

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: P141075

Luminaire Tested: **ECM-F02-LED-E1-SL3**

Issue Date: 03/03/2020

Test Information

Test Method: LM-79-08
Report Number: P141075
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33691)
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-SL3
Description: EPIC CLASSICAL MEDIUM DECORATIVE LED LUMINAIRE
(2) LIGHTBARS WITH AccuLED OPTICS - TYPE 3 W/ SPILL LIGHT CONTROL
Light Source: (14) 4000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4777.9 lumens
Efficiency: N/A
Efficacy: 86.9 lumens/watt
Luminous Opening: Rectangular (W 0.33' x L: 1' x H: 0')
IES Classification: Type III - Short - Semi-Cutoff
BUG Rating: B1 - U0 - G1

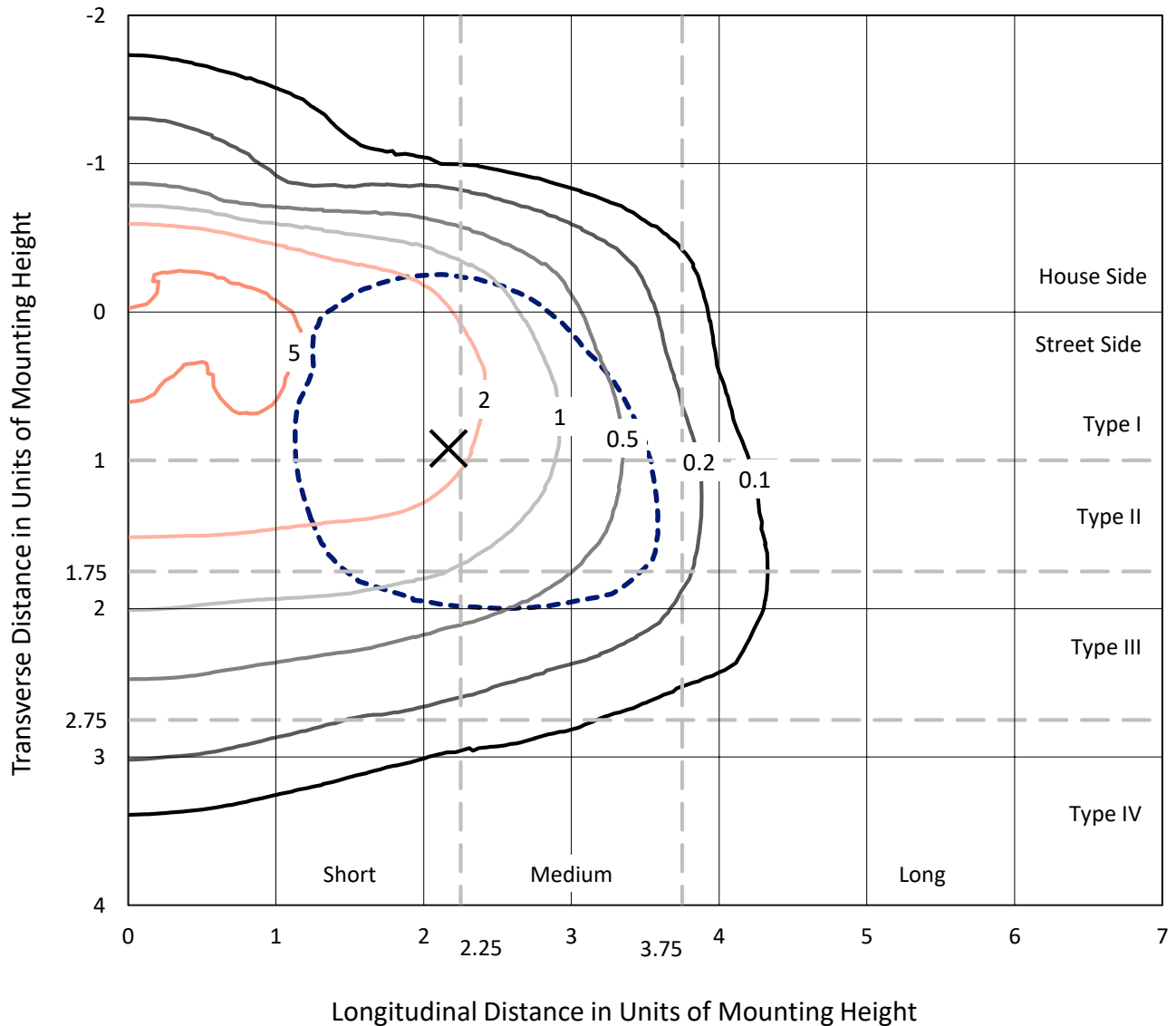
Input Watts (W): 55
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

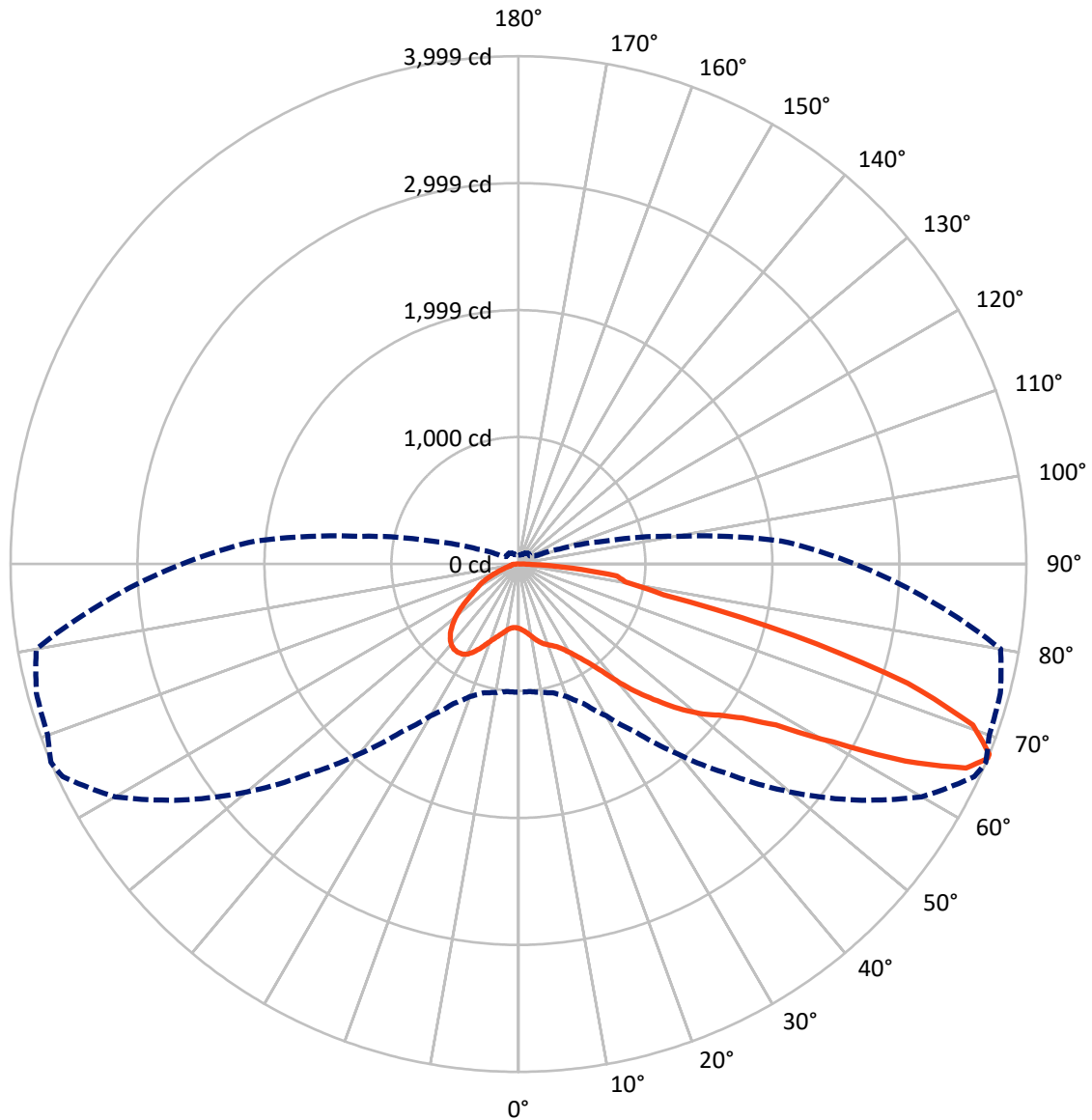
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 6.6 fc
 Type III - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 67-Deg Lateral - - - Horizontal Cone Through 67-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1099.2	0.0	1099.2
	% Fixture	23.0	0.0	23.0
Street Side	Lumens	3678.8	0.0	3678.8
	% Fixture	77.0	0.0	77.0
Total	Lumens	4777.9	0.0	4777.9
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	50.8	1.1
10°-20°	175.7	3.7
20°-30°	312.7	6.5
30°-40°	449.6	9.4
40°-50°	685.2	14.3
50°-60°	1001.0	20.9
60°-70°	1348.7	28.2
70°-80°	662.2	13.9
80°-90°	92.1	1.9
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°	4777.9	100.0
0°-180°	4777.9	100.0



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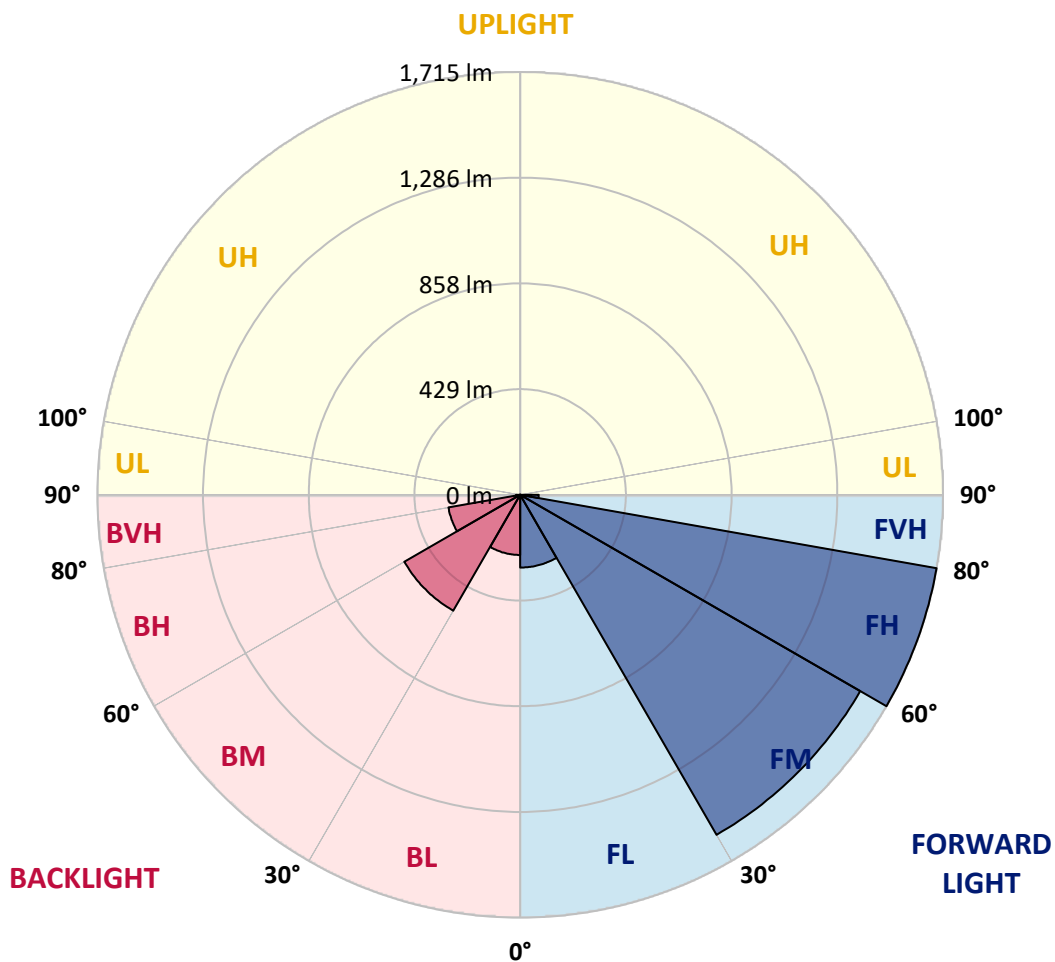
CATALOG NUMBER: ECM-F02-LED-E1-SL3

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	295.1	6.2			
FM	(30°-60°)	1592.9	33.3			
FH	(60°-80°)	1715.3	35.9			G1/1800
FVH	(80°-90°)	75.5	1.6			G1/100
BL	(0°-30°)	244.1	5.1	B1/500		
BM	(30°-60°)	542.9	11.4	B1/1000		
BH	(60°-80°)	295.6	6.2	B1/500		G1/500
BVH	(80°-90°)	16.6	0.3			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G1

Type III Short





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CATALOG NUMBER: ECM-F02-LED-E1-SL3

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	506.9	506.9	506.9	506.9	506.9	506.9	506.9	506.9	506.9	506.9	506.9
2.5°	533.3	530.5	532.7	532.2	530.5	528.3	529.4	527.8	526.7	525.0	523.4
5°	568.0	566.3	565.2	563.6	562.5	560.8	559.7	557.0	553.1	550.3	548.1
7.5°	602.1	601.5	599.9	597.7	593.3	592.2	588.3	585.6	582.3	576.8	572.4
10°	642.3	641.7	639.0	635.7	630.7	625.7	621.3	614.7	608.1	603.2	599.3
12.5°	690.7	687.9	682.4	678.0	672.5	664.8	657.7	650.0	640.6	632.9	628.5
15°	739.1	735.8	731.4	725.4	717.1	706.6	696.2	684.6	670.3	660.4	654.4
17.5°	778.7	776.5	771.6	763.3	755.1	742.4	728.7	712.7	695.1	680.2	670.9
20°	807.4	805.2	797.5	787.6	776.5	762.2	747.4	729.8	708.9	690.7	680.2
22.5°	819.5	816.2	807.4	794.2	779.3	761.7	745.7	730.9	711.6	697.8	686.8
25°	823.3	819.5	807.9	791.4	772.1	749.6	731.4	719.9	708.3	703.3	699.5
27.5°	821.1	817.8	805.2	784.8	758.9	732.5	713.3	705.0	705.5	714.9	719.3
30°	813.4	809.6	798.0	775.4	747.9	719.3	702.2	699.5	712.2	735.8	753.4
32.5°	800.8	798.0	788.7	769.4	744.6	719.9	707.8	713.8	735.8	772.7	803.0
35°	797.5	796.9	792.5	782.0	763.9	747.9	743.0	760.0	796.4	847.0	885.5
37.5°	796.9	799.7	801.9	801.9	798.0	796.9	811.8	835.4	889.4	952.7	1015.4
40°	807.9	812.9	823.9	838.2	851.9	871.8	902.0	946.6	1002.7	1079.8	1157.9
42.5°	842.0	853.0	871.8	896.5	932.3	969.2	1018.1	1073.7	1145.8	1223.4	1301.0
45°	908.6	924.6	938.3	977.4	1024.8	1068.2	1132.1	1205.3	1284.5	1381.9	1465.6
47.5°	996.7	1008.2	1036.9	1078.1	1135.9	1198.1	1259.8	1323.6	1418.8	1520.6	1621.9
50°	1084.7	1093.5	1123.8	1172.2	1248.2	1316.4	1386.9	1450.2	1532.2	1640.0	1739.1
52.5°	1150.2	1162.3	1188.8	1236.1	1321.4	1399.0	1479.3	1549.2	1641.7	1738.6	1842.0
55°	1195.4	1203.1	1227.3	1273.5	1353.9	1442.5	1533.3	1619.1	1729.2	1838.7	1941.6
57.5°	1202.5	1210.2	1232.2	1273.0	1351.1	1444.1	1548.1	1653.3	1786.4	1931.2	2066.0
60°	1194.3	1200.3	1219.6	1253.1	1326.9	1428.7	1552.5	1684.6	1848.6	2035.2	2227.8
62.5°	1157.4	1163.4	1181.1	1208.6	1274.1	1384.1	1539.3	1730.9	1937.2	2171.7	2454.0
65°	1088.0	1091.9	1108.4	1130.4	1196.5	1308.2	1479.3	1721.5	2007.1	2326.3	2691.8
67°	1009.3	1007.7	1026.4	1048.4	1109.0	1211.9	1379.2	1617.5	1951.5	2338.4	2791.4
67.5°	985.1	989.5	1007.7	1023.1	1082.0	1181.6	1341.8	1577.3	1904.2	2310.9	2789.7
70°	813.4	821.7	831.6	841.5	893.2	966.4	1084.2	1312.0	1576.2	1961.4	2532.7
72.5°	558.1	541.5	548.7	545.4	561.4	607.6	689.6	889.9	1099.6	1430.9	1880.0
75°	282.9	301.0	298.8	312.6	335.2	364.3	402.3	477.2	641.7	836.5	1163.4
77.5°	158.5	154.1	169.5	172.8	186.0	216.8	284.0	382.5	457.9	537.7	657.7
80°	72.1	79.8	84.8	77.0	79.8	86.4	112.3	176.1	296.1	450.7	518.4
82.5°	40.2	42.9	50.1	50.6	52.8	54.5	58.9	68.2	91.9	186.0	366.0
85°	25.3	26.4	33.6	36.9	38.5	38.5	38.5	40.7	46.8	55.0	94.7
87.5°	9.4	9.9	15.4	20.4	20.9	19.8	18.7	21.5	19.8	20.4	30.8
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-SL3

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	67°	70°	75°	80°	85°	90°	95°	100°
0°	506.9	506.9	506.9	506.9	506.9	506.9	506.9	506.9	506.9	506.9	506.9
2.5°	522.3	520.1	517.9	517.3	515.7	514.6	511.8	509.6	507.4	505.8	504.1
5°	543.2	538.8	534.9	533.3	531.1	528.3	522.8	519.0	515.7	512.4	509.1
7.5°	566.9	561.4	555.9	553.7	550.3	545.4	539.3	534.9	529.4	524.5	520.1
10°	593.3	587.2	582.8	580.6	577.9	570.7	566.9	559.2	553.1	546.5	541.0
12.5°	621.9	619.1	613.1	610.9	608.1	603.2	597.7	591.1	583.4	576.2	569.6
15°	647.8	643.4	639.5	639.0	637.3	634.6	627.4	620.2	613.6	604.3	598.8
17.5°	663.7	662.1	661.5	661.0	659.9	658.2	654.9	647.2	641.2	633.5	625.7
20°	673.6	675.3	678.0	680.2	681.3	682.4	680.8	673.1	667.0	660.4	653.8
22.5°	684.1	688.5	695.6	698.9	702.8	708.3	707.2	702.2	698.9	691.2	686.3
25°	698.9	707.8	719.9	724.3	731.4	738.6	740.2	737.5	734.2	728.7	728.7
27.5°	724.3	736.9	752.9	762.2	769.4	779.3	782.6	780.9	781.5	778.2	785.9
30°	763.9	781.5	803.0	812.9	821.7	833.2	835.4	838.7	836.5	842.6	851.9
32.5°	823.9	845.9	867.9	877.3	885.0	897.1	904.2	902.0	909.7	913.6	926.8
35°	916.3	938.3	955.4	957.1	965.9	972.5	979.1	976.9	997.8	1006.0	1013.2
37.5°	1044.0	1062.7	1073.2	1069.3	1058.9	1071.5	1080.3	1093.5	1106.8	1121.6	1095.2
40°	1209.7	1239.4	1235.0	1229.5	1209.7	1212.4	1216.3	1223.4	1245.4	1240.5	1165.1
42.5°	1367.1	1397.3	1392.4	1386.3	1359.9	1346.2	1356.6	1369.3	1381.4	1334.6	1222.3
45°	1526.1	1553.6	1530.0	1538.2	1514.6	1508.5	1528.9	1536.0	1522.3	1436.4	1270.8
47.5°	1691.2	1720.9	1709.4	1701.1	1684.1	1682.4	1694.0	1705.0	1650.5	1510.2	1307.1
50°	1817.8	1861.8	1855.8	1850.8	1832.1	1829.9	1857.4	1865.1	1767.2	1588.3	1343.4
52.5°	1915.2	1972.5	1983.5	1976.9	1972.5	1973.6	2052.8	2041.2	1905.9	1683.0	1385.8
55°	2030.2	2089.7	2129.9	2138.1	2149.1	2165.1	2321.9	2304.9	2097.4	1819.5	1430.4
57.5°	2182.7	2292.8	2353.3	2390.7	2421.0	2524.5	2723.7	2658.2	2362.7	1995.6	1483.2
60°	2407.2	2625.7	2751.2	2846.4	2906.4	3086.9	3328.5	3087.5	2670.8	2206.9	1552.5
62.5°	2767.7	3124.3	3364.3	3418.2	3443.5	3615.2	3788.1	3416.0	2893.2	2346.7	1563.5
65°	3117.2	3563.0	3843.1	3874.5	3855.8	3902.0	3950.4	3425.9	2841.5	2280.7	1434.8
67°	3240.5	3666.4	3960.9	3998.8	3943.8	3928.9	3855.2	3245.4	2648.3	2078.1	1255.3
67.5°	3233.9	3654.3	3959.8	3998.3	3943.8	3920.1	3811.7	3172.8	2572.3	2028.6	1220.7
70°	2980.7	3384.7	3724.8	3796.9	3766.6	3703.9	3415.5	2687.4	2131.5	1664.3	941.1
72.5°	2419.9	2856.3	3126.0	3205.8	3227.3	3066.0	2543.7	1881.1	1536.6	1189.3	682.4
75°	1624.6	2058.3	2279.0	2238.8	2108.4	1833.8	1342.9	992.3	842.0	691.8	422.1
77.5°	921.3	1255.9	1238.8	1169.5	1059.4	784.2	380.8	206.4	197.0	230.0	178.9
80°	615.3	774.3	827.2	854.1	848.1	580.1	157.4	79.8	68.8	68.8	67.7
82.5°	513.5	669.2	757.8	781.5	728.1	440.8	94.1	52.3	41.8	46.8	52.3
85°	216.3	337.4	446.3	429.3	341.2	171.7	47.9	27.5	27.5	36.3	45.7
87.5°	52.3	77.6	109.5	106.2	85.3	39.6	24.2	17.1	17.1	28.1	39.6
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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CANDELA DISTRIBUTION (continued):

	105°	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°
0°	506.9	506.9	506.9	506.9	506.9	506.9	506.9	506.9	506.9	506.9	506.9
2.5°	503.6	501.4	501.4	499.2	498.1	497.0	496.4	497.0	495.3	493.7	494.2
5°	506.3	503.0	501.4	497.5	495.3	493.1	491.5	490.9	488.2	486.5	486.5
7.5°	515.7	511.3	508.0	503.6	499.2	495.9	493.1	491.5	487.6	484.9	484.3
10°	534.9	528.9	523.9	517.3	511.3	506.9	501.9	499.2	494.8	492.0	490.9
12.5°	563.6	554.8	547.0	537.1	530.0	523.4	520.6	516.2	514.6	512.9	513.5
15°	590.5	580.1	572.9	565.2	557.0	553.1	547.6	547.0	547.6	544.8	544.8
17.5°	618.0	609.8	601.5	598.8	591.1	588.3	584.5	582.3	577.3	572.4	566.3
20°	646.7	642.3	639.0	635.7	634.0	627.4	617.5	605.9	590.0	575.7	563.6
22.5°	683.5	680.8	681.3	678.6	669.8	653.3	630.7	606.5	580.6	557.5	539.3
25°	730.3	733.1	729.8	716.0	690.7	657.1	622.4	588.3	554.2	526.7	501.9
27.5°	789.8	787.6	772.1	736.9	693.4	645.6	601.0	560.3	519.5	487.6	456.8
30°	854.7	838.7	798.6	743.5	682.4	624.6	569.6	522.3	475.0	437.5	402.9
32.5°	920.2	874.5	809.6	735.8	663.2	594.9	533.3	477.7	423.2	381.4	341.2
35°	969.7	896.5	807.9	719.3	634.0	555.9	484.3	415.5	352.2	302.1	261.4
37.5°	1015.4	908.6	796.9	694.0	593.8	504.1	415.0	340.7	276.8	226.7	191.5
40°	1043.5	907.5	775.4	652.2	538.2	428.2	331.3	254.8	198.7	161.8	142.5
42.5°	1060.0	896.0	738.6	596.6	461.7	342.9	244.4	175.6	141.4	125.5	116.7
45°	1068.2	871.2	692.9	522.3	369.3	244.9	168.4	126.6	112.8	108.4	106.2
47.5°	1063.3	836.5	627.4	438.6	275.2	167.9	120.5	106.8	102.4	100.2	99.6
50°	1051.7	791.4	558.6	347.8	195.4	120.5	101.3	97.4	95.8	95.2	94.1
52.5°	1035.2	738.0	479.9	269.7	138.7	100.2	94.7	93.0	91.9	90.3	89.7
55°	1007.7	672.0	399.6	198.7	111.2	94.7	91.9	91.4	89.2	87.5	86.4
57.5°	974.7	601.5	323.6	155.7	102.4	92.5	90.8	90.3	88.1	85.9	83.7
60°	958.2	552.0	266.4	134.8	100.7	93.6	92.5	91.4	88.6	85.3	82.6
62.5°	917.4	498.6	229.5	128.2	102.9	97.4	96.9	94.7	90.8	87.5	83.1
65°	812.3	423.2	195.4	121.6	106.2	103.5	104.6	101.8	97.4	91.9	84.8
67°	686.3	344.0	165.1	116.7	110.1	111.7	113.4	111.7	104.6	96.3	87.0
67.5°	652.2	320.3	156.8	115.0	111.2	113.4	116.1	114.5	106.8	97.4	88.1
70°	490.4	229.5	124.4	109.0	115.0	121.1	126.6	126.0	118.3	106.8	91.9
72.5°	339.0	156.8	100.7	101.8	111.7	122.7	129.9	133.2	125.5	111.7	94.1
75°	204.2	100.2	84.8	91.9	101.8	112.8	124.4	125.5	116.7	102.9	88.1
77.5°	100.2	72.1	69.9	72.6	82.0	91.4	96.3	90.3	84.8	75.4	69.9
80°	60.5	56.7	55.6	61.6	67.1	65.5	61.6	56.7	53.9	51.7	49.5
82.5°	50.6	51.2	52.3	53.4	52.3	46.2	39.6	36.3	34.1	34.1	34.7
85°	51.7	52.8	48.4	44.6	39.6	33.0	27.0	23.1	23.7	24.2	24.2
87.5°	40.2	38.5	34.1	28.1	22.6	16.5	13.2	11.0	12.1	11.6	12.7
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: P141075

CATALOG NUMBER: ECM-F02-LED-E1-SL3

CANDELA DISTRIBUTION (continued):

	160°	165°	170°	175°	180°
0°	506.9	506.9	506.9	506.9	506.9
2.5°	494.2	493.7	494.2	494.2	494.8
5°	485.4	484.3	484.3	484.9	484.9
7.5°	483.2	482.1	482.1	482.7	482.1
10°	490.9	490.4	491.5	490.9	490.9
12.5°	514.0	514.0	516.2	517.3	516.2
15°	545.4	544.3	545.9	546.5	547.0
17.5°	563.0	558.1	556.4	557.5	555.3
20°	553.1	544.8	541.5	541.0	537.1
22.5°	525.0	512.9	508.0	505.8	501.4
25°	485.4	471.1	464.5	459.0	456.2
27.5°	438.1	420.5	411.1	406.7	405.1
30°	378.6	361.6	347.8	340.7	338.5
32.5°	312.6	287.8	273.5	264.7	258.7
35°	233.3	209.7	199.2	192.6	184.9
37.5°	169.5	155.2	146.4	142.0	140.3
40°	131.0	123.8	119.4	118.9	118.3
42.5°	113.4	110.1	109.5	108.4	107.3
45°	104.6	103.5	104.0	102.4	101.3
47.5°	98.5	98.0	98.0	96.9	96.3
50°	93.6	93.6	93.0	92.5	92.5
52.5°	89.2	89.7	89.7	88.6	88.6
55°	85.3	85.3	85.9	85.3	85.3
57.5°	82.6	82.0	82.6	82.6	82.6
60°	80.9	79.8	79.3	79.8	79.8
62.5°	79.3	77.6	77.0	77.0	77.6
65°	79.3	76.5	75.4	75.4	74.8
67°	79.8	75.4	73.2	72.1	71.5
67.5°	79.8	74.8	72.1	71.5	71.0
70°	79.8	72.6	68.8	66.0	66.0
72.5°	79.3	70.4	64.4	61.6	60.5
75°	75.4	66.6	61.1	57.8	56.7
77.5°	63.3	57.8	55.0	52.3	51.7
80°	47.9	45.1	42.9	36.9	34.1
82.5°	34.1	32.5	28.6	26.4	24.8
85°	24.2	22.6	20.9	18.7	18.7
87.5°	13.2	12.7	12.1	11.0	9.9
90°	0.0	0.0	0.0	0.0	0.0

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