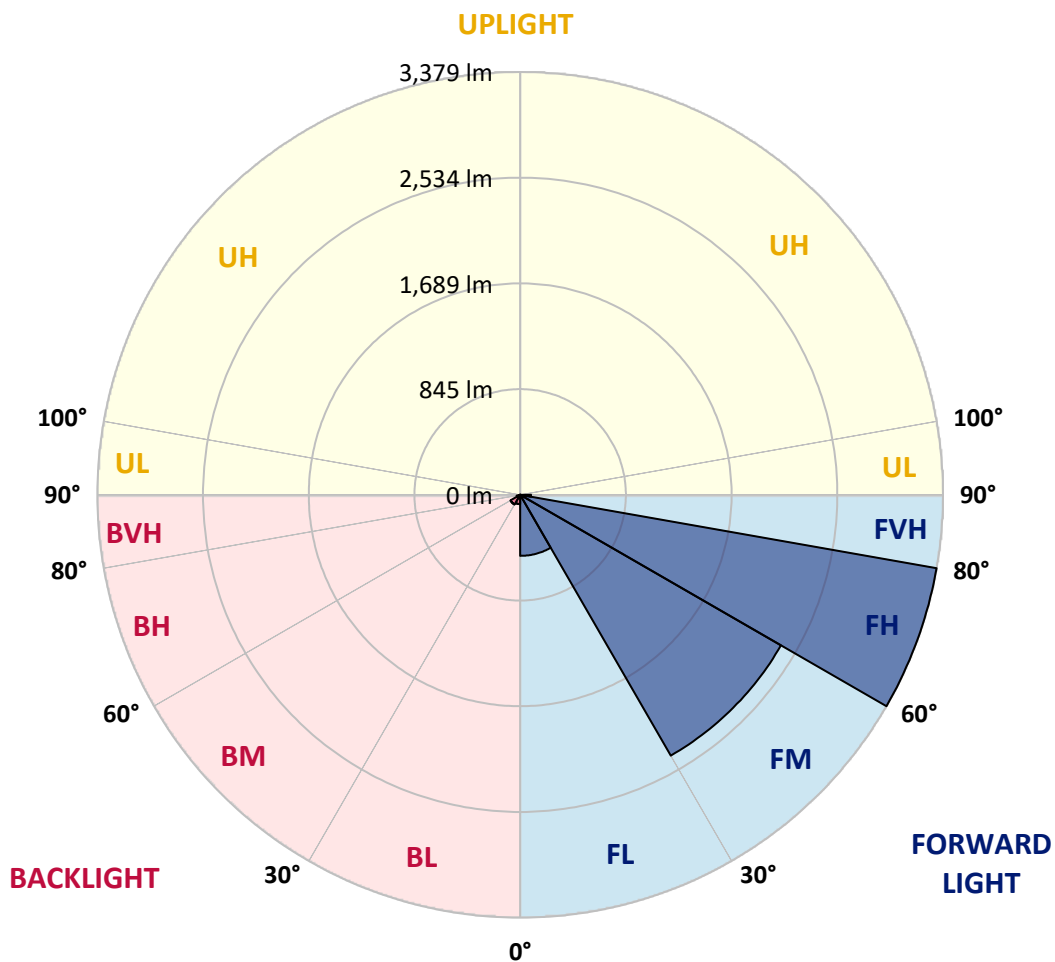
CATALOG NUMBER: ECM-F04-LED-E1-SL4-HSS-7050

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

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	487.8	7.4			
FM	(30°-60°)	2406.5	36.7			
FH	(60°-80°)	3378.5	51.5			G2/5000
FVH	(80°-90°)	87.1	1.3			G1/100
BL	(0°-30°)	74.2	1.1	B0/110		
BM	(30°-60°)	89.1	1.4	B0/220		
BH	(60°-80°)	28.5	0.4	B0/110		G0/110
BVH	(80°-90°)	3.4	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°	495.0	495.0	495.0	495.0	495.0	495.0	495.0	495.0	495.0	495.0	495.0
2.5°	660.4	652.9	644.3	644.3	633.5	633.5	627.1	609.9	607.7	598.1	588.4
5°	842.9	836.5	825.7	816.1	807.5	792.5	781.8	761.4	738.8	717.3	698.0
7.5°	1021.2	1018.0	998.6	995.5	981.5	956.7	935.3	905.2	866.6	836.5	801.1
10°	1186.6	1179.0	1174.7	1156.5	1136.1	1109.2	1076.0	1039.4	994.4	947.1	896.7
12.5°	1317.6	1313.3	1294.0	1286.4	1265.0	1238.1	1196.2	1149.0	1103.9	1042.7	983.6
15°	1415.3	1407.7	1394.9	1383.1	1357.4	1333.6	1295.0	1243.5	1188.7	1122.1	1051.3
17.5°	1497.0	1482.9	1479.7	1461.5	1434.6	1406.7	1363.8	1316.5	1252.1	1185.5	1108.2
20°	1606.4	1587.1	1580.6	1553.8	1522.7	1484.1	1434.6	1375.5	1307.9	1234.9	1155.4
22.5°	1735.3	1721.4	1707.4	1683.8	1644.0	1589.2	1517.3	1452.9	1367.0	1286.4	1200.5
25°	1917.9	1906.0	1883.4	1851.3	1801.9	1736.4	1649.4	1554.9	1453.9	1350.9	1249.9
27.5°	2095.0	2084.3	2068.2	2043.5	1987.7	1915.7	1808.3	1688.1	1560.3	1435.7	1324.0
30°	2261.5	2251.8	2235.7	2211.0	2161.6	2090.7	1969.4	1840.5	1681.6	1536.6	1402.4
32.5°	2440.8	2437.5	2419.4	2383.9	2341.0	2245.3	2113.3	1974.7	1813.6	1646.2	1489.4
35°	2643.8	2619.0	2601.9	2566.4	2493.5	2391.4	2236.7	2085.4	1915.7	1743.8	1568.9
37.5°	2815.6	2792.0	2770.5	2725.3	2636.2	2506.3	2331.3	2164.8	1989.8	1814.8	1636.6
40°	2941.2	2929.4	2903.7	2844.6	2744.6	2590.0	2401.1	2219.6	2043.5	1867.4	1691.2
42.5°	3034.6	3016.4	2987.4	2926.1	2808.0	2631.9	2429.0	2242.2	2068.2	1899.6	1726.7
45°	3069.0	3054.0	3027.1	2960.5	2832.7	2643.8	2427.9	2235.7	2069.2	1909.3	1750.3
47.5°	3048.6	3033.5	3009.9	2947.6	2822.0	2629.8	2408.6	2217.4	2058.5	1912.5	1771.9
50°	2980.9	2972.3	2954.0	2901.5	2788.7	2602.9	2391.4	2207.8	2056.4	1928.6	1801.9
52.5°	2974.5	2969.2	2946.6	2893.9	2779.1	2594.3	2389.2	2213.1	2074.7	1949.0	1823.4
55°	3634.9	3558.6	3387.9	3242.9	3004.5	2721.0	2497.7	2300.1	2151.9	2029.5	1941.5
57.5°	5166.1	5052.3	4827.9	4552.0	4004.3	3466.3	3035.7	2724.3	2570.7	2514.9	2548.2
60°	5883.4	5863.0	5827.7	5696.6	5416.3	4953.6	4438.1	3880.7	3657.4	3638.1	3705.8
62.5°	6223.9	6211.0	6221.7	6205.6	6118.6	5983.3	5835.1	5594.7	5373.4	5230.6	4927.7
65°	6380.6	6389.2	6450.4	6498.8	6509.5	6545.0	6653.4	6953.0	7172.0	6803.7	5963.0
67.5°	5982.3	6032.8	6173.4	6349.5	6555.7	6755.4	7077.6	7709.0	8158.9	7726.1	6532.1
69°	4952.5	4977.2	5320.8	5652.6	6156.2	6508.5	6975.5	7803.5	8309.2	7820.7	6486.9
70°	3899.0	3921.6	4289.9	4740.9	5592.5	6045.6	6656.7	7643.4	8168.5	7694.9	6255.0
72.5°	1758.9	1726.7	1856.7	2098.3	3023.8	3743.3	4811.8	6192.7	6739.3	6164.8	4679.7
75°	1228.5	1214.5	1228.5	1229.5	1373.4	1771.9	2235.7	3356.8	4151.3	3582.2	2235.7
77.5°	951.4	941.7	932.1	921.4	938.6	1051.3	1096.3	1190.9	1546.3	1462.5	852.6
80°	752.8	744.2	767.8	760.2	760.2	773.1	764.5	729.2	662.5	614.2	549.8
82.5°	350.0	352.2	352.2	382.3	460.7	537.9	562.7	527.2	468.2	398.4	321.1
85°	33.3	37.6	63.4	97.7	194.4	219.1	220.1	182.5	182.5	143.9	116.0
87.5°	0.0	1.1	1.1	1.1	9.7	26.9	22.6	6.4	3.3	3.3	5.4
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: P162623

CATALOG NUMBER: ECM-F04-LED-E1-SL4-HSS-7050

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	495.0	495.0	495.0	495.0	495.0	495.0	495.0	495.0	495.0	495.0	495.0
2.5°	571.3	568.1	555.1	542.2	530.5	517.6	505.8	493.9	481.0	471.4	459.6
5°	667.9	644.3	617.5	591.7	566.0	539.1	511.2	486.4	460.7	437.1	414.5
7.5°	765.6	719.4	683.0	636.8	594.9	553.0	514.3	474.6	438.1	403.8	371.6
10°	848.3	792.5	735.6	676.5	616.3	560.5	506.9	459.6	411.2	369.4	329.7
12.5°	916.0	845.0	775.2	701.2	633.5	562.7	496.2	439.2	382.3	335.0	294.2
15°	977.2	895.5	811.8	725.9	640.1	559.4	485.3	414.5	356.6	302.8	256.6
17.5°	1026.5	933.1	838.6	742.0	649.7	555.1	471.4	397.3	329.7	273.8	228.7
20°	1069.6	971.8	869.8	761.4	656.1	554.1	459.6	375.9	306.1	247.0	203.0
22.5°	1109.2	1011.5	902.0	786.1	665.8	553.0	448.8	359.7	285.6	226.6	182.5
25°	1154.4	1051.3	936.4	811.8	683.0	557.3	442.4	346.8	267.3	207.3	166.5
27.5°	1204.9	1096.3	977.2	844.0	705.4	566.0	440.3	332.8	251.3	189.0	153.6
30°	1275.7	1150.1	1018.0	876.2	725.9	575.6	438.1	324.3	235.1	175.1	140.6
32.5°	1337.9	1202.7	1063.1	909.5	748.5	585.3	437.1	312.5	220.1	161.1	131.0
35°	1403.4	1251.0	1101.8	941.7	767.8	596.0	436.0	303.9	206.1	147.2	121.3
37.5°	1460.4	1291.8	1131.8	969.6	789.2	605.6	437.1	296.4	193.2	135.3	112.7
40°	1508.7	1333.6	1165.1	995.5	811.8	620.6	438.1	288.9	180.4	124.6	105.3
42.5°	1551.6	1373.4	1200.5	1024.4	837.6	637.9	444.5	282.4	169.6	114.9	97.7
45°	1584.9	1409.9	1239.2	1065.3	879.5	665.8	456.4	278.1	158.9	106.3	91.3
47.5°	1619.3	1463.6	1304.7	1129.7	940.7	709.8	476.7	277.1	150.3	99.8	85.9
50°	1666.6	1517.3	1362.7	1195.2	996.5	754.9	501.5	278.1	139.6	93.4	80.5
52.5°	1700.9	1572.1	1437.9	1309.0	1129.7	892.4	597.0	297.5	134.2	88.1	74.1
55°	1903.9	1881.3	1884.6	1906.0	1767.6	1518.4	998.6	429.5	157.9	99.8	73.1
57.5°	2684.6	2764.1	2810.1	2809.1	2580.4	2140.2	1341.2	552.0	176.1	116.0	87.0
60°	3711.1	3651.0	3566.2	3356.8	3052.9	2443.0	1500.1	593.9	152.5	92.4	79.5
62.5°	4618.5	4266.3	3953.8	3614.5	3216.1	2548.2	1532.3	590.6	133.2	69.8	55.8
65°	5184.4	4550.8	4046.2	3621.0	3151.7	2460.1	1449.6	542.2	112.7	56.9	46.2
67.5°	5319.7	4397.3	3683.2	3141.0	2633.0	1914.6	1064.2	408.1	88.1	47.2	40.8
69°	5024.4	3908.7	3051.8	2436.5	1915.7	1270.3	658.2	257.7	67.7	42.9	37.6
70°	4621.8	3399.7	2485.9	1955.4	1418.6	892.4	460.7	181.5	54.8	39.8	34.3
72.5°	2973.5	1785.7	1222.0	850.5	585.3	355.4	180.4	81.7	41.9	33.3	27.9
75°	1153.3	660.4	478.9	364.0	284.6	197.5	109.6	52.6	35.5	27.9	21.5
77.5°	568.1	434.9	355.4	243.7	141.7	88.1	59.1	40.8	29.0	20.4	14.0
80°	448.8	298.5	178.2	110.6	83.8	63.4	45.1	33.3	21.5	12.9	9.7
82.5°	229.8	125.6	92.4	75.2	62.2	49.4	36.5	23.6	14.0	8.6	7.6
85°	71.9	52.6	47.2	46.2	42.9	35.5	25.8	15.0	8.6	5.4	5.4
87.5°	5.4	7.6	9.7	7.6	8.6	7.6	9.7	6.4	4.3	4.3	3.3
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: P162623

CATALOG NUMBER: ECM-F04-LED-E1-SL4-HSS-7050

**CANDELA DISTRIBUTION (continued):**

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	495.0	495.0	495.0	495.0	495.0	495.0	495.0	495.0	495.0	495.0	495.0
2.5°	451.0	438.1	426.4	418.8	404.8	399.5	394.1	391.9	382.3	384.5	375.9
5°	394.1	371.6	354.4	337.1	321.1	309.2	299.6	287.8	278.1	273.8	265.2
7.5°	342.6	313.5	291.1	272.8	253.4	238.4	225.5	217.0	208.3	199.7	195.4
10°	297.5	266.3	240.6	222.3	204.0	191.1	181.5	175.1	169.6	166.5	165.3
12.5°	255.6	225.5	201.8	185.8	171.8	165.3	161.1	157.9	156.8	155.7	155.7
15°	223.4	193.2	175.1	163.2	156.8	153.6	152.5	150.3	148.2	147.2	147.2
17.5°	193.2	170.8	157.9	151.5	148.2	146.0	143.9	141.7	139.6	138.5	138.5
20°	172.9	154.6	148.2	143.9	140.6	138.5	135.3	133.2	132.0	131.0	129.9
22.5°	156.8	145.0	140.6	137.5	133.2	129.9	127.7	125.6	123.4	122.4	121.3
25°	145.0	137.5	134.2	129.9	125.6	122.4	119.2	116.0	113.8	112.7	110.6
27.5°	136.3	131.0	126.7	121.3	117.0	113.8	110.6	107.4	105.3	103.1	102.0
30°	128.9	123.4	118.1	113.8	108.4	105.3	101.0	97.7	96.7	94.5	92.4
32.5°	121.3	116.0	110.6	105.3	99.8	95.6	93.4	89.1	87.0	85.9	83.8
35°	112.7	107.4	101.0	96.7	91.3	87.0	83.8	80.5	78.4	76.2	75.2
37.5°	105.3	98.8	92.4	87.0	82.7	78.4	75.2	71.9	69.8	67.7	66.5
40°	96.7	90.2	83.8	78.4	74.1	70.9	67.7	64.4	62.2	61.2	61.2
42.5°	89.1	81.7	75.2	70.9	67.7	63.4	60.1	56.9	55.8	54.8	55.8
45°	81.7	74.1	68.7	64.4	61.2	56.9	53.6	51.5	50.5	51.5	52.6
47.5°	75.2	67.7	62.2	59.1	55.8	52.6	49.4	47.2	47.2	49.4	51.5
50°	68.7	61.2	56.9	54.8	51.5	48.3	44.0	42.9	44.0	46.2	48.3
52.5°	62.2	53.6	50.5	49.4	46.2	42.9	39.8	38.6	39.8	41.9	40.8
55°	55.8	47.2	46.2	45.1	41.9	37.6	34.3	34.3	34.3	33.3	31.2
57.5°	53.6	41.9	40.8	39.8	36.5	32.2	30.0	27.9	26.9	23.6	22.6
60°	55.8	37.6	37.6	35.5	32.2	27.9	24.7	21.5	19.3	17.2	17.2
62.5°	45.1	34.3	33.3	31.2	26.9	22.6	19.3	16.2	15.0	14.0	14.0
65°	36.5	31.2	29.0	25.8	22.6	18.3	15.0	12.9	11.9	11.9	12.9
67.5°	33.3	27.9	24.7	21.5	18.3	14.0	11.9	10.7	10.7	11.9	11.9
69°	31.2	25.8	22.6	19.3	16.2	12.9	10.7	10.7	10.7	10.7	11.9
70°	29.0	24.7	21.5	18.3	14.0	10.7	9.7	9.7	10.7	10.7	11.9
72.5°	22.6	19.3	18.3	15.0	10.7	9.7	8.6	9.7	9.7	10.7	10.7
75°	17.2	14.0	14.0	11.9	8.6	7.6	7.6	8.6	8.6	9.7	9.7
77.5°	11.9	9.7	9.7	8.6	7.6	6.4	6.4	7.6	8.6	8.6	9.7
80°	8.6	7.6	6.4	7.6	6.4	5.4	6.4	7.6	7.6	8.6	8.6
82.5°	6.4	6.4	6.4	6.4	5.4	5.4	6.4	6.4	7.6	8.6	8.6
85°	5.4	5.4	5.4	5.4	5.4	5.4	5.4	6.4	6.4	7.6	7.6
87.5°	3.3	3.3	3.3	4.3	4.3	5.4	5.4	5.4	5.4	6.4	6.4
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: P162623

CATALOG NUMBER: ECM-F04-LED-E1-SL4-HSS-7050

**CANDELA DISTRIBUTION (continued):**

	165°	170°	175°	180°
0°	495.0	495.0	495.0	495.0
2.5°	373.7	372.6	368.3	369.4
5°	262.0	255.6	259.9	258.8
7.5°	192.2	191.1	190.1	192.2
10°	164.3	164.3	163.2	164.3
12.5°	154.6	154.6	154.6	154.6
15°	147.2	147.2	146.0	146.0
17.5°	138.5	138.5	138.5	137.5
20°	129.9	128.9	128.9	128.9
22.5°	120.3	119.2	119.2	119.2
25°	110.6	109.6	109.6	109.6
27.5°	101.0	99.8	98.8	98.8
30°	91.3	90.2	89.1	89.1
32.5°	81.7	80.5	79.5	79.5
35°	73.1	73.1	71.9	70.9
37.5°	65.5	65.5	65.5	65.5
40°	60.1	61.2	61.2	61.2
42.5°	56.9	57.9	59.1	60.1
45°	54.8	56.9	57.9	57.9
47.5°	53.6	54.8	55.8	55.8
50°	49.4	48.3	48.3	48.3
52.5°	39.8	37.6	36.5	35.5
55°	29.0	27.9	25.8	25.8
57.5°	20.4	20.4	19.3	19.3
60°	16.2	16.2	15.0	16.2
62.5°	14.0	14.0	14.0	14.0
65°	12.9	12.9	12.9	12.9
67.5°	12.9	12.9	12.9	12.9
69°	11.9	11.9	11.9	11.9
70°	11.9	11.9	11.9	11.9
72.5°	10.7	10.7	10.7	10.7
75°	9.7	10.7	10.7	10.7
77.5°	9.7	9.7	9.7	9.7
80°	8.6	8.6	9.7	9.7
82.5°	8.6	8.6	8.6	8.6
85°	7.6	7.6	8.6	8.6
87.5°	6.4	6.4	7.6	7.6
90°	0.0	0.0	0.0	0.0

(END OF REPORT)