

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: P139873

Luminaire Tested: **ENT-F02-LED-E1-GZW-8030**

Issue Date: 03/03/2020

Test Information

Test Method: LM-79-08
Report Number: P139873
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33649)
Test Lab: INNOVATION CENTER-P3
Issue Date: 03/03/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: ENT-F02-LED-E1-GZW-8030
Description: ENTRI LED LUMINAIRE
(2) LIGHTBARS WITH AccuLED OPTICS - WALL GRAZER WIDE
Light Source: (14) 3000K CCT, 80 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3880.6 lumens
Efficiency: N/A
Efficacy: 78.7 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 0.33' x H: 0')
IES Classification: Type I - Short - Full Cutoff
BUG Rating: B2 - U0 - G2

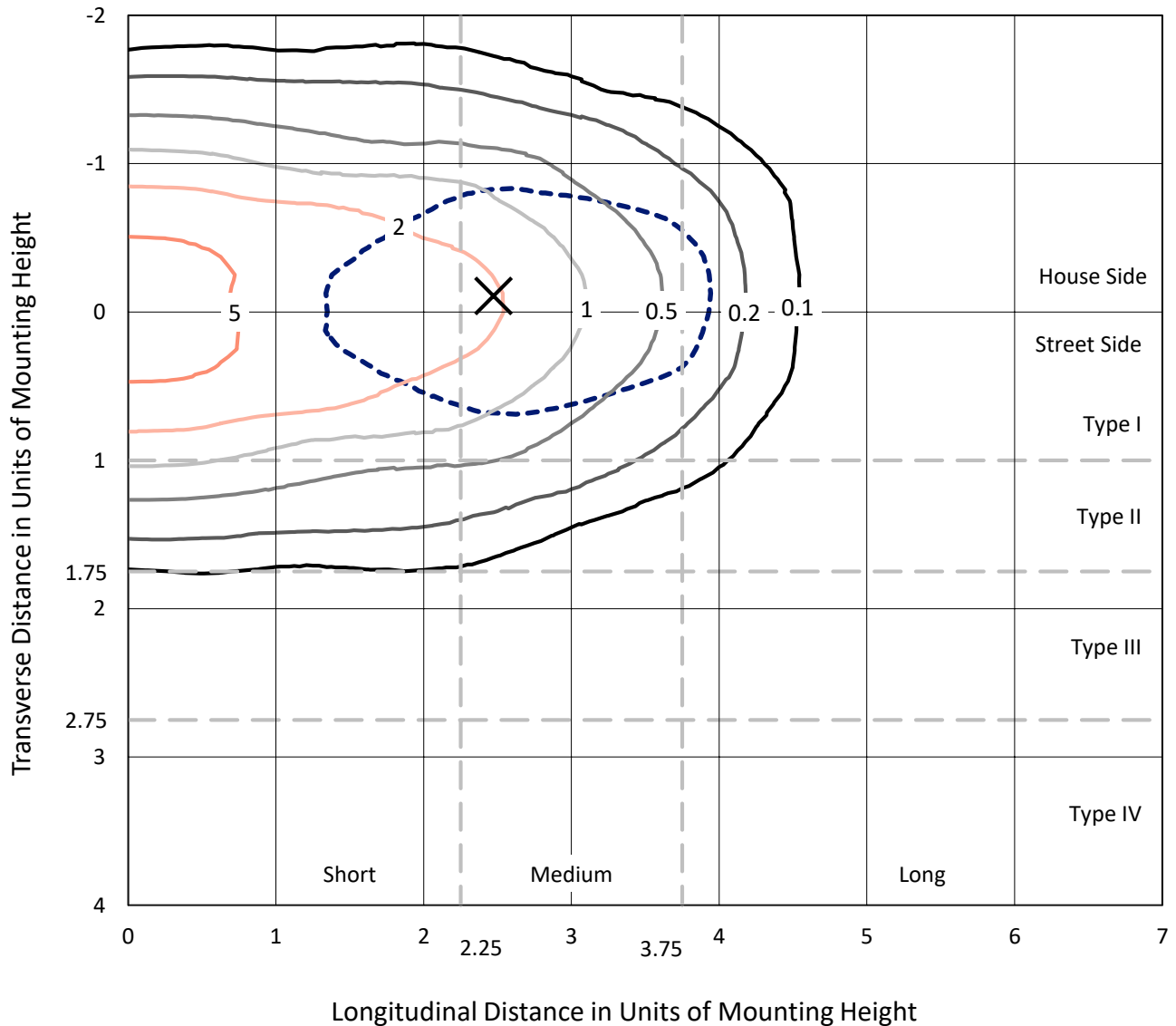
Input Watts (W): 49.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

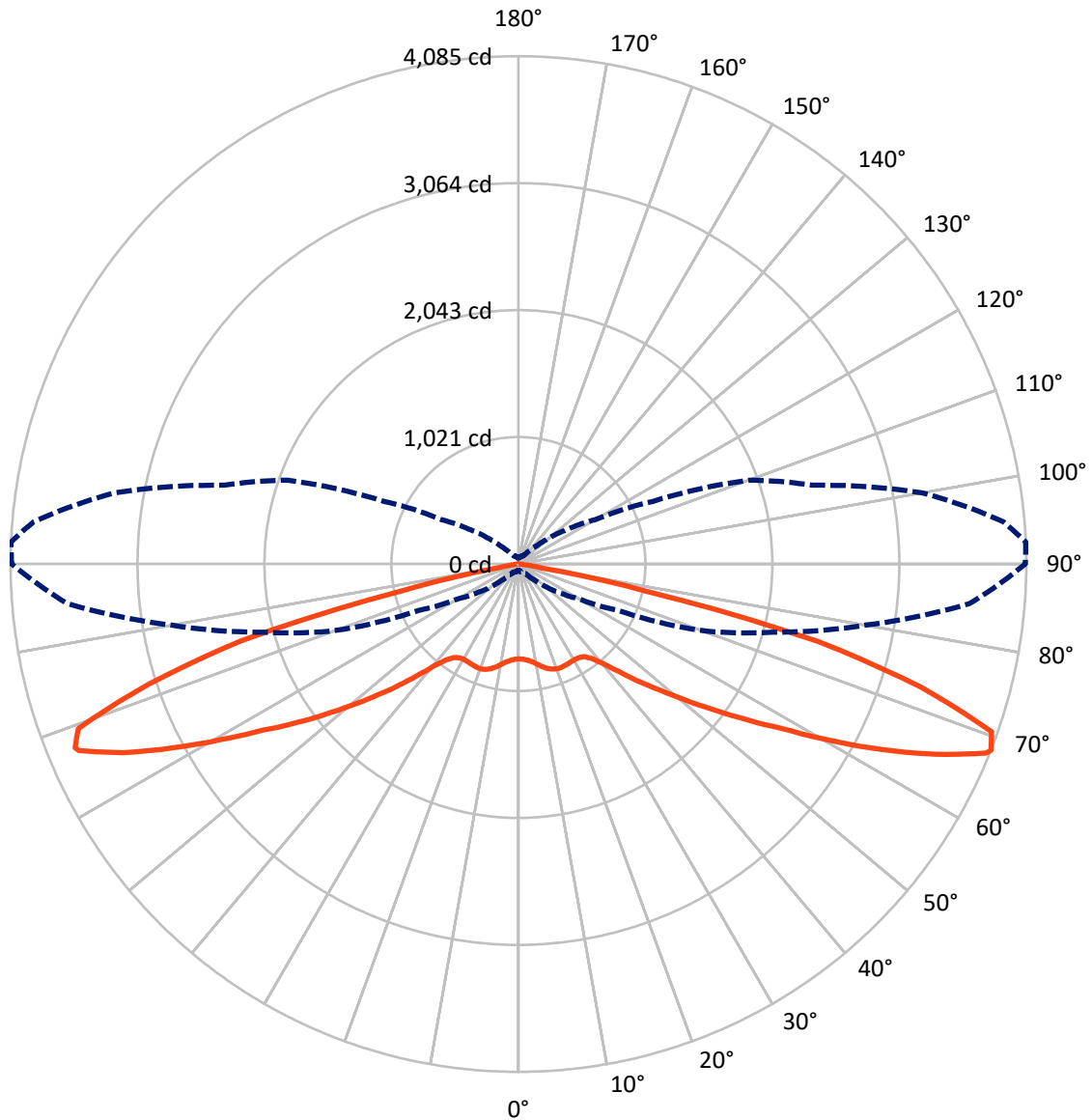
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 7.8 fc
 Type I - Short - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 92.5-Deg Lateral - - - Horizontal Cone Through 68-Deg Vertical

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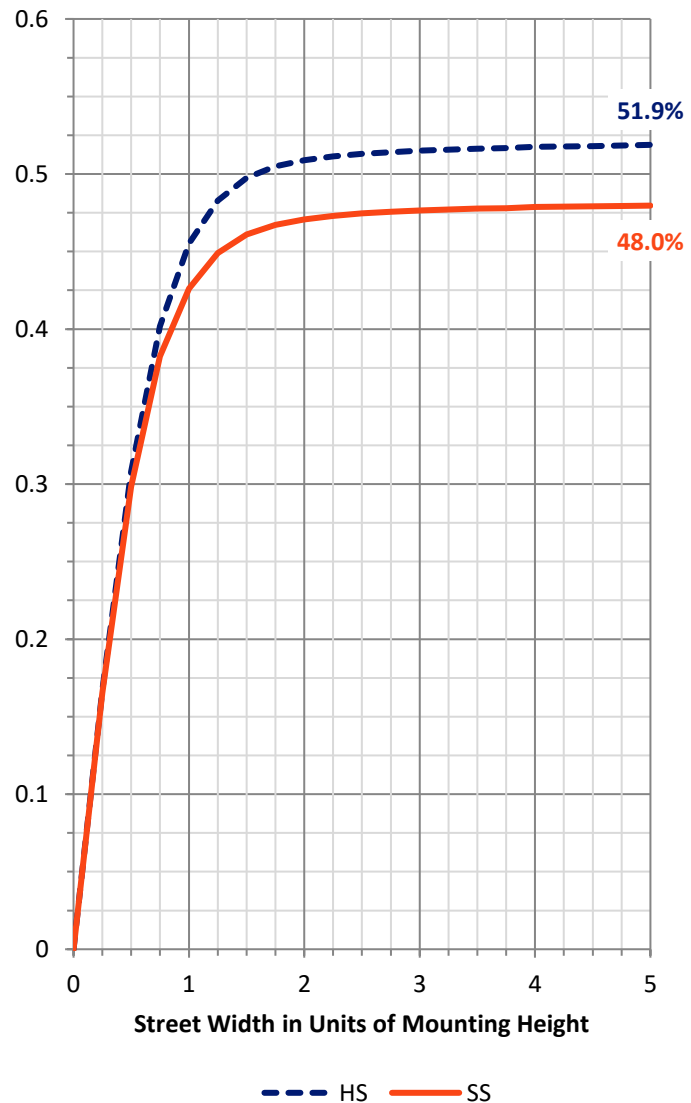
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2027.2	0.0	2027.2
	% Fixture	52.2	0.0	52.2
Street Side	Lumens	1853.4	0.0	1853.4
	% Fixture	47.8	0.0	47.8
Total	Lumens	3880.6	0.0	3880.6
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	75.0	1.9
10°-20°	237.3	6.1
20°-30°	384.8	9.9
30°-40°	478.4	12.3
40°-50°	594.7	15.3
50°-60°	731.6	18.9
60°-70°	865.0	22.3
70°-80°	484.4	12.5
80°-90°	29.4	0.8
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°	3880.6	100.0
0°-180°	3880.6	100.0



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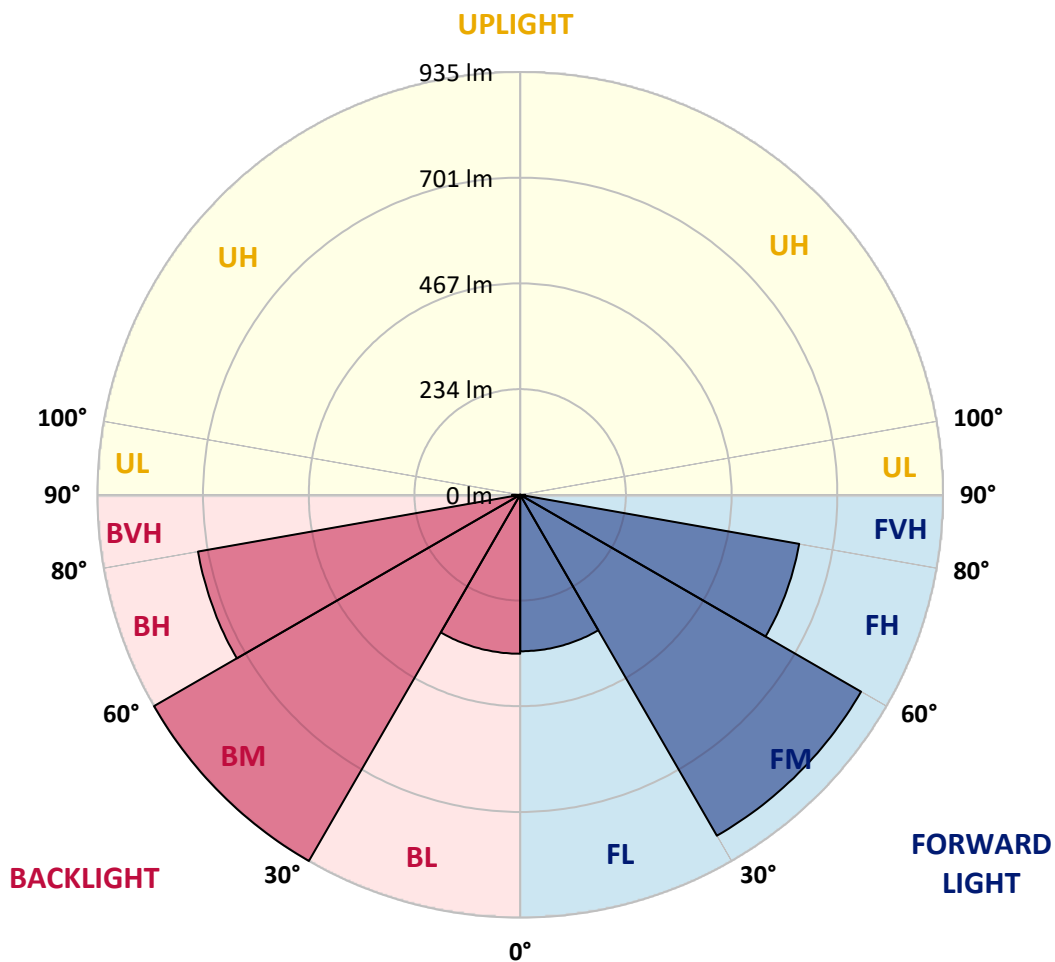
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	345.8	8.9			
FM (30°-60°)	870.1	22.4			
FH (60°-80°)	626.3	16.1			G0/660
FVH (80°-90°)	11.2	0.3			G1/100
BL (0°-30°)	351.2	9.1	B1/500		
BM (30°-60°)	934.6	24.1	B1/1000		
BH (60°-80°)	723.1	18.6	B2/1000		G2/1000
BVH (80°-90°)	18.2	0.5			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G2

Type I Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	762.9	762.9	762.9	762.9	762.9	762.9	762.9	762.9	762.9	762.9	762.9
2.5°	766.4	766.4	766.4	767.1	767.8	769.2	768.5	769.9	767.8	770.6	770.6
5°	775.5	776.2	776.9	776.9	778.3	779.0	778.3	780.3	778.3	781.0	781.7
7.5°	783.8	783.8	784.5	785.2	786.6	788.0	788.7	790.8	790.1	792.9	795.7
10°	790.1	789.4	790.1	791.5	795.0	797.1	799.9	802.6	804.0	806.8	811.0
12.5°	792.9	792.2	794.3	797.8	801.2	805.4	809.6	815.9	820.1	824.2	830.5
15°	791.5	791.5	794.3	798.5	805.4	813.1	820.8	829.1	836.8	845.8	852.1
17.5°	778.3	779.6	783.8	790.8	801.2	813.1	825.6	839.6	852.1	864.6	873.0
20°	754.6	756.0	763.6	772.0	785.9	803.3	822.8	843.1	862.6	879.3	891.1
22.5°	725.3	723.9	730.9	742.0	760.8	781.7	806.8	836.8	863.3	886.9	903.7
25°	680.0	680.0	687.7	701.6	721.8	747.6	778.3	816.6	852.1	882.8	906.5
27.5°	631.9	632.6	642.4	654.2	677.2	701.6	737.1	781.7	824.9	865.3	900.2
30°	583.9	586.0	594.3	606.2	630.5	656.3	692.6	736.4	783.1	833.3	880.7
32.5°	534.4	537.2	544.2	558.1	584.6	613.1	650.1	689.1	733.7	788.7	850.0
35°	487.7	489.8	495.4	512.1	539.3	569.9	611.0	648.7	693.9	744.8	812.4
37.5°	443.8	445.9	452.2	469.6	496.8	527.4	567.8	610.3	657.0	707.2	774.1
40°	396.4	401.3	409.7	426.4	451.5	486.3	527.4	572.0	621.5	678.6	746.9
42.5°	353.2	357.4	365.1	379.7	404.8	441.7	484.9	530.9	584.6	649.4	726.7
45°	313.5	317.0	324.7	337.9	364.4	393.7	432.7	480.7	536.5	611.0	705.1
47.5°	275.2	278.7	287.1	303.1	324.7	353.2	388.1	430.6	482.1	558.1	664.0
50°	236.9	240.4	248.7	264.8	285.7	313.5	345.6	383.9	434.8	500.3	604.1
52.5°	195.1	198.6	206.9	223.0	243.2	269.6	302.4	342.1	389.5	451.5	537.2
55°	149.8	154.7	162.3	175.6	197.2	223.7	256.4	299.6	347.7	408.3	487.7
57.5°	108.0	111.5	120.5	131.0	149.1	177.0	206.2	250.8	304.5	366.5	445.2
60°	78.7	82.2	88.5	96.8	109.4	129.6	155.4	197.2	256.4	326.1	406.9
62.5°	65.5	68.3	74.6	82.9	89.9	99.6	115.0	147.0	204.8	282.2	367.2
65°	57.8	59.9	65.5	73.9	79.4	83.6	89.9	111.5	158.9	234.8	328.2
67.5°	51.6	53.6	57.8	64.8	71.1	73.2	76.6	91.3	124.7	190.9	287.1
68°	50.9	53.0	56.4	62.7	69.0	71.1	74.6	89.2	121.2	181.8	275.9
70°	47.4	48.8	52.3	57.1	62.0	63.4	67.6	82.2	113.6	158.9	223.7
72.5°	43.2	43.9	46.0	50.2	55.0	55.7	59.9	71.8	89.2	117.1	166.5
75°	36.2	36.9	39.7	43.2	46.0	47.4	48.8	54.3	60.6	72.5	98.2
77.5°	27.9	29.3	31.4	33.4	37.6	39.0	37.6	41.8	44.6	49.5	59.9
80°	16.7	16.7	18.8	20.9	23.0	26.5	25.1	29.3	31.4	34.1	40.4
82.5°	2.8	3.5	3.5	4.9	6.3	7.7	8.4	10.5	13.2	16.0	21.6
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.7	2.1
87.5°	0.0	0.0	0.0	0.0	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	0.0	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	92.5°	95°	100°
0°	762.9	762.9	762.9	762.9	762.9	762.9	762.9	762.9	762.9	762.9	762.9
2.5°	766.4	768.5	768.5	767.8	767.8	767.8	765.7	766.4	767.1	769.2	766.4
5°	777.6	779.6	779.0	778.3	778.3	778.3	775.5	776.2	776.9	778.3	775.5
7.5°	792.2	794.3	795.0	795.0	795.0	796.4	792.2	792.2	793.6	795.0	790.8
10°	813.8	813.8	815.9	817.3	818.7	820.1	817.3	815.9	818.7	818.7	813.8
12.5°	834.0	835.4	838.9	841.7	842.4	845.1	845.1	844.4	846.5	845.8	840.3
15°	857.0	858.4	861.2	864.6	865.3	868.1	868.1	868.8	870.9	872.3	864.0
17.5°	878.6	880.7	880.7	881.4	882.8	884.9	886.2	886.9	889.0	890.4	882.1
20°	896.7	898.8	895.3	892.5	889.7	891.1	893.9	896.7	898.1	898.8	888.3
22.5°	910.6	911.3	905.8	898.1	890.4	889.7	893.2	898.1	899.5	898.8	884.2
25°	918.3	920.4	914.8	903.0	889.0	884.2	887.6	893.9	896.7	893.9	876.5
27.5°	918.3	926.0	923.2	910.6	891.8	878.6	880.7	890.4	892.5	889.0	868.8
30°	911.3	927.4	930.8	923.2	903.7	880.7	877.9	889.0	891.8	885.6	865.3
32.5°	897.4	926.7	940.6	941.3	926.0	897.4	883.5	894.6	896.7	889.0	872.3
35°	877.9	926.0	953.1	966.4	961.5	932.9	908.5	915.5	914.1	905.8	899.5
37.5°	856.3	926.0	971.2	1001.9	1013.1	998.4	966.4	962.9	966.4	953.8	950.3
40°	832.6	928.1	997.0	1051.4	1084.8	1089.7	1061.1	1051.4	1055.6	1043.7	1048.6
42.5°	818.7	930.8	1031.2	1109.2	1174.0	1223.5	1210.9	1181.7	1179.6	1181.0	1191.4
45°	811.7	937.8	1065.3	1174.7	1265.3	1375.4	1387.2	1334.9	1337.7	1345.4	1361.4
47.5°	804.0	951.0	1105.0	1243.0	1364.9	1519.6	1577.4	1507.0	1501.5	1530.0	1534.9
50°	776.2	967.1	1150.3	1319.6	1469.4	1681.9	1773.2	1701.4	1702.8	1729.3	1719.5
52.5°	712.1	967.8	1198.4	1396.3	1573.9	1842.2	1980.8	1933.4	1930.0	1955.7	1904.2
55°	623.6	923.9	1237.4	1471.5	1672.9	1991.3	2195.4	2205.9	2198.9	2203.1	2091.6
57.5°	552.5	815.9	1241.6	1534.9	1756.5	2132.7	2415.6	2490.8	2491.5	2473.4	2275.5
60°	506.5	694.6	1187.2	1587.2	1854.0	2313.2	2702.6	2871.2	2881.0	2807.1	2521.5
62.5°	468.2	633.3	1075.1	1640.8	1966.2	2495.7	3012.0	3289.3	3290.0	3166.7	2792.5
65°	438.2	599.9	951.7	1620.6	2052.6	2672.7	3339.5	3710.1	3692.0	3556.1	3049.6
67.5°	404.8	569.9	894.6	1589.3	2126.4	2836.4	3627.9	4053.6	4058.5	3891.3	3287.9
68°	397.8	558.8	880.0	1562.8	2118.1	2830.8	3643.2	4076.6	4085.0	3912.9	3298.3
70°	342.8	487.7	765.7	1364.9	1967.6	2679.6	3545.7	4011.8	4037.6	3845.3	3182.0
72.5°	228.5	337.2	511.4	964.3	1516.1	2129.2	2902.6	3360.4	3382.0	3252.4	2642.7
75°	144.9	204.8	271.7	556.0	1018.6	1527.9	2188.4	2455.3	2490.8	2448.3	1978.7
77.5°	87.8	143.5	167.2	269.6	536.5	714.9	988.7	1006.1	1046.5	1021.4	1025.6
80°	57.8	99.6	121.9	183.2	186.0	154.0	174.9	176.3	186.7	198.6	206.9
82.5°	32.7	60.6	85.0	125.4	110.8	57.1	48.8	50.9	52.3	53.6	63.4
85°	4.9	11.1	23.7	39.0	39.7	18.8	17.4	16.0	16.7	18.1	23.0
87.5°	0.0	0.0	0.0	0.0	0.7	1.4	2.1	2.1	2.1	4.2	4.2
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°	762.9	762.9	762.9	762.9	762.9	762.9	762.9	762.9	762.9	762.9	762.9
2.5°	765.7	765.0	765.7	763.6	765.7	765.0	765.0	765.0	764.3	765.0	765.0
5°	774.1	774.1	774.1	772.7	774.1	774.1	774.1	774.1	773.4	774.1	774.8
7.5°	790.1	790.1	789.4	787.3	788.7	788.7	788.0	786.6	785.2	785.9	785.2
10°	811.7	813.1	808.9	808.9	806.8	804.0	801.9	799.9	799.2	797.8	795.0
12.5°	838.2	837.5	831.9	829.8	828.4	822.8	818.7	816.6	813.8	810.3	806.1
15°	861.9	859.1	854.9	852.8	850.7	844.4	838.9	834.0	830.5	825.6	819.4
17.5°	877.9	875.1	873.0	872.3	872.3	866.7	861.9	855.6	847.9	838.9	828.4
20°	881.4	881.4	882.1	886.2	890.4	888.3	882.8	875.1	864.0	849.3	833.3
22.5°	876.5	879.3	885.6	896.0	905.1	905.8	900.2	889.0	870.2	849.3	825.6
25°	868.1	875.8	889.0	903.7	916.2	916.2	906.5	890.4	864.6	834.7	803.3
27.5°	864.0	879.3	898.1	913.4	921.8	916.9	899.5	876.5	841.0	802.6	766.4
30°	868.8	892.5	912.7	923.2	924.6	908.5	878.6	844.4	802.6	756.7	719.7
32.5°	886.9	915.5	930.8	932.9	923.2	893.2	846.5	799.2	752.5	710.0	672.3
35°	923.9	948.3	953.8	945.5	921.1	870.9	804.0	748.3	706.5	666.1	627.1
37.5°	983.8	994.9	984.5	960.1	914.1	843.7	765.0	710.7	666.1	626.4	583.2
40°	1068.8	1056.3	1026.3	978.2	906.5	813.8	734.4	680.0	630.5	586.7	543.5
42.5°	1174.7	1130.8	1068.8	999.1	898.1	794.3	712.1	649.4	595.0	546.2	501.0
45°	1293.1	1211.6	1127.3	1022.8	895.3	782.4	685.6	611.7	548.3	499.6	455.0
47.5°	1413.7	1297.3	1186.5	1048.6	898.8	761.5	645.2	562.3	496.1	448.7	406.9
50°	1535.6	1393.5	1255.5	1082.0	896.7	719.0	590.1	505.8	444.5	402.0	364.4
52.5°	1658.2	1495.9	1326.6	1112.0	868.8	652.1	529.5	457.8	398.5	357.4	320.5
55°	1778.8	1595.5	1396.3	1121.0	788.0	581.8	478.7	409.7	351.2	309.4	268.9
57.5°	1893.0	1685.4	1445.0	1068.1	688.4	526.7	433.4	365.8	303.8	255.7	216.0
60°	2035.2	1771.1	1459.0	939.9	608.9	480.7	392.3	314.9	245.3	194.4	158.2
62.5°	2190.5	1887.5	1437.4	817.3	562.3	440.3	341.4	255.0	187.4	138.0	110.8
65°	2304.8	1935.5	1328.0	751.8	533.0	400.6	287.1	197.9	129.6	94.8	84.3
67.5°	2456.7	1982.9	1215.1	719.7	501.0	349.1	221.6	142.8	100.3	78.7	72.5
68°	2446.2	1969.7	1191.4	711.4	491.2	330.9	209.0	140.0	97.5	76.6	70.4
70°	2304.8	1807.3	1034.7	630.5	406.9	257.8	179.8	127.5	89.9	69.7	64.1
72.5°	1890.9	1401.8	742.0	415.3	264.8	188.8	133.1	96.1	74.6	61.3	57.1
75°	1338.4	876.5	372.1	239.0	166.5	109.4	75.2	62.0	55.0	48.8	48.8
77.5°	752.5	458.5	196.5	163.7	94.1	63.4	50.2	46.7	43.2	39.7	43.9
80°	245.3	239.0	144.9	112.2	65.5	46.7	39.0	36.9	34.8	31.4	39.0
82.5°	132.4	163.7	104.5	80.1	48.1	33.4	29.3	30.0	27.2	24.4	29.3
85°	59.2	78.0	69.7	55.7	30.0	18.8	15.3	18.1	16.0	14.6	13.9
87.5°	23.0	38.3	27.9	16.0	7.0	4.2	4.2	3.5	2.8	2.8	2.1
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: ENT-F02-LED-E1-GZW-8030

CANDELA DISTRIBUTION (continued):

	160°	165°	170°	175°	180°
0°	762.9	762.9	762.9	762.9	762.9
2.5°	762.9	762.9	762.2	761.5	760.1
5°	772.7	772.7	772.0	771.3	769.9
7.5°	783.1	782.4	781.7	781.0	779.6
10°	794.3	792.9	792.9	793.6	792.9
12.5°	805.4	803.3	801.2	800.5	802.6
15°	816.6	812.4	808.9	808.2	808.2
17.5°	822.8	815.9	809.6	807.5	807.5
20°	821.5	808.9	800.5	796.4	797.1
22.5°	808.2	790.8	779.6	774.1	772.0
25°	780.3	759.4	745.5	737.8	738.5
27.5°	738.5	716.2	700.9	696.7	692.6
30°	689.1	666.8	651.4	642.4	643.1
32.5°	640.3	615.9	602.0	591.5	590.1
35°	593.6	567.1	550.4	542.8	541.4
37.5°	547.6	519.8	504.4	497.5	492.6
40°	505.1	480.1	461.9	451.5	449.4
42.5°	463.3	434.8	416.6	409.0	406.9
45°	416.0	388.8	372.8	366.5	365.1
47.5°	373.5	347.7	334.4	326.1	323.3
50°	332.3	308.0	292.6	285.0	283.6
52.5°	289.1	264.8	248.7	242.5	236.9
55°	241.8	216.0	200.0	188.8	184.6
57.5°	186.7	163.7	147.0	139.3	131.7
60°	133.8	113.6	100.3	94.1	88.5
62.5°	94.8	81.5	73.2	66.9	63.4
65°	78.0	71.8	62.7	57.1	54.3
67.5°	69.0	62.7	55.7	50.9	48.8
68°	67.6	61.3	54.3	49.5	48.1
70°	62.0	55.7	49.5	46.0	44.6
72.5°	55.0	50.2	44.6	41.1	39.7
75°	47.4	42.5	39.0	36.2	34.1
77.5°	41.8	34.8	33.4	30.7	29.3
80°	34.8	31.4	28.6	26.5	25.1
82.5°	28.6	23.7	20.2	18.1	17.4
85°	16.0	14.6	11.8	9.1	8.4
87.5°	1.4	0.7	0.7	0.0	0.0
90°	0.0	0.0	0.0	0.0	0.0

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