

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: P162272

Luminaire Tested: **ECM-F01-LED-E1-SL2-HSS**

Issue Date: 03/03/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P162272  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33726)  
Test Lab: INNOVATION CENTER-P3  
Issue Date: 03/03/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: ECM-F01-LED-E1-SL2-HSS  
Description: EPIC CLASSICAL MEDIUM DECORATIVE LED LUMINAIRE  
(1) LIGHTBARS WITH AccuLED OPTICS - TYPE 2 W/ SPILL LIGHT CONTROL AND HOUSE SIDE SHIELD  
Light Source: (7) 4000K CCT, 70 CRI LEDs  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1439.1 lumens  
Efficiency: N/A  
Efficacy: 55.6 lumens/watt  
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 1' x H: 0.1')  
IES Classification: Type II - Short - Non-Cutoff  
BUG Rating: B0 - U0 - G1

Input Watts (W): 25.9  
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

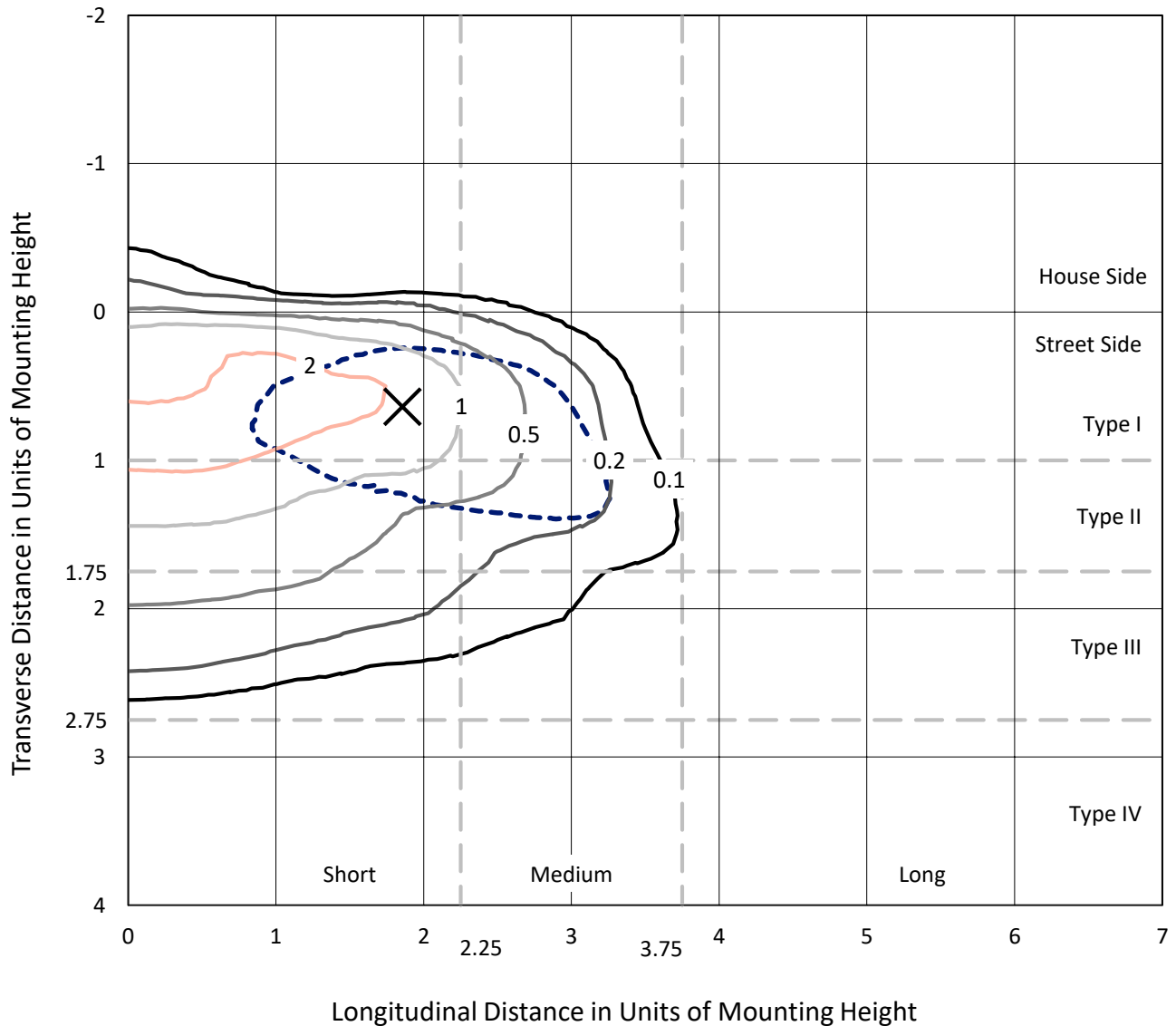


REPORT NUMBER: P162272

CATALOG NUMBER: ECM-F01-LED-E1-SL2-HSS

### Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd  
 - - - 1/2 Max cd

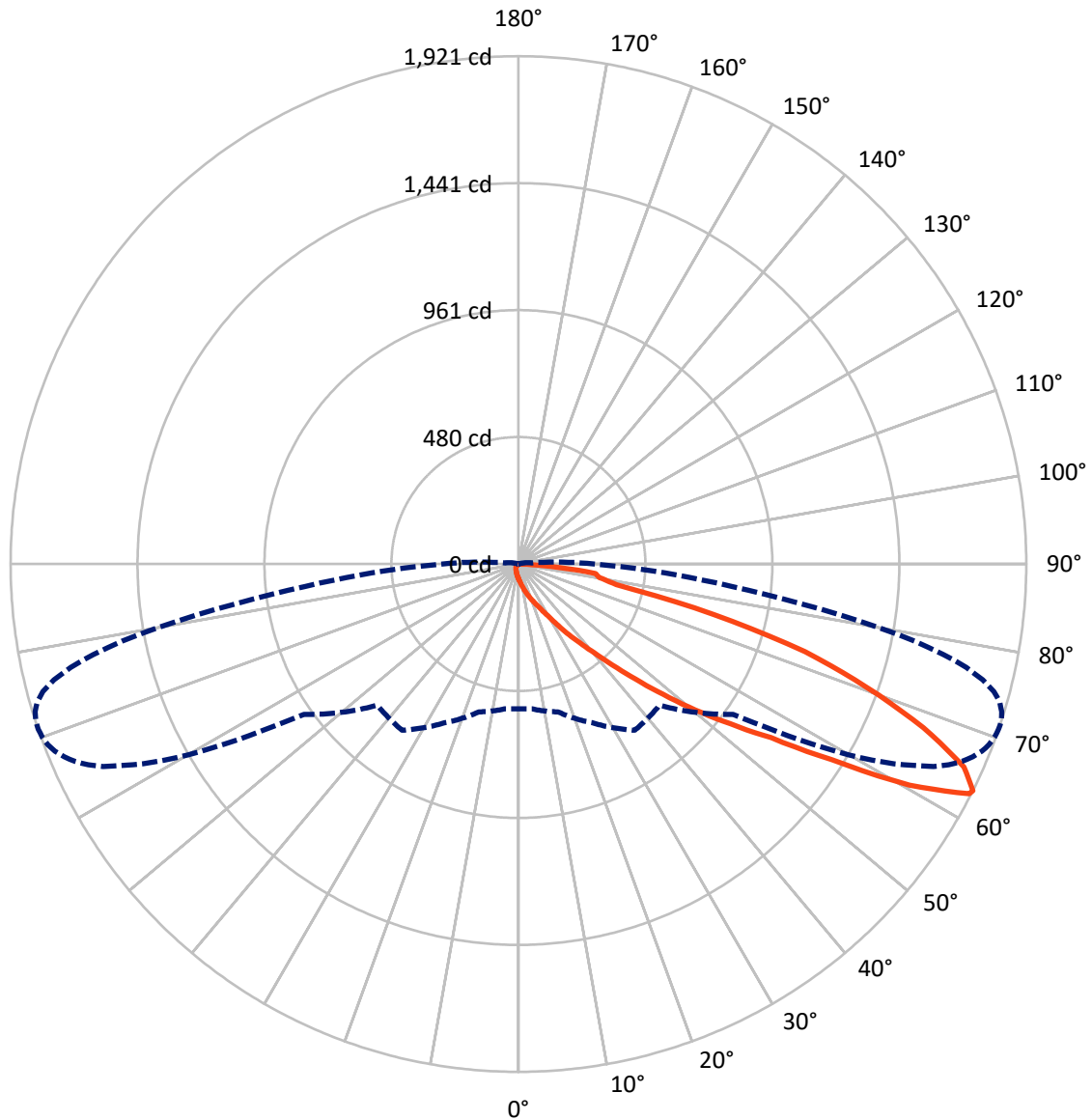


Based on 10 foot mounting height. Maximum calculated value = 3 fc  
 Type II - Short - Non-Cutoff

REPORT NUMBER: P162272

CATALOG NUMBER: ECM-F01-LED-E1-SL2-HSS

### Luminous Intensity Polar Plot



— Vertical Plane Through 71-Deg Lateral      - - - Horizontal Cone Through 63-Deg Vertical

REPORT NUMBER: P162272

CATALOG NUMBER: ECM-F01-LED-E1-SL2-HSS

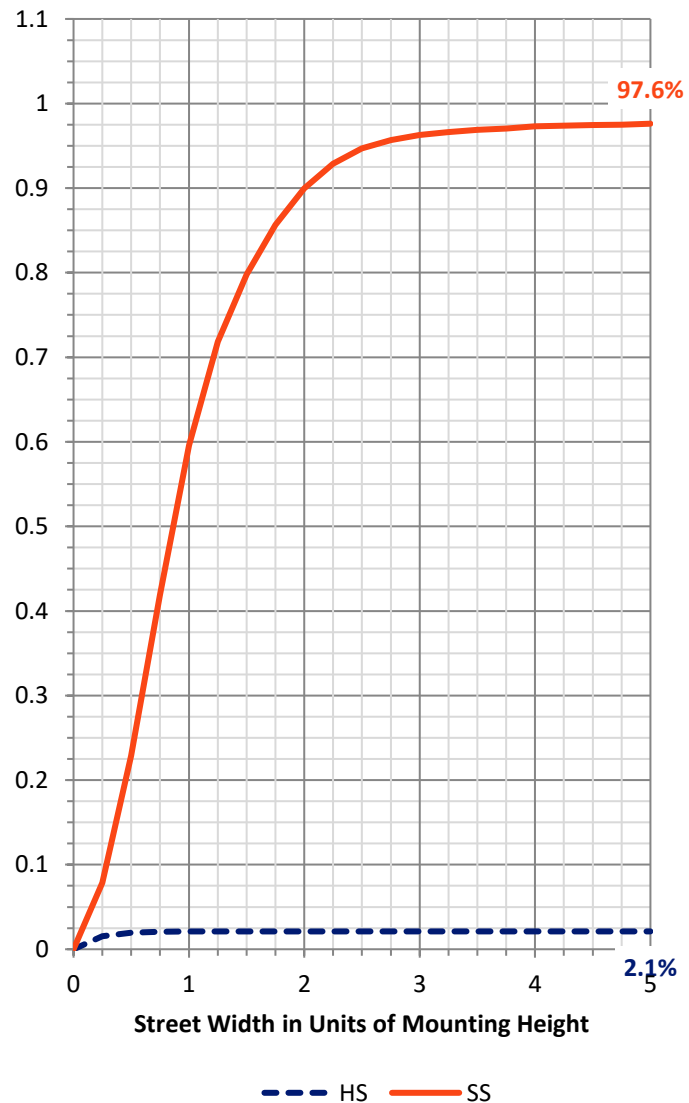
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	30.6	0.0	30.6
	% Fixture	2.1	0.0	2.1
<b>Street Side</b>	Lumens	1408.6	0.0	1408.6
	% Fixture	97.9	0.0	97.9
<b>Total</b>	Lumens	1439.1	0.0	1439.1
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	6.1	0.4
10°-20°	23.7	1.6
20°-30°	48.1	3.3
30°-40°	117.4	8.2
40°-50°	262.6	18.2
50°-60°	369.3	25.7
60°-70°	434.2	30.2
70°-80°	156.8	10.9
80°-90°	21.0	1.5
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°	1439.1	100.0
0°-180°	1439.1	100.0



REPORT NUMBER: P162272

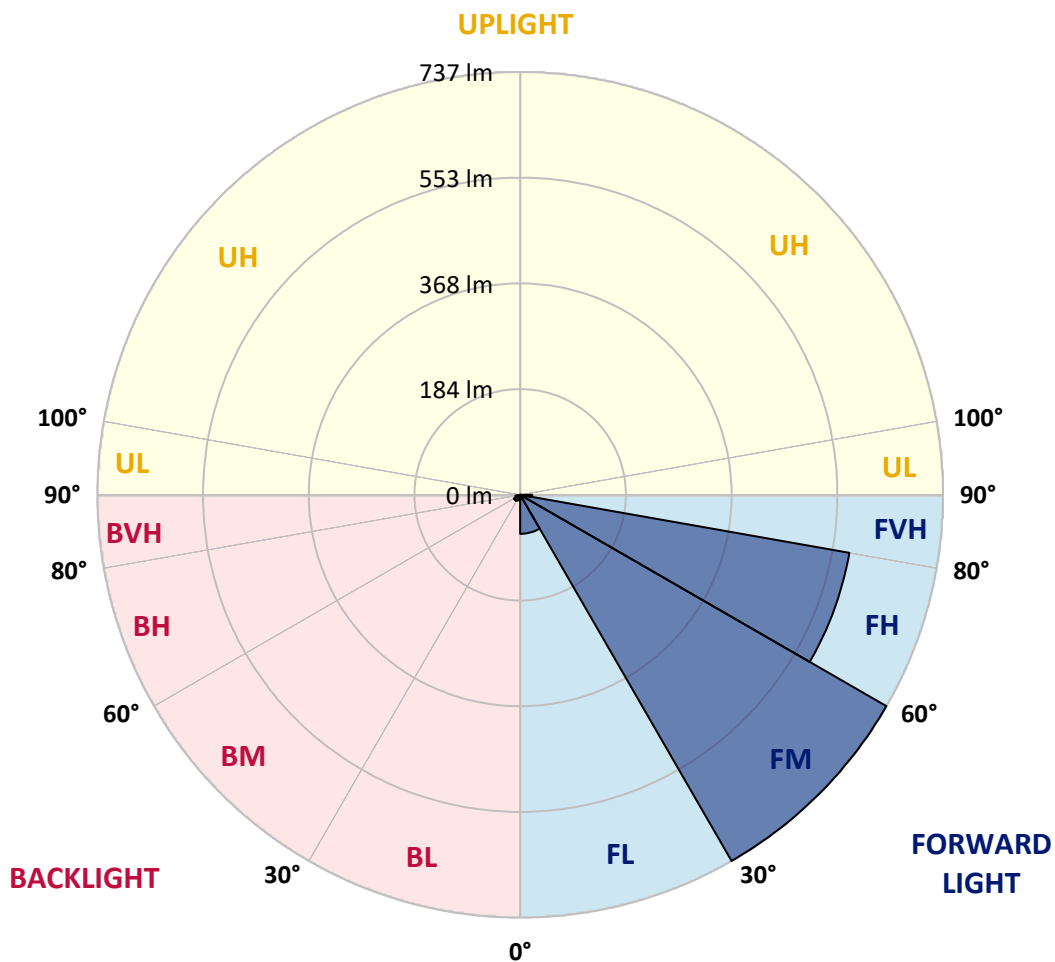
CATALOG NUMBER: ECM-F01-LED-E1-SL2-HSS

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

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	68.0	4.7			
FM (30°-60°)	737.0	51.2			
FH (60°-80°)	582.6	40.5			G0/660
FVH (80°-90°)	20.9	1.5			G1/100
BL (0°-30°)	9.8	0.7	B0/110		
BM (30°-60°)	12.3	0.9	B0/220		
BH (60°-80°)	8.4	0.6	B0/110		G0/110
BVH (80°-90°)	0.0	0.0			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 II Short





REPORT NUMBER: P162272

CATALOG NUMBER: ECM-F01-LED-E1-SL2-HSS

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	56°	57°	58°	59°
0°	55.2	55.2	55.2	55.2	55.2	55.2	55.2	55.2	55.2	55.2	55.2
2.5°	72.2	73.0	72.5	71.2	69.6	67.5	65.7	65.7	65.4	64.6	64.9
5°	94.7	95.0	93.9	90.8	87.9	83.5	78.5	78.0	77.4	76.7	76.4
7.5°	116.7	117.7	116.7	113.3	107.5	100.7	92.9	92.1	90.5	90.5	89.5
10°	139.2	139.2	138.1	134.2	129.0	119.3	109.4	108.1	106.2	105.7	104.1
12.5°	155.1	155.1	154.6	152.5	148.3	139.7	127.7	126.4	124.0	123.2	121.4
15°	161.4	161.4	161.7	163.5	163.8	159.8	147.3	146.3	143.9	141.8	141.0
17.5°	165.4	165.1	165.1	167.7	172.4	175.0	166.9	165.9	163.3	162.2	159.6
20°	174.0	173.5	171.9	171.9	176.3	185.5	185.5	185.2	182.4	181.6	180.3
22.5°	186.8	186.3	181.6	177.7	179.7	191.2	202.0	201.5	200.4	199.4	198.6
25°	207.7	205.9	197.8	186.3	184.4	196.8	214.5	215.8	216.6	216.6	217.1
27.5°	239.4	237.0	222.6	201.2	193.1	205.6	228.4	231.0	233.4	233.9	236.2
30°	283.3	279.2	258.5	227.1	208.5	218.7	248.8	251.7	255.1	256.1	259.8
32.5°	355.6	353.2	333.3	286.2	246.4	244.4	277.3	281.0	285.4	287.3	291.7
35°	465.4	466.0	449.7	407.3	352.4	323.6	328.3	331.5	333.0	338.5	340.9
37.5°	540.0	541.3	545.0	528.2	489.0	459.7	422.8	426.2	418.1	418.9	419.1
40°	580.8	585.0	606.5	622.7	619.5	602.5	573.0	574.8	559.6	556.2	539.7
42.5°	608.0	613.5	647.8	698.0	723.7	739.1	732.3	731.5	719.7	715.3	701.4
45°	625.0	630.0	673.2	747.2	806.3	851.3	869.9	872.0	862.1	857.6	846.1
47.5°	624.2	630.0	676.3	765.5	852.6	924.6	976.9	979.5	985.5	981.6	982.4
50°	589.7	595.2	641.8	734.4	839.0	958.1	1053.8	1062.2	1071.9	1078.4	1081.5
52.5°	547.8	551.8	593.1	681.0	780.9	944.2	1099.4	1113.7	1128.1	1140.4	1149.0
55°	532.4	536.9	569.3	642.3	734.4	886.1	1120.5	1141.7	1162.1	1182.3	1198.8
57.5°	540.5	544.7	568.0	624.0	706.6	824.9	1126.6	1159.5	1193.0	1225.7	1258.2
60°	570.4	574.8	594.7	641.0	699.3	789.6	1103.0	1157.7	1213.4	1270.5	1324.1
62.5°	558.6	560.4	589.7	670.8	751.6	759.5	1017.5	1093.8	1178.9	1266.8	1353.4
63°	547.3	549.4	579.2	662.7	767.6	755.1	991.0	1071.6	1161.3	1256.1	1350.3
65°	496.3	496.6	519.3	585.3	749.8	762.9	873.3	950.2	1053.3	1166.9	1285.9
67.5°	370.5	368.6	390.6	440.8	588.7	763.2	749.5	792.7	864.4	965.1	1071.9
70°	131.3	128.5	164.0	233.6	366.8	624.2	644.1	647.0	666.9	721.3	788.3
72.5°	42.7	43.4	52.3	85.6	169.0	420.2	583.2	574.3	569.0	568.8	577.7
75°	17.0	17.3	20.9	37.9	75.9	202.5	510.7	515.7	517.5	520.1	523.0
77.5°	8.1	8.9	11.8	21.2	37.7	100.2	365.5	407.6	431.7	450.3	461.5
80°	2.9	3.4	6.5	13.1	17.5	46.0	192.6	232.3	267.6	313.2	352.4
82.5°	0.0	0.0	1.3	9.2	9.7	18.6	79.0	92.6	106.0	137.3	176.3
85°	0.0	0.0	0.0	2.6	2.9	3.1	26.7	32.2	36.1	42.1	48.7
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.8	1.6	3.9	6.0
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: P162272

CATALOG NUMBER: ECM-F01-LED-E1-SL2-HSS

**CANDELA DISTRIBUTION (continued):**

	60°	61°	62°	64°	65°	66°	67°	68°	69°	70°	71°
0°	55.2	55.2	55.2	55.2	55.2	55.2	55.2	55.2	55.2	55.2	55.2
2.5°	64.4	64.1	64.1	63.6	63.3	62.8	62.5	61.7	61.5	61.5	61.5
5°	76.1	75.1	74.6	73.3	72.5	72.2	70.9	70.4	69.6	69.9	68.5
7.5°	89.2	87.4	86.6	84.8	84.2	82.4	81.9	80.6	79.8	78.2	77.7
10°	103.6	101.2	99.9	97.1	96.3	95.0	93.4	91.8	90.5	89.0	88.2
12.5°	120.1	118.0	116.9	113.0	111.2	109.4	107.3	105.2	103.1	101.8	99.9
15°	139.5	136.0	135.0	131.3	128.2	125.8	123.0	120.3	118.8	116.2	114.3
17.5°	158.6	155.1	154.3	148.9	145.5	143.9	140.8	137.3	134.5	131.9	129.0
20°	177.7	175.3	173.2	168.0	164.3	161.7	157.5	154.1	151.7	148.1	144.4
22.5°	196.8	194.4	192.8	187.3	183.9	180.3	176.6	172.9	169.5	165.1	160.9
25°	216.4	214.8	214.0	209.1	205.9	202.5	198.8	194.7	190.5	185.5	181.0
27.5°	236.8	237.3	235.7	234.7	231.3	228.9	223.2	220.3	217.1	211.1	205.6
30°	262.7	264.3	263.7	264.5	262.4	260.8	256.4	252.7	249.1	243.3	237.0
32.5°	295.4	297.5	298.5	301.4	300.4	299.8	298.5	293.3	290.7	280.7	278.1
35°	345.9	344.8	349.3	351.6	350.6	350.1	348.5	345.6	342.5	335.4	328.9
37.5°	411.5	412.6	414.2	409.4	406.3	406.0	401.3	398.5	394.0	386.2	378.3
40°	531.9	525.3	518.0	498.1	489.5	484.5	470.7	466.8	459.2	448.4	440.3
42.5°	688.3	681.8	659.8	626.6	608.8	584.2	573.0	559.1	548.4	530.8	521.4
45°	843.7	824.9	822.3	783.6	761.6	729.2	709.0	685.7	661.4	638.4	621.6
47.5°	974.8	970.6	957.8	934.3	913.9	886.6	860.7	824.9	799.8	767.1	737.0
50°	1079.7	1079.5	1074.8	1061.2	1044.2	1022.2	999.4	969.1	940.5	900.5	868.3
52.5°	1158.2	1162.4	1164.0	1159.8	1153.3	1133.9	1122.4	1097.0	1072.9	1038.9	1004.1
55°	1215.8	1231.2	1239.1	1247.9	1246.1	1239.3	1238.8	1222.3	1211.3	1184.4	1159.8
57.5°	1286.9	1312.3	1336.6	1379.8	1381.4	1396.6	1404.4	1412.3	1414.3	1403.6	1395.5
60°	1377.5	1429.3	1475.3	1565.6	1589.1	1626.3	1650.3	1676.5	1698.7	1700.6	1700.0
62.5°	1441.3	1521.1	1595.4	1729.3	1775.1	1818.0	1850.2	1875.6	1891.0	1906.7	1914.1
63°	1443.1	1530.5	1609.5	1747.7	1795.8	1836.6	1867.2	1890.8	1907.0	1916.4	1921.1
65°	1398.9	1504.9	1599.0	1736.7	1781.9	1823.0	1839.0	1854.4	1862.2	1865.9	1852.0
67.5°	1185.7	1289.3	1399.2	1553.0	1591.7	1640.9	1654.0	1661.8	1665.5	1664.7	1652.9
70°	886.6	973.5	1095.7	1271.5	1322.8	1370.9	1400.8	1413.6	1417.8	1416.4	1398.9
72.5°	619.0	670.0	770.7	966.4	1036.3	1098.0	1134.9	1154.0	1158.0	1150.1	1133.9
75°	519.9	522.5	545.2	652.2	717.6	783.6	825.2	837.2	829.3	805.5	764.2
77.5°	464.1	469.9	469.9	485.8	498.6	517.0	520.9	491.6	457.6	413.6	378.0
80°	389.3	409.4	423.6	435.4	436.6	433.0	423.3	406.8	380.7	347.2	310.0
82.5°	236.5	276.3	292.5	353.2	383.0	403.2	401.6	379.6	359.7	324.9	293.3
85°	59.7	64.4	69.9	90.8	101.8	124.3	138.4	144.9	147.3	135.2	122.5
87.5°	5.8	3.9	6.5	5.0	7.1	5.2	7.1	6.5	8.1	8.6	9.4
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: P162272

CATALOG NUMBER: ECM-F01-LED-E1-SL2-HSS

**CANDELA DISTRIBUTION (continued):**

	72°	73°	74°	75°	76°	77°	78°	79°	80°	81°	82°
0°	55.2	55.2	55.2	55.2	55.2	55.2	55.2	55.2	55.2	55.2	55.2
2.5°	61.0	60.7	60.4	60.2	59.9	59.7	59.1	59.1	58.6	58.3	58.1
5°	67.7	67.2	67.0	66.5	65.7	65.1	64.4	63.3	62.5	62.3	61.7
7.5°	76.4	75.1	74.6	73.8	72.7	71.2	70.1	69.3	68.0	67.2	65.7
10°	86.1	84.8	83.2	81.6	80.0	78.2	76.9	75.9	73.8	72.7	70.9
12.5°	98.4	96.0	94.2	92.1	90.0	87.9	86.3	83.2	81.4	79.0	77.4
15°	110.9	108.8	106.7	104.1	101.0	97.6	96.0	93.1	90.8	87.1	85.0
17.5°	126.1	122.2	119.0	115.9	113.0	109.9	106.7	102.3	98.9	95.8	91.6
20°	141.0	136.3	132.9	128.7	124.5	119.6	115.9	112.8	108.1	103.9	99.4
22.5°	157.0	152.3	146.8	142.6	136.8	132.9	127.9	122.7	118.0	112.5	107.0
25°	176.3	171.4	165.1	159.6	153.1	147.5	141.6	135.5	129.8	123.5	116.4
27.5°	200.1	194.9	188.1	181.6	172.9	166.1	160.4	152.3	144.9	137.1	129.0
30°	230.2	224.5	216.1	206.7	198.0	190.5	182.4	171.6	163.5	154.1	143.6
32.5°	269.5	262.7	251.4	242.5	231.8	221.8	210.6	199.9	188.4	176.1	164.0
35°	318.9	312.7	299.6	286.5	274.7	262.9	248.8	236.5	220.3	205.4	190.0
37.5°	370.2	358.9	346.9	332.8	318.1	304.0	286.7	269.7	251.2	234.9	215.6
40°	428.8	415.2	405.3	390.1	369.4	349.3	333.3	312.1	288.8	267.1	244.4
42.5°	509.1	493.9	476.2	453.1	438.2	414.7	394.0	368.9	338.3	313.9	286.5
45°	602.0	581.3	564.1	541.8	523.8	494.5	470.4	436.9	406.3	374.4	340.9
47.5°	708.0	682.3	657.2	635.2	606.5	577.7	547.0	511.5	472.2	437.2	397.4
50°	829.6	793.2	758.5	730.2	690.7	657.5	624.2	584.2	540.8	500.5	455.2
52.5°	964.9	922.7	876.7	833.3	787.5	744.8	704.8	658.8	610.4	561.2	510.7
55°	1128.1	1096.5	1042.3	987.1	925.9	868.9	817.3	760.3	701.4	636.8	583.7
57.5°	1383.7	1368.3	1323.0	1267.8	1188.0	1118.7	1031.3	961.5	876.2	787.2	718.7
60°	1730.1	1711.0	1685.6	1640.9	1577.6	1483.4	1387.1	1278.6	1148.8	1025.6	908.6
62.5°	1914.8	1908.0	1887.4	1856.5	1797.4	1723.1	1626.0	1506.7	1360.2	1210.5	1061.4
63°	1920.3	1911.7	1893.9	1862.5	1810.5	1738.5	1643.3	1527.4	1384.0	1231.5	1079.2
65°	1846.0	1842.6	1824.6	1790.3	1754.7	1699.8	1626.0	1526.3	1406.0	1261.8	1110.3
67.5°	1637.3	1627.1	1599.3	1588.9	1564.0	1525.8	1469.5	1401.0	1314.9	1201.6	1070.8
70°	1384.8	1369.6	1334.8	1316.2	1285.9	1261.8	1227.6	1178.6	1125.5	1046.5	948.9
72.5°	1117.1	1085.8	1053.8	1005.4	963.0	920.1	882.2	847.7	789.3	757.4	683.4
75°	725.5	668.5	613.8	540.5	474.6	416.3	359.5	330.7	270.8	246.4	211.7
77.5°	344.3	312.4	269.5	236.2	193.9	158.3	129.2	97.1	76.1	59.7	45.5
80°	277.8	250.9	225.0	194.9	163.0	130.0	99.7	74.6	52.9	36.6	25.9
82.5°	247.8	218.5	186.5	165.9	144.2	118.0	96.8	79.0	58.3	42.7	29.0
85°	96.3	81.1	62.5	51.0	39.8	32.7	29.6	20.4	16.0	12.5	9.7
87.5°	8.4	6.8	5.5	3.7	3.9	2.1	2.4	1.6	1.3	1.3	1.0
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: P162272

CATALOG NUMBER: ECM-F01-LED-E1-SL2-HSS

**CANDELA DISTRIBUTION (continued):**

	83°	84°	85°	86°	87°	88°	89°	90°	95°	105°	115°
0°	55.2	55.2	55.2	55.2	55.2	55.2	55.2	55.2	55.2	55.2	55.2
2.5°	57.8	57.6	57.3	56.8	56.8	56.2	56.0	55.7	54.4	51.5	49.2
5°	60.7	60.2	59.7	58.9	58.3	57.6	57.0	56.2	53.4	47.9	43.2
7.5°	64.9	63.8	63.0	61.5	60.7	59.7	58.9	57.6	52.9	44.5	37.9
10°	69.9	68.0	66.7	64.9	63.3	62.0	60.7	58.9	52.3	40.8	33.2
12.5°	75.9	73.8	71.2	69.1	67.0	65.1	63.3	61.0	51.5	37.7	29.6
15°	81.9	78.8	76.9	74.0	71.2	68.5	65.9	63.8	51.8	34.3	26.4
17.5°	88.7	85.6	81.6	78.5	75.3	72.0	68.8	64.6	50.5	31.6	24.1
20°	95.2	90.8	87.1	83.2	78.8	74.6	70.6	67.0	49.4	29.0	22.0
22.5°	102.3	97.1	92.3	87.4	81.9	77.2	72.5	67.7	47.6	26.7	20.1
25°	110.9	104.9	98.1	92.1	86.3	80.6	74.6	68.8	45.8	24.6	18.8
27.5°	121.4	113.5	106.7	99.1	91.1	83.7	77.2	70.9	43.9	23.0	17.5
30°	134.7	125.6	115.9	106.2	97.6	89.2	80.0	72.2	42.1	21.5	16.2
32.5°	152.5	141.0	129.2	118.0	106.5	95.8	86.1	75.9	41.1	20.1	14.9
35°	176.1	161.2	146.8	132.6	118.8	105.7	93.1	81.6	41.1	18.6	13.3
37.5°	198.3	181.0	162.7	145.2	128.7	113.5	98.6	84.8	39.0	17.3	12.0
40°	222.4	201.7	180.3	159.6	139.7	120.9	103.9	87.9	37.1	15.7	10.7
42.5°	259.3	233.1	205.1	181.0	157.2	134.0	112.8	93.9	34.8	14.1	9.4
45°	307.7	274.4	241.5	212.2	181.8	153.3	128.2	104.9	34.3	12.8	8.1
47.5°	359.5	320.2	281.5	244.1	208.5	175.3	145.2	117.2	34.3	11.5	7.1
50°	411.0	361.8	320.5	277.1	237.0	197.8	161.9	130.0	34.5	10.5	5.8
52.5°	457.6	405.0	358.7	308.4	264.3	218.7	179.7	142.6	34.0	9.2	4.7
55°	522.2	460.5	406.8	351.4	299.6	248.3	204.1	161.4	34.3	8.1	3.9
57.5°	641.2	568.8	504.1	431.4	371.8	305.6	252.0	200.1	37.4	6.8	2.9
60°	812.1	717.9	627.1	538.4	462.5	383.8	314.2	253.2	43.9	5.5	2.1
62.5°	926.9	803.7	695.4	597.5	509.4	427.0	351.1	281.8	48.4	4.5	1.3
63°	938.7	811.3	702.5	601.5	511.5	429.1	352.7	283.9	48.7	4.2	1.3
65°	960.9	824.4	706.4	602.2	509.4	426.2	351.6	283.6	49.2	3.4	1.0
67.5°	935.6	804.2	683.6	579.8	491.1	409.2	338.5	273.1	48.9	2.4	0.8
70°	836.7	727.8	621.9	525.1	444.5	370.5	308.2	249.1	45.0	1.6	0.5
72.5°	614.3	540.3	458.1	388.2	334.9	278.1	237.3	187.1	34.8	1.0	0.3
75°	182.1	165.9	139.5	123.0	108.6	89.7	79.8	62.3	17.8	0.5	0.0
77.5°	36.4	33.0	29.6	26.9	25.4	21.7	20.7	17.0	7.3	0.3	0.0
80°	19.1	15.7	13.3	11.8	10.2	8.4	7.1	5.8	1.3	0.0	0.0
82.5°	18.3	12.3	8.9	7.3	6.3	5.0	3.9	2.9	0.8	0.0	0.0
85°	6.8	5.2	3.9	3.1	2.6	2.4	1.8	1.6	0.0	0.0	0.0
87.5°	1.0	0.8	0.8	0.5	0.5	0.3	0.3	0.3	0.0	0.0	0.0
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: P162272

CATALOG NUMBER: ECM-F01-LED-E1-SL2-HSS

**CANDELA DISTRIBUTION (continued):**

	125°	135°	145°	155°	165°	175°	180°
0°	55.2	55.2	55.2	55.2	55.2	55.2	55.2
2.5°	46.8	44.7	43.7	42.4	42.4	42.1	42.7
5°	39.0	36.1	34.0	32.4	32.7	31.9	32.2
7.5°	33.0	30.1	28.3	27.2	26.9	26.7	26.7
10°	28.5	25.9	24.3	23.6	23.3	23.3	23.3
12.5°	25.4	22.8	21.5	20.9	20.9	20.7	20.7
15°	22.8	20.7	19.4	18.8	18.8	18.6	18.8
17.5°	20.7	18.6	17.5	17.0	17.0	16.7	16.7
20°	18.8	17.0	16.0	15.2	15.2	14.9	15.2
22.5°	17.3	15.4	14.1	13.6	13.3	13.1	13.3
25°	15.7	13.9	12.5	11.8	11.5	11.5	11.3
27.5°	14.4	12.5	11.0	10.2	9.9	9.9	9.7
30°	13.1	11.0	9.4	8.6	8.4	8.4	8.4
32.5°	11.8	9.4	8.1	7.3	7.1	7.1	7.1
35°	10.5	8.1	6.8	6.0	5.8	5.8	5.8
37.5°	8.9	6.8	5.2	4.7	4.5	4.2	4.2
40°	7.6	5.2	3.9	3.4	2.9	2.9	2.9
42.5°	6.3	4.2	2.9	2.1	1.8	1.6	1.8
45°	5.2	3.1	1.8	1.0	0.8	0.8	0.8
47.5°	4.2	2.1	0.8	0.3	0.3	0.3	0.3
50°	3.1	1.3	0.3	0.0	0.0	0.3	0.3
52.5°	2.4	0.8	0.0	0.0	0.0	0.0	0.0
55°	1.3	0.3	0.0	0.0	0.0	0.0	0.0
57.5°	0.8	0.0	0.0	0.0	0.0	0.0	0.0
60°	0.5	0.0	0.0	0.0	0.0	0.0	0.0
62.5°	0.3	0.0	0.0	0.0	0.0	0.0	0.0
63°	0.3	0.0	0.0	0.0	0.0	0.0	0.0
65°	0.3	0.0	0.0	0.0	0.0	0.0	0.0
67.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70°	0.0	0.0	0.0	0.0	0.0	0.0	0.0
72.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75°	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)