

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: P142036

Luminaire Tested: **ECM-F02-LED-E1-T4-7050**

Issue Date: 03/03/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P142036  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33685)  
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-T4-7050  
Description: EPIC CLASSICAL MEDIUM DECORATIVE LED LUMINAIRE  
(2) LIGHTBARS WITH AccuLED OPTICS - TYPE 4  
Light Source: (14) 5000K CCT, 70 CRI LEDs  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4872 lumens  
Efficiency: N/A  
Efficacy: 88.6 lumens/watt  
Luminous Opening: Rectangular (W 0.33' x L: 1' x H: 0')  
IES Classification: Type IV - Short - Semi-Cutoff  
BUG Rating: B1 - U0 - G2

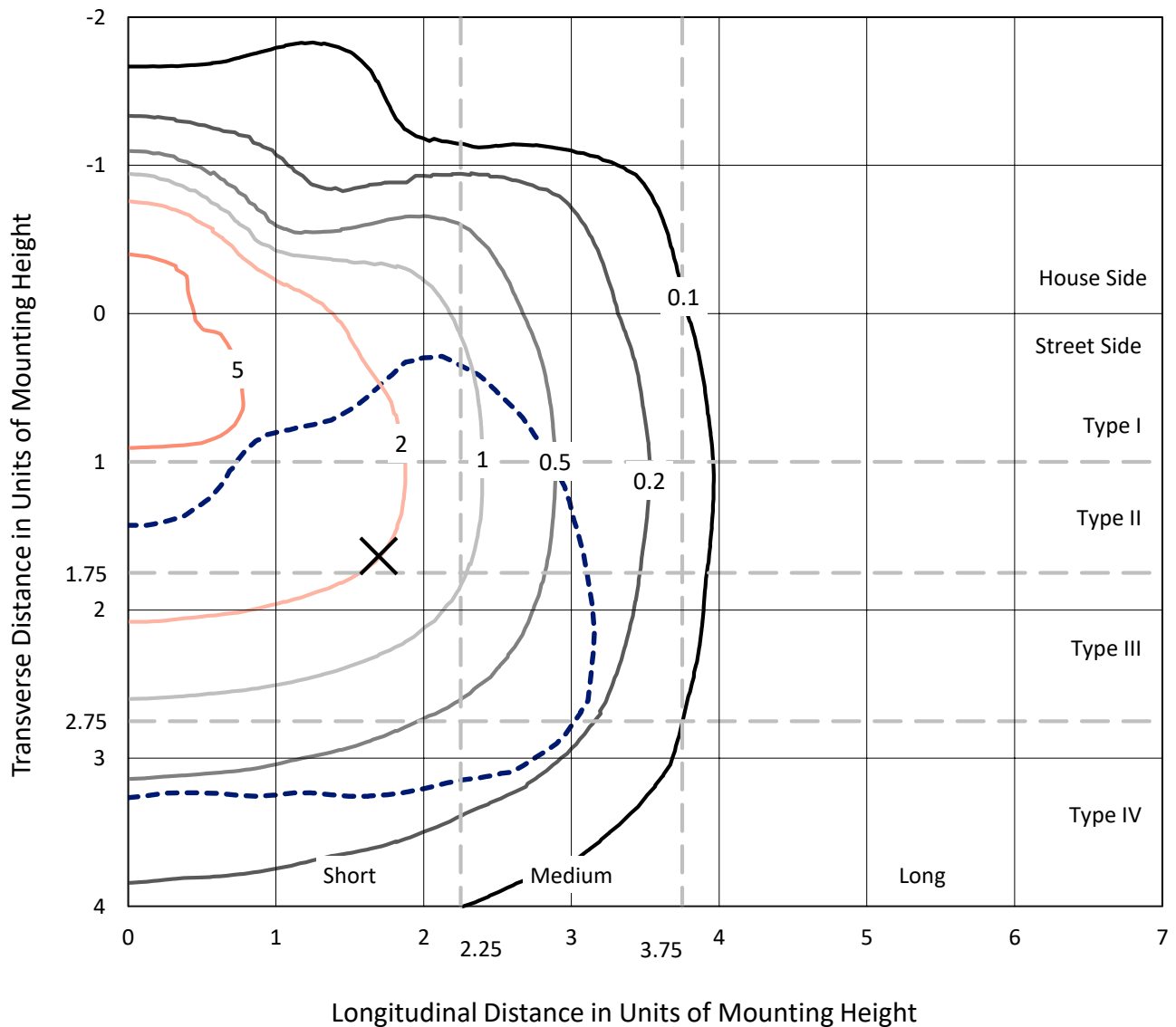
Input Watts (W): 55  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

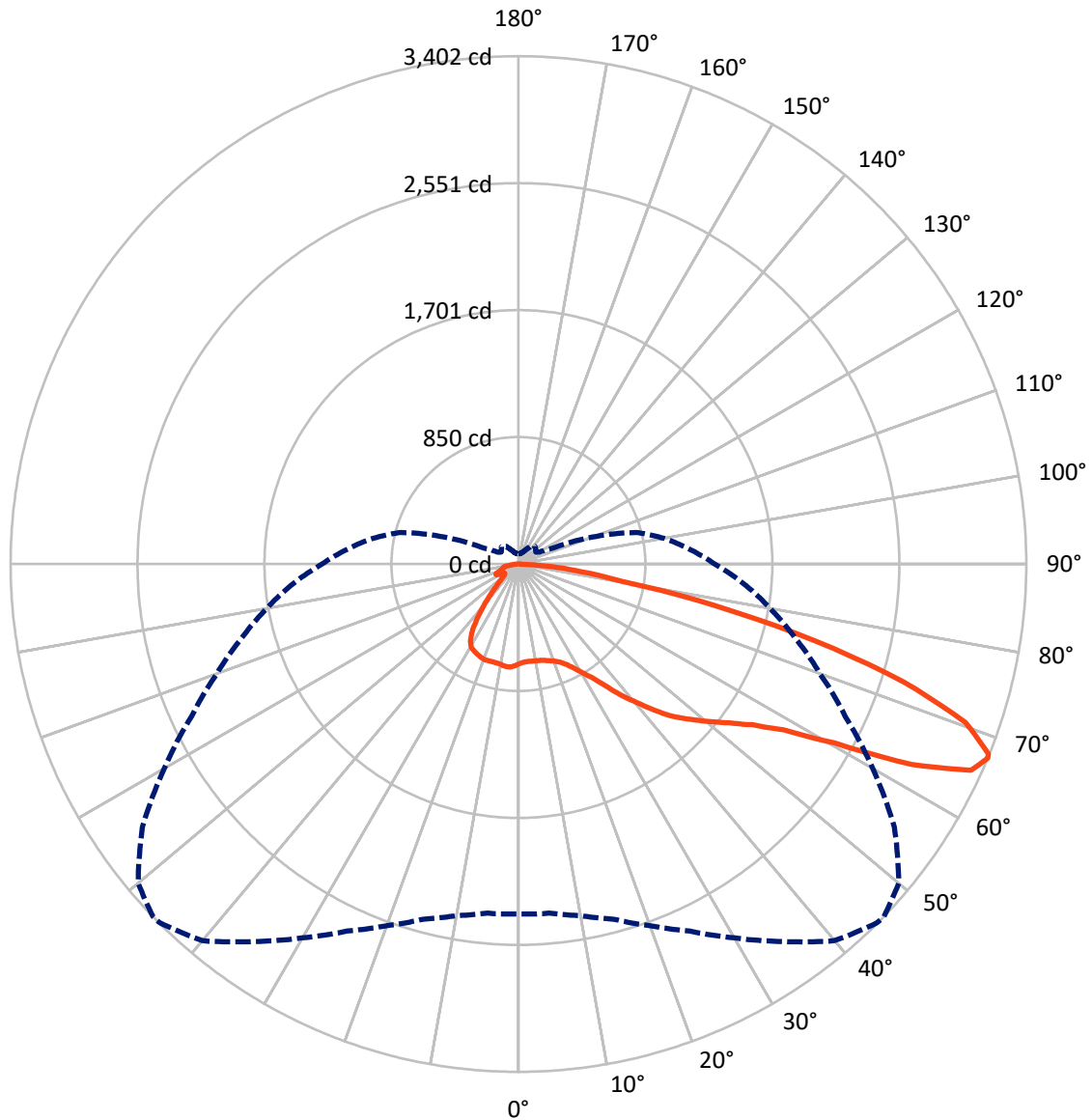
✕ Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 6.8 fc  
 Type IV - Short - Semi-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 46-Deg Lateral    - - - Horizontal Cone Through 67-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	968.2	0.0	968.2
	% Fixture	19.9	0.0	19.9
<b>Street Side</b>	Lumens	3903.8	0.0	3903.8
	% Fixture	80.1	0.0	80.1
<b>Total</b>	Lumens	4872.0	0.0	4872.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	64.2	1.3
10°-20°	191.8	3.9
20°-30°	322.4	6.6
30°-40°	482.1	9.9
40°-50°	628.0	12.9
50°-60°	860.1	17.7
60°-70°	1359.7	27.9
70°-80°	843.4	17.3
80°-90°	120.2	2.5
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°	4872.0	100.0
0°-180°	4872.0	100.0



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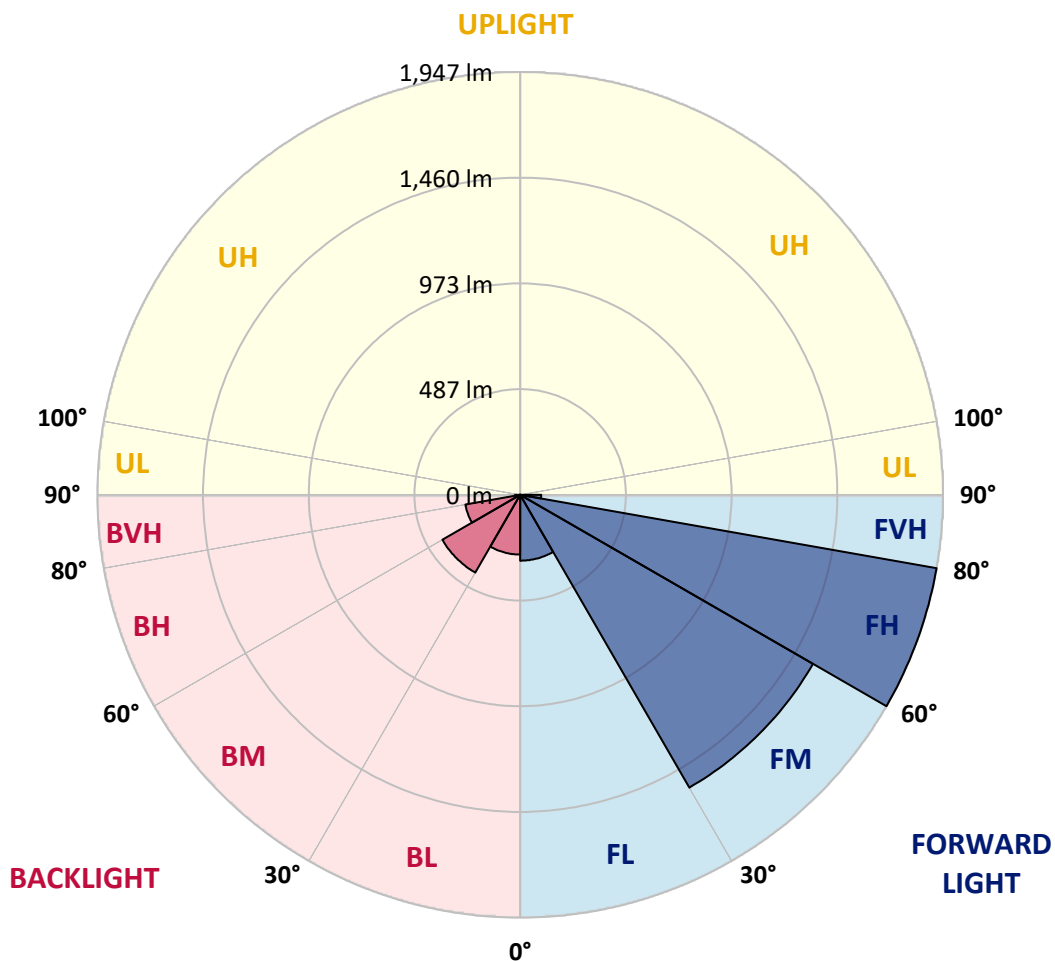
CATALOG NUMBER: ECM-F02-LED-E1-T4-7050

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

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	303.4	6.2			
FM	(30°-60°)	1556.8	32.0			
FH	(60°-80°)	1946.9	40.0			G2/5000
FVH	(80°-90°)	96.8	2.0			G1/100
BL	(0°-30°)	275.0	5.6	B1/500		
BM	(30°-60°)	413.5	8.5	B1/1000		
BH	(60°-80°)	256.3	5.3	B1/500		G1/500
BVH	(80°-90°)	23.4	0.5			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B1-U0-G2**

Type IV Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	46°
0°	667.5	667.5	667.5	667.5	667.5	667.5	667.5	667.5	667.5	667.5	667.5
2.5°	652.8	654.5	653.9	653.4	653.9	654.5	655.1	656.8	657.3	657.9	658.5
5°	641.0	642.6	642.1	643.2	643.8	646.0	647.7	650.6	652.2	654.5	655.6
7.5°	637.6	638.7	638.7	639.8	640.4	642.6	645.5	648.9	652.2	655.6	656.8
10°	646.6	647.2	647.2	646.6	647.2	648.3	649.4	652.2	655.1	657.9	659.0
12.5°	668.1	666.4	665.8	664.1	664.7	662.4	662.4	661.8	661.8	662.4	662.4
15°	690.6	689.5	688.4	685.6	685.6	682.2	681.0	678.8	673.1	670.9	670.3
17.5°	711.0	709.8	707.6	705.3	704.2	699.7	698.6	694.6	687.8	682.7	681.0
20°	735.3	732.4	727.4	726.2	723.4	718.3	716.6	711.5	702.5	695.2	694.6
22.5°	772.5	768.0	762.9	759.0	751.6	746.6	742.0	735.3	724.5	716.1	713.8
25°	809.8	808.1	803.6	797.9	792.9	787.2	781.6	771.4	757.3	746.6	744.3
27.5°	862.3	858.4	852.7	843.7	840.9	831.3	826.7	818.3	804.2	790.6	788.3
30°	917.1	913.1	904.1	896.2	894.5	884.3	881.5	872.5	860.1	846.5	844.8
32.5°	979.8	975.8	969.1	964.5	958.3	952.7	945.9	937.4	921.6	910.3	908.1
35°	1060.0	1056.6	1048.7	1052.1	1046.4	1044.7	1040.8	1026.7	1009.1	995.6	997.9
37.5°	1123.2	1122.7	1124.4	1122.7	1130.0	1137.3	1137.3	1138.5	1130.0	1115.3	1112.5
40°	1182.5	1182.0	1186.5	1191.6	1211.3	1223.2	1236.7	1241.8	1232.8	1221.5	1217.5
42.5°	1237.9	1236.7	1242.9	1261.6	1285.9	1307.9	1331.0	1350.8	1355.3	1342.9	1340.1
45°	1292.6	1294.3	1302.2	1323.1	1355.3	1384.1	1423.7	1446.8	1461.5	1454.7	1459.2
47.5°	1358.7	1360.4	1368.9	1393.7	1422.0	1458.1	1504.4	1543.9	1561.4	1561.4	1555.8
50°	1437.2	1445.1	1454.1	1471.1	1503.8	1539.4	1595.9	1635.4	1663.7	1662.5	1658.0
52.5°	1541.7	1543.4	1558.1	1571.6	1599.8	1636.0	1686.8	1741.0	1776.6	1773.2	1768.1
55°	1682.3	1675.5	1685.1	1698.1	1728.6	1760.2	1815.6	1878.2	1914.4	1903.7	1900.3
57.5°	1859.6	1854.0	1860.7	1876.6	1915.0	1940.9	1985.5	2043.1	2094.0	2103.0	2095.1
60°	2115.4	2115.4	2129.0	2162.9	2201.8	2240.8	2297.8	2367.3	2419.8	2432.8	2432.2
62.5°	2418.7	2437.9	2440.7	2484.8	2559.3	2626.5	2715.2	2837.7	2916.2	2972.1	2957.4
65°	2467.2	2473.5	2498.3	2566.6	2667.7	2786.9	2924.7	3085.6	3248.8	3329.6	3331.8
67°	2345.3	2347.5	2391.0	2462.7	2578.5	2712.9	2891.4	3087.3	3294.0	3398.5	3401.9
67.5°	2307.4	2302.9	2341.9	2417.0	2543.5	2694.8	2862.6	3068.7	3282.1	3393.9	3395.6
70°	2053.9	2056.1	2086.6	2170.2	2304.0	2445.8	2633.3	2845.0	3069.8	3172.0	3177.1
72.5°	1771.0	1756.3	1783.9	1873.2	1937.0	2075.3	2247.6	2407.4	2605.0	2701.6	2699.3
75°	1350.8	1310.1	1358.7	1410.7	1446.2	1583.5	1690.8	1800.9	1983.3	2056.7	2052.7
77.5°	727.9	726.2	779.3	820.0	873.1	996.7	1091.0	1160.5	1314.1	1350.2	1354.8
80°	395.3	410.0	441.6	486.8	529.7	589.0	643.8	687.3	737.5	714.4	709.3
82.5°	238.3	262.6	311.2	345.6	362.5	389.1	428.1	452.9	472.7	429.7	421.3
85°	37.8	68.3	175.6	210.1	228.1	240.6	249.0	265.4	242.3	227.0	231.0
87.5°	12.4	14.1	27.1	59.9	52.5	36.1	47.4	68.9	32.8	17.5	16.9
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):**

	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°
0°	667.5	667.5	667.5	667.5	667.5	667.5	667.5	667.5	667.5	667.5	667.5
2.5°	659.0	659.6	661.3	663.5	664.7	667.5	667.5	669.8	669.8	671.4	673.1
5°	657.3	660.2	662.4	665.8	667.5	671.4	673.1	676.5	678.2	680.5	682.7
7.5°	660.2	664.1	666.9	670.9	673.7	677.7	679.4	682.2	683.9	686.7	687.8
10°	662.4	666.4	669.8	674.3	676.5	679.4	681.0	683.3	683.9	685.6	686.7
12.5°	665.2	666.9	669.8	673.7	676.0	677.7	679.4	681.0	682.7	682.7	682.7
15°	669.2	667.5	668.1	671.4	673.7	674.8	676.5	677.7	678.2	678.2	677.1
17.5°	677.7	673.1	670.3	670.3	671.4	672.6	672.6	670.9	669.8	668.1	665.8
20°	690.1	682.7	677.1	674.3	672.0	669.2	664.7	659.0	653.9	649.4	646.6
22.5°	707.6	700.2	693.5	687.3	679.9	670.3	660.7	648.9	639.3	631.9	629.1
25°	740.3	729.6	724.5	714.9	703.6	688.4	673.7	657.3	646.0	635.9	631.4
27.5°	784.4	775.9	764.6	759.5	744.9	727.4	711.0	691.2	675.4	663.0	654.5
30°	840.3	834.7	825.1	816.6	802.5	786.7	762.4	740.3	712.7	690.6	678.2
32.5°	904.7	896.2	887.7	877.0	866.8	845.9	823.4	790.0	751.6	713.8	690.6
35°	985.4	977.0	971.3	954.4	937.4	914.8	884.3	844.8	791.2	740.3	700.8
37.5°	1096.7	1078.6	1050.9	1026.7	996.2	961.7	927.3	879.8	820.0	753.9	699.7
40°	1193.2	1166.7	1135.6	1093.9	1050.9	1005.8	965.1	913.7	843.7	765.2	691.8
42.5°	1318.6	1272.9	1220.4	1165.0	1106.3	1052.1	1001.8	943.1	861.2	765.8	673.1
45°	1431.6	1375.1	1305.6	1230.5	1158.8	1092.7	1035.1	970.2	875.9	763.5	651.7
47.5°	1532.1	1466.0	1381.3	1290.9	1206.2	1131.7	1068.4	1000.1	895.1	770.8	643.8
50°	1629.2	1553.5	1458.1	1348.5	1254.2	1172.9	1106.8	1033.4	927.3	795.7	656.2
52.5°	1733.1	1641.1	1533.2	1409.5	1306.8	1222.6	1148.6	1073.5	965.7	829.0	678.8
55°	1860.2	1755.7	1632.6	1495.9	1377.9	1284.2	1200.6	1121.5	1011.4	870.2	705.3
57.5°	2029.6	1924.0	1782.2	1624.7	1501.0	1389.8	1289.2	1200.0	1080.9	927.3	744.9
60°	2356.0	2225.6	2036.9	1865.8	1732.0	1601.0	1479.6	1357.6	1214.1	1042.5	846.5
62.5°	2880.1	2698.2	2464.4	2226.1	2045.4	1872.0	1711.7	1553.0	1374.0	1181.4	967.4
65°	3242.6	3017.8	2724.2	2425.5	2180.9	1969.2	1777.7	1589.1	1389.8	1206.2	1019.9
67°	3325.6	3074.3	2740.0	2415.9	2149.9	1920.0	1711.7	1515.1	1314.7	1148.1	988.8
67.5°	3322.2	3071.5	2727.6	2395.5	2129.0	1902.5	1692.5	1485.8	1288.7	1125.5	973.6
70°	3121.2	2869.3	2523.7	2193.4	1936.4	1711.1	1499.3	1319.2	1118.1	986.0	871.9
72.5°	2644.6	2425.5	2146.5	1849.4	1629.2	1427.6	1258.2	1081.4	906.9	818.8	729.0
75°	2011.0	1816.7	1560.9	1343.5	1175.7	1035.7	865.7	749.4	626.8	566.4	534.2
77.5°	1328.8	1105.7	929.0	721.7	598.6	488.5	385.1	305.5	255.3	268.2	293.1
80°	703.1	557.9	412.8	319.6	246.8	192.0	152.5	114.1	83.0	97.1	122.0
82.5°	382.9	326.4	241.1	192.0	157.0	129.9	100.0	70.0	52.0	57.6	83.0
85°	218.5	192.0	149.1	116.3	101.6	83.0	57.0	38.4	37.3	40.1	51.4
87.5°	36.1	48.6	39.5	27.1	30.5	29.9	26.5	20.3	15.2	21.5	27.7
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):**

	105°	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°
0°	667.5	667.5	667.5	667.5	667.5	667.5	667.5	667.5	667.5	667.5	667.5
2.5°	674.3	676.0	678.2	678.8	678.2	679.9	682.7	685.0	683.3	682.2	685.0
5°	685.0	686.1	689.0	689.0	689.5	690.6	692.3	694.0	691.8	691.8	692.9
7.5°	689.5	689.5	692.3	691.2	691.2	690.6	692.3	692.9	689.5	689.0	689.5
10°	686.7	686.7	687.8	685.6	685.0	684.4	684.4	685.0	681.6	680.5	682.2
12.5°	682.7	682.7	681.6	680.5	679.4	678.2	679.4	679.9	677.7	677.7	678.2
15°	676.0	674.3	673.7	673.7	674.3	674.8	677.1	678.8	677.1	676.0	676.0
17.5°	664.7	663.5	665.2	668.6	672.6	675.4	678.8	679.9	676.0	671.4	668.1
20°	647.7	650.6	656.8	666.4	674.8	679.4	679.4	675.4	666.4	657.3	652.8
22.5°	630.2	638.1	651.7	666.4	676.5	678.2	672.0	663.5	651.1	641.5	633.0
25°	632.5	642.1	655.6	668.1	674.8	672.0	660.7	650.0	635.3	625.1	612.7
27.5°	656.2	665.2	672.0	676.0	673.7	664.7	651.7	637.0	620.6	606.5	591.8
30°	675.4	679.4	678.8	675.4	666.9	652.8	637.6	620.1	600.3	585.0	565.8
32.5°	678.8	671.4	660.2	647.7	636.4	620.6	603.1	582.8	560.8	541.0	521.8
35°	672.6	644.9	620.1	595.2	578.3	558.5	543.3	519.5	495.3	478.3	464.2
37.5°	649.4	601.4	561.9	526.9	502.0	479.4	456.3	433.1	412.8	404.9	400.9
40°	620.1	547.8	487.4	438.8	412.2	390.2	366.5	347.9	338.3	330.9	328.1
42.5°	577.1	486.8	411.7	359.7	325.8	305.5	282.4	272.2	267.7	269.4	267.1
45°	537.0	423.0	328.7	271.1	247.9	228.7	217.4	212.9	210.6	209.5	211.2
47.5°	508.8	373.8	264.9	206.1	186.9	173.4	168.9	167.2	166.6	164.3	163.8
50°	502.0	345.0	216.9	160.4	145.7	138.4	136.1	134.4	133.3	131.6	127.6
52.5°	509.9	337.1	193.1	137.8	125.4	119.7	118.0	115.2	114.1	109.6	104.5
55°	523.5	340.0	185.8	131.6	119.2	112.9	110.7	109.6	105.6	100.5	94.3
57.5°	551.7	357.5	189.2	133.3	120.3	114.6	113.5	112.4	107.3	100.0	92.0
60°	633.6	408.3	206.7	145.1	129.3	125.4	125.9	123.7	116.3	106.7	94.9
62.5°	760.1	487.4	238.9	159.8	144.0	144.0	147.4	145.7	134.4	118.6	101.6
65°	825.6	534.8	252.4	164.3	148.5	155.9	166.6	164.9	148.5	124.8	102.2
67°	815.5	525.8	244.5	157.6	140.0	149.7	160.4	160.9	142.9	119.2	97.7
67.5°	805.9	519.5	240.6	154.7	137.8	147.4	157.6	155.9	140.6	116.9	96.6
70°	724.0	456.3	214.6	144.6	127.6	130.4	133.3	131.0	119.2	103.3	89.2
72.5°	625.1	378.9	189.2	138.4	122.0	117.5	117.5	113.5	105.6	94.9	84.7
75°	476.6	294.8	166.0	131.6	115.2	108.4	107.3	104.5	97.7	89.8	80.8
77.5°	290.8	211.2	144.0	121.4	106.7	101.1	101.6	100.0	93.2	85.8	77.4
80°	145.7	136.7	120.8	105.6	96.6	90.9	91.5	88.1	82.4	76.8	70.0
82.5°	89.2	94.3	84.7	80.2	74.5	68.3	53.1	62.1	60.4	55.3	52.5
85°	59.3	58.7	53.1	46.9	42.9	37.3	33.3	33.9	37.3	38.4	38.4
87.5°	28.8	27.7	25.4	23.7	22.6	18.6	17.5	19.8	19.8	20.9	20.3
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: ECM-F02-LED-E1-T4-7050

**CANDELA DISTRIBUTION (continued):**

	160°	165°	170°	175°	180°
0°	667.5	667.5	667.5	667.5	667.5
2.5°	685.6	686.7	686.1	687.8	686.1
5°	693.5	693.5	694.0	694.6	694.0
7.5°	689.5	689.0	690.1	691.2	690.6
10°	682.2	682.7	683.9	685.6	685.6
12.5°	679.4	679.9	682.2	683.9	683.9
15°	677.1	677.7	678.8	681.0	679.4
17.5°	666.9	664.7	664.7	666.4	664.7
20°	648.9	645.5	645.5	644.9	644.3
22.5°	627.4	618.9	616.7	613.8	614.4
25°	600.9	589.6	583.4	580.0	578.8
27.5°	579.4	566.4	560.2	555.1	553.4
30°	552.3	537.6	532.5	529.7	528.6
32.5°	512.8	499.8	493.0	491.3	487.9
35°	452.9	447.3	444.4	440.5	441.0
37.5°	393.0	391.3	384.6	386.8	384.6
40°	328.7	328.1	329.2	327.5	331.5
42.5°	268.2	266.5	269.4	267.7	269.4
45°	207.8	211.2	215.2	213.5	215.7
47.5°	159.3	159.8	158.7	159.8	160.9
50°	122.5	121.4	120.3	118.0	119.2
52.5°	101.1	97.1	94.3	92.6	92.0
55°	89.2	85.3	83.0	80.8	80.8
57.5°	85.8	80.8	77.4	75.7	75.1
60°	86.4	79.6	75.1	72.3	71.7
62.5°	88.7	79.6	73.4	70.6	69.5
65°	88.1	78.5	72.3	69.5	68.3
67°	85.3	76.8	71.7	68.9	68.3
67.5°	84.1	76.2	71.7	68.9	67.8
70°	80.2	74.5	70.6	67.8	66.6
72.5°	76.8	72.3	67.8	65.5	64.4
75°	73.4	68.9	64.9	62.7	62.1
77.5°	70.0	64.9	62.1	59.3	57.0
80°	63.8	58.2	54.2	49.7	48.6
82.5°	52.5	48.0	44.0	40.1	39.5
85°	39.0	37.3	33.9	30.5	30.5
87.5°	21.5	23.7	20.9	19.2	18.1
90°	0.0	0.0	0.0	0.0	0.0

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