

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: P139874

Luminaire Tested: **ENT-F02-LED-E1-GZW-7030**

Issue Date: 03/03/2020

Test Information

Test Method: LM-79-08
Report Number: P139874
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-7030
Description: ENTRI LED LUMINAIRE
(2) LIGHTBARS WITH AccuLED OPTICS - WALL GRAZER WIDE
Light Source: (14) 3000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4199.5 lumens
Efficiency: N/A
Efficacy: 85.2 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

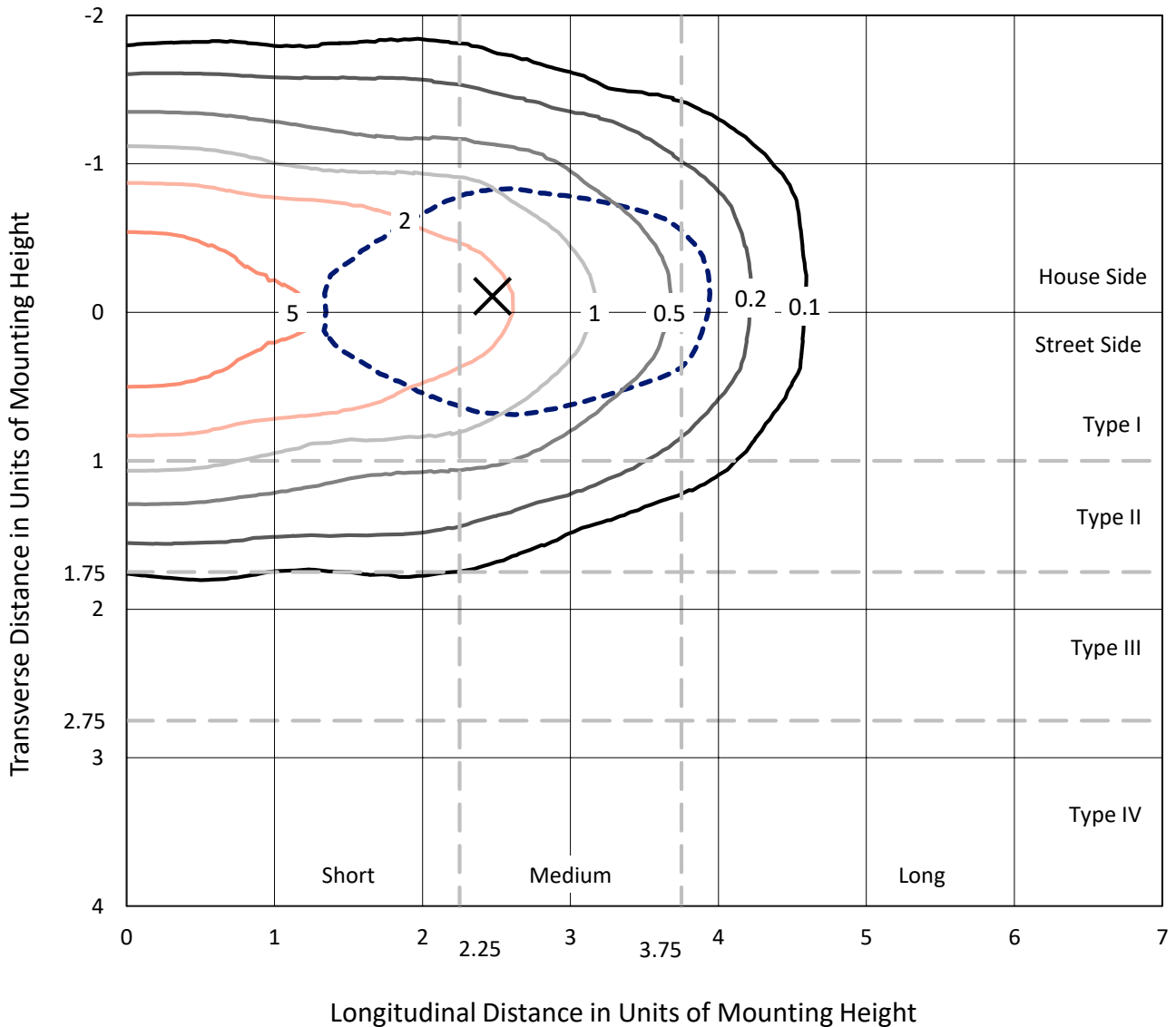


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Iso-Footcandle Lines of Horizontal Illumination

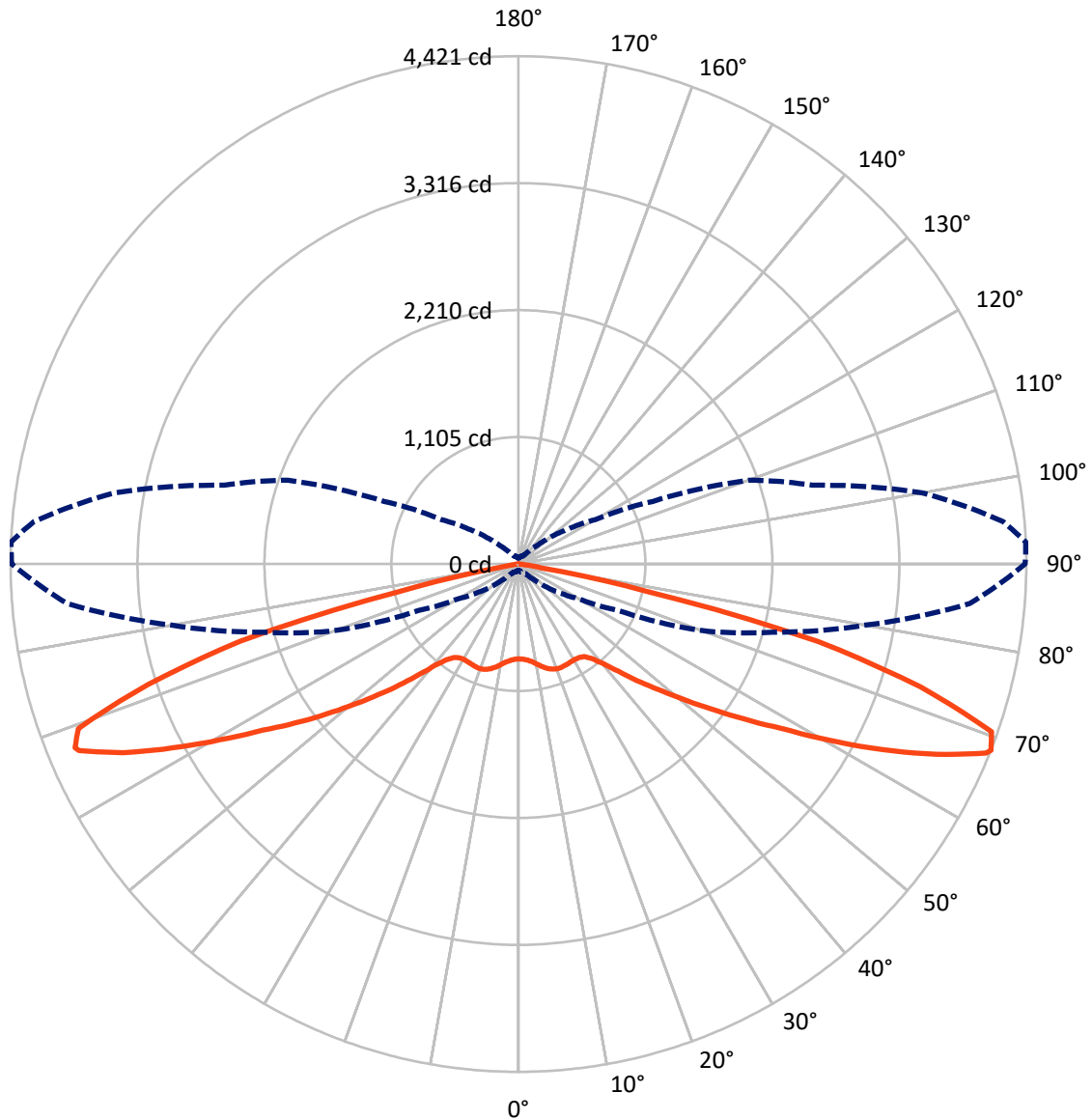
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 8.5 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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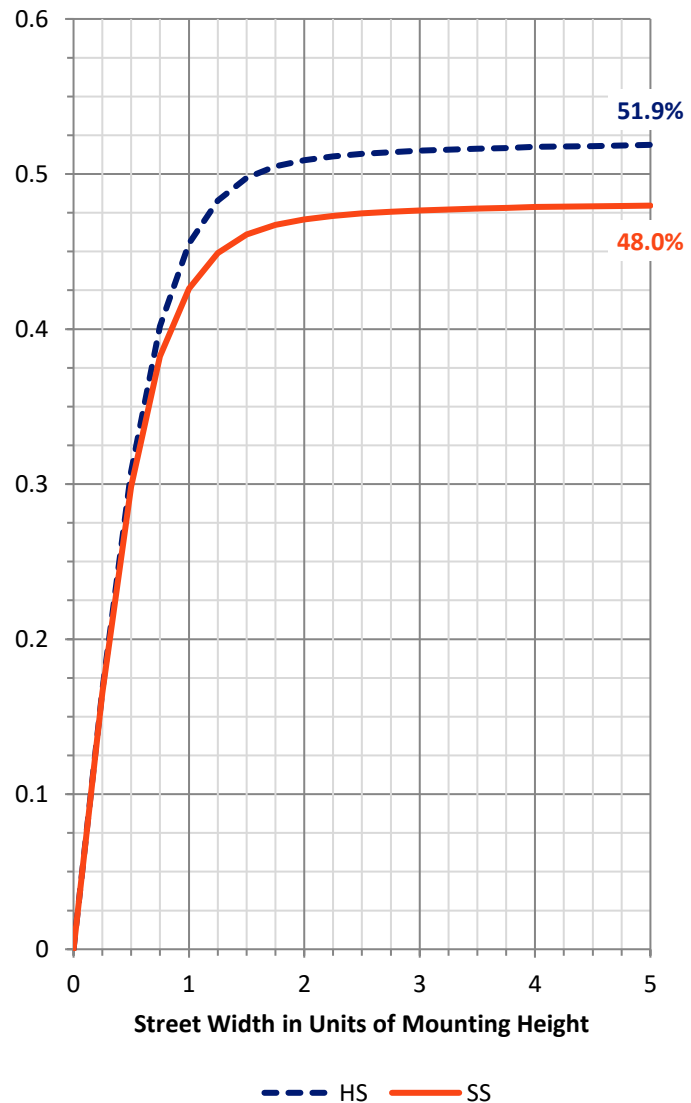
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2193.8	0.0	2193.8
	% Fixture	52.2	0.0	52.2
Street Side	Lumens	2005.7	0.0	2005.7
	% Fixture	47.8	0.0	47.8
Total	Lumens	4199.5	0.0	4199.5
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	81.1	1.9
10°-20°	256.8	6.1
20°-30°	416.4	9.9
30°-40°	517.7	12.3
40°-50°	643.6	15.3
50°-60°	791.7	18.9
60°-70°	936.1	22.3
70°-80°	524.2	12.5
80°-90°	31.8	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°	4199.5	100.0
0°-180°	4199.5	100.0



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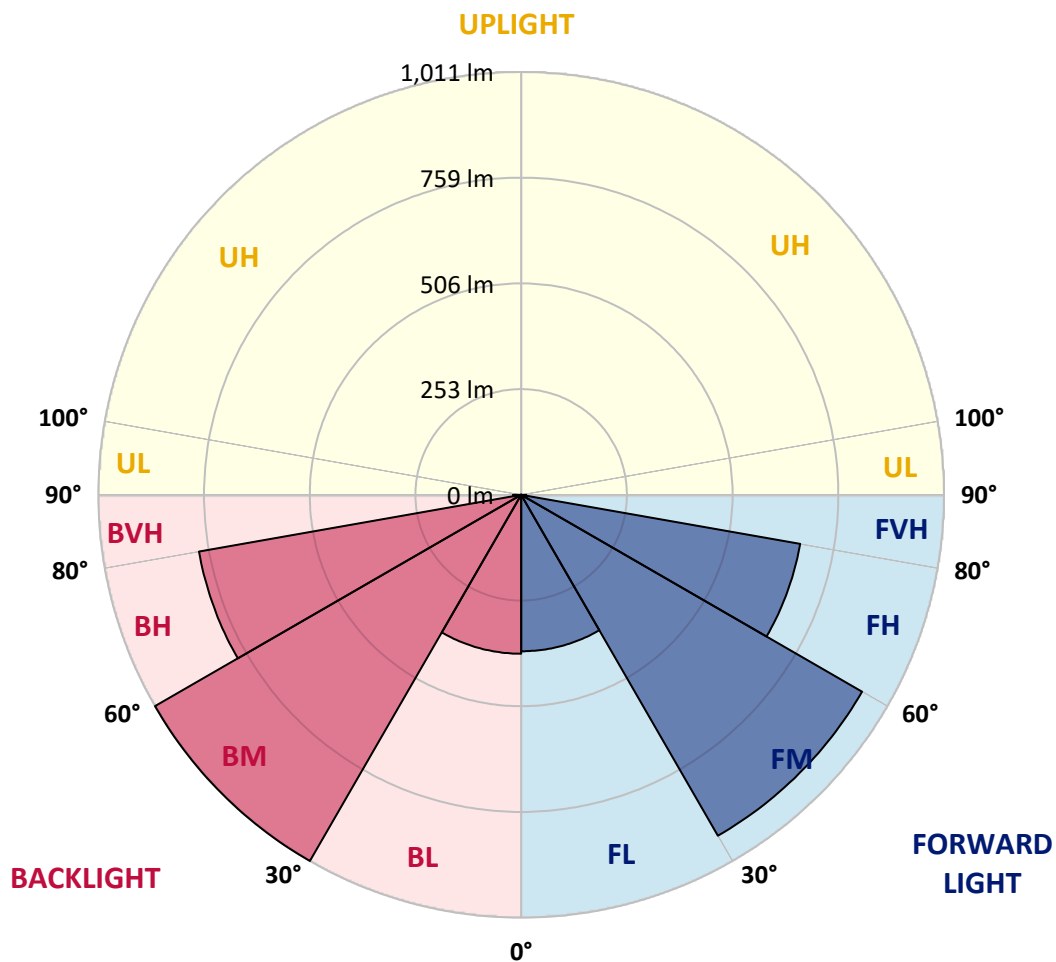
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	374.2	8.9			
FM (30°-60°)	941.6	22.4			
FH (60°-80°)	677.7	16.1			G1/1800
FVH (80°-90°)	12.1	0.3			G1/100
BL (0°-30°)	380.1	9.1	B1/500		
BM (30°-60°)	1011.4	24.1	B2/2500		
BH (60°-80°)	782.5	18.6	B2/1000		G2/1000
BVH (80°-90°)	19.7	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°	825.6	825.6	825.6	825.6	825.6	825.6	825.6	825.6	825.6	825.6	825.6
2.5°	829.4	829.4	829.4	830.1	830.9	832.4	831.7	833.2	830.9	833.9	833.9
5°	839.2	839.9	840.7	840.7	842.2	843.0	842.2	844.5	842.2	845.2	846.0
7.5°	848.2	848.2	849.0	849.8	851.3	852.8	853.5	855.8	855.0	858.0	861.1
10°	855.0	854.3	855.0	856.5	860.3	862.6	865.6	868.6	870.1	873.1	877.6
12.5°	858.0	857.3	859.6	863.3	867.1	871.6	876.1	882.9	887.5	892.0	898.8
15°	856.5	856.5	859.6	864.1	871.6	879.9	888.2	897.3	905.5	915.3	922.1
17.5°	842.2	843.7	848.2	855.8	867.1	879.9	893.5	908.6	922.1	935.7	944.8
20°	816.6	818.1	826.4	835.4	850.5	869.4	890.5	912.3	933.4	951.5	964.4
22.5°	784.9	783.4	790.9	803.0	823.4	846.0	873.1	905.5	934.2	959.8	977.9
25°	735.9	735.9	744.2	759.3	781.1	809.0	842.2	883.7	922.1	955.3	980.9
27.5°	683.9	684.6	695.2	708.0	732.9	759.3	797.7	846.0	892.7	936.5	974.2
30°	631.8	634.1	643.2	656.0	682.4	710.3	749.5	797.0	847.5	901.8	953.0
32.5°	578.3	581.3	588.9	603.9	632.6	663.5	703.5	745.7	794.0	853.5	919.9
35°	527.8	530.1	536.1	554.2	583.6	616.8	661.3	702.0	751.0	806.0	879.2
37.5°	480.3	482.6	489.3	508.2	537.6	570.8	614.5	660.5	711.0	765.3	837.7
40°	429.0	434.3	443.3	461.4	488.6	526.3	570.8	619.0	672.6	734.4	808.3
42.5°	382.3	386.8	395.1	410.9	438.1	478.0	524.8	574.5	632.6	702.7	786.4
45°	339.3	343.1	351.4	365.7	394.3	426.0	468.2	520.3	580.6	661.3	763.0
47.5°	297.8	301.6	310.6	328.0	351.4	382.3	420.0	466.0	521.8	603.9	718.6
50°	256.4	260.1	269.2	286.5	309.1	339.3	374.0	415.5	470.5	541.4	653.7
52.5°	211.1	214.9	223.9	241.3	263.1	291.8	327.2	370.2	421.5	488.6	581.3
55°	162.1	167.4	175.7	190.0	213.4	242.0	277.5	324.2	376.2	441.8	527.8
57.5°	116.9	120.6	130.4	141.8	161.4	191.5	223.2	271.4	329.5	396.6	481.8
60°	85.2	89.0	95.8	104.8	118.4	140.2	168.1	213.4	277.5	352.9	440.3
62.5°	70.9	73.9	80.7	89.7	97.3	107.8	124.4	159.1	221.7	305.4	397.4
65°	62.6	64.8	70.9	79.9	86.0	90.5	97.3	120.6	171.9	254.1	355.1
67.5°	55.8	58.1	62.6	70.1	76.9	79.2	82.9	98.8	135.0	206.6	310.6
68°	55.0	57.3	61.1	67.9	74.6	76.9	80.7	96.5	131.2	196.8	298.6
70°	51.3	52.8	56.5	61.8	67.1	68.6	73.1	89.0	122.9	171.9	242.0
72.5°	46.7	47.5	49.8	54.3	59.6	60.3	64.8	77.7	96.5	126.7	180.2
75°	39.2	40.0	43.0	46.7	49.8	51.3	52.8	58.8	65.6	78.4	106.3
77.5°	30.2	31.7	33.9	36.2	40.7	42.2	40.7	45.2	48.3	53.5	64.8
80°	18.1	18.1	20.4	22.6	24.9	28.7	27.1	31.7	33.9	36.9	43.7
82.5°	3.0	3.8	3.8	5.3	6.8	8.3	9.0	11.3	14.3	17.3	23.4
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.8	2.3
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°	825.6	825.6	825.6	825.6	825.6	825.6	825.6	825.6	825.6	825.6	825.6
2.5°	829.4	831.7	831.7	830.9	830.9	830.9	828.6	829.4	830.1	832.4	829.4
5°	841.5	843.7	843.0	842.2	842.2	842.2	839.2	839.9	840.7	842.2	839.2
7.5°	857.3	859.6	860.3	860.3	860.3	861.8	857.3	857.3	858.8	860.3	855.8
10°	880.7	880.7	882.9	884.4	885.9	887.5	884.4	882.9	885.9	885.9	880.7
12.5°	902.5	904.0	907.8	910.8	911.6	914.6	914.6	913.8	916.1	915.3	909.3
15°	927.4	928.9	931.9	935.7	936.5	939.5	939.5	940.2	942.5	944.0	935.0
17.5°	950.8	953.0	953.0	953.8	955.3	957.6	959.1	959.8	962.1	963.6	954.6
20°	970.4	972.7	968.9	965.9	962.8	964.4	967.4	970.4	971.9	972.7	961.3
22.5°	985.5	986.2	980.2	971.9	963.6	962.8	966.6	971.9	973.4	972.7	956.8
25°	993.8	996.0	990.0	977.2	962.1	956.8	960.6	967.4	970.4	967.4	948.5
27.5°	993.8	1002.1	999.0	985.5	965.1	950.8	953.0	963.6	965.9	962.1	940.2
30°	986.2	1003.6	1007.3	999.0	977.9	953.0	950.0	962.1	965.1	958.3	936.5
32.5°	971.1	1002.8	1017.9	1018.6	1002.1	971.1	956.1	968.1	970.4	962.1	944.0
35°	950.0	1002.1	1031.5	1045.8	1040.5	1009.6	983.2	990.7	989.2	980.2	973.4
37.5°	926.7	1002.1	1051.1	1084.2	1096.3	1080.5	1045.8	1042.0	1045.8	1032.2	1028.4
40°	901.0	1004.3	1079.0	1137.8	1174.0	1179.2	1148.3	1137.8	1142.3	1129.5	1134.8
42.5°	885.9	1007.3	1115.9	1200.4	1270.5	1324.0	1310.4	1278.8	1276.5	1278.0	1289.3
45°	878.4	1014.9	1152.9	1271.2	1369.3	1488.4	1501.2	1444.7	1447.7	1456.0	1473.3
47.5°	870.1	1029.2	1195.8	1345.1	1477.1	1644.5	1707.0	1630.9	1624.9	1655.8	1661.0
50°	839.9	1046.5	1244.8	1428.1	1590.2	1820.1	1918.9	1841.3	1842.8	1871.4	1860.9
52.5°	770.6	1047.3	1296.9	1511.0	1703.3	1993.6	2143.6	2092.3	2088.6	2116.5	2060.7
55°	674.8	999.8	1339.1	1592.4	1810.3	2154.9	2375.8	2387.1	2379.6	2384.1	2263.5
57.5°	597.9	882.9	1343.6	1661.0	1900.8	2308.0	2614.1	2695.5	2696.3	2676.7	2462.5
60°	548.2	751.7	1284.8	1717.6	2006.4	2503.3	2924.7	3107.2	3117.8	3037.8	2728.7
62.5°	506.7	685.4	1163.4	1775.7	2127.8	2700.8	3259.5	3559.6	3560.4	3426.9	3022.0
65°	474.3	649.2	1030.0	1753.8	2221.3	2892.3	3613.9	4015.0	3995.4	3848.4	3300.2
67.5°	438.1	616.8	968.1	1719.9	2301.2	3069.5	3926.0	4386.7	4392.0	4211.1	3558.1
68°	430.5	604.7	952.3	1691.2	2292.1	3063.5	3942.6	4411.6	4420.7	4234.4	3569.4
70°	371.0	527.8	828.6	1477.1	2129.3	2899.9	3837.1	4341.5	4369.4	4161.3	3443.5
72.5°	247.3	364.9	553.4	1043.5	1640.7	2304.2	3141.1	3636.5	3659.9	3519.6	2859.9
75°	156.8	221.7	294.1	601.7	1102.3	1653.5	2368.3	2657.1	2695.5	2649.5	2141.3
77.5°	95.0	155.3	181.0	291.8	580.6	773.6	1069.9	1088.8	1132.5	1105.4	1109.9
80°	62.6	107.8	131.9	198.3	201.3	166.6	189.3	190.8	202.1	214.9	223.9
82.5°	35.4	65.6	92.0	135.7	119.9	61.8	52.8	55.0	56.5	58.1	68.6
85°	5.3	12.1	25.6	42.2	43.0	20.4	18.8	17.3	18.1	19.6	24.9
87.5°	0.0	0.0	0.0	0.0	0.8	1.5	2.3	2.3	2.3	4.5	4.5
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°	825.6	825.6	825.6	825.6	825.6	825.6	825.6	825.6	825.6	825.6	825.6
2.5°	828.6	827.9	828.6	826.4	828.6	827.9	827.9	827.9	827.1	827.9	827.9
5°	837.7	837.7	837.7	836.2	837.7	837.7	837.7	837.7	836.9	837.7	838.4
7.5°	855.0	855.0	854.3	852.0	853.5	853.5	852.8	851.3	849.8	850.5	849.8
10°	878.4	879.9	875.4	875.4	873.1	870.1	867.8	865.6	864.8	863.3	860.3
12.5°	907.1	906.3	900.3	898.0	896.5	890.5	885.9	883.7	880.7	876.9	872.4
15°	932.7	929.7	925.1	922.9	920.6	913.8	907.8	902.5	898.8	893.5	886.7
17.5°	950.0	947.0	944.8	944.0	944.0	938.0	932.7	925.9	917.6	907.8	896.5
20°	953.8	953.8	954.6	959.1	963.6	961.3	955.3	947.0	935.0	919.1	901.8
22.5°	948.5	951.5	958.3	969.6	979.4	980.2	974.2	962.1	941.7	919.1	893.5
25°	939.5	947.8	962.1	977.9	991.5	991.5	980.9	963.6	935.7	903.3	869.4
27.5°	935.0	951.5	971.9	988.5	997.5	992.3	973.4	948.5	910.1	868.6	829.4
30°	940.2	965.9	987.7	999.0	1000.5	983.2	950.8	913.8	868.6	818.8	778.9
32.5°	959.8	990.7	1007.3	1009.6	999.0	966.6	916.1	864.8	814.3	768.3	727.6
35°	999.8	1026.2	1032.2	1023.2	996.8	942.5	870.1	809.8	764.5	720.8	678.6
37.5°	1064.6	1076.7	1065.4	1039.0	989.2	913.1	827.9	769.1	720.8	677.8	631.1
40°	1156.6	1143.1	1110.6	1058.6	980.9	880.7	794.7	735.9	682.4	634.9	588.1
42.5°	1271.2	1223.7	1156.6	1081.2	971.9	859.6	770.6	702.7	643.9	591.1	542.1
45°	1399.4	1311.2	1220.0	1106.9	968.9	846.7	741.9	662.0	593.4	540.6	492.4
47.5°	1529.9	1403.9	1284.1	1134.8	972.7	824.1	698.2	608.5	536.8	485.6	440.3
50°	1661.8	1508.0	1358.7	1171.0	970.4	778.1	638.6	547.4	481.0	435.1	394.3
52.5°	1794.5	1618.8	1435.6	1203.4	940.2	705.7	573.0	495.4	431.3	386.8	346.8
55°	1924.9	1726.6	1511.0	1213.2	852.8	629.6	518.0	443.3	380.0	334.8	291.0
57.5°	2048.6	1823.9	1563.8	1155.9	744.9	570.0	469.0	395.8	328.7	276.7	233.7
60°	2202.4	1916.7	1578.9	1017.1	659.0	520.3	424.5	340.8	265.4	210.4	171.2
62.5°	2370.6	2042.6	1555.5	884.4	608.5	476.5	369.5	276.0	202.8	149.3	119.9
65°	2494.2	2094.6	1437.1	813.6	576.8	433.5	310.6	214.1	140.2	102.5	91.2
67.5°	2658.6	2145.9	1315.0	778.9	542.1	377.8	239.8	154.6	108.6	85.2	78.4
68°	2647.3	2131.5	1289.3	769.8	531.6	358.1	226.2	151.6	105.6	82.9	76.2
70°	2494.2	1955.9	1119.7	682.4	440.3	279.0	194.5	138.0	97.3	75.4	69.4
72.5°	2046.3	1517.0	803.0	449.4	286.5	204.3	144.0	104.1	80.7	66.4	61.8
75°	1448.4	948.5	402.6	258.6	180.2	118.4	81.4	67.1	59.6	52.8	52.8
77.5°	814.3	496.1	212.6	177.2	101.8	68.6	54.3	50.5	46.7	43.0	47.5
80°	265.4	258.6	156.8	121.4	70.9	50.5	42.2	40.0	37.7	33.9	42.2
82.5°	143.3	177.2	113.1	86.7	52.0	36.2	31.7	32.4	29.4	26.4	31.7
85°	64.1	84.4	75.4	60.3	32.4	20.4	16.6	19.6	17.3	15.8	15.1
87.5°	24.9	41.5	30.2	17.3	7.5	4.5	4.5	3.8	3.0	3.0	2.3
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: ENT-F02-LED-E1-GZW-7030

CANDELA DISTRIBUTION (continued):

	160°	165°	170°	175°	180°
0°	825.6	825.6	825.6	825.6	825.6
2.5°	825.6	825.6	824.9	824.1	822.6
5°	836.2	836.2	835.4	834.7	833.2
7.5°	847.5	846.7	846.0	845.2	843.7
10°	859.6	858.0	858.0	858.8	858.0
12.5°	871.6	869.4	867.1	866.3	868.6
15°	883.7	879.2	875.4	874.6	874.6
17.5°	890.5	882.9	876.1	873.9	873.9
20°	889.0	875.4	866.3	861.8	862.6
22.5°	874.6	855.8	843.7	837.7	835.4
25°	844.5	821.9	806.8	798.5	799.2
27.5°	799.2	775.1	758.5	754.0	749.5
30°	745.7	721.6	705.0	695.2	695.9
32.5°	692.9	666.5	651.5	640.1	638.6
35°	642.4	613.8	595.7	587.4	585.9
37.5°	592.6	562.5	545.9	538.4	533.1
40°	546.6	519.5	499.9	488.6	486.3
42.5°	501.4	470.5	450.9	442.6	440.3
45°	450.1	420.7	403.4	396.6	395.1
47.5°	404.1	376.2	361.9	352.9	349.9
50°	359.7	333.3	316.7	308.4	306.9
52.5°	312.9	286.5	269.2	262.4	256.4
55°	261.6	233.7	216.4	204.3	199.8
57.5°	202.1	177.2	159.1	150.8	142.5
60°	144.8	122.9	108.6	101.8	95.8
62.5°	102.5	88.2	79.2	72.4	68.6
65°	84.4	77.7	67.9	61.8	58.8
67.5°	74.6	67.9	60.3	55.0	52.8
68°	73.1	66.4	58.8	53.5	52.0
70°	67.1	60.3	53.5	49.8	48.3
72.5°	59.6	54.3	48.3	44.5	43.0
75°	51.3	46.0	42.2	39.2	36.9
77.5°	45.2	37.7	36.2	33.2	31.7
80°	37.7	33.9	30.9	28.7	27.1
82.5°	30.9	25.6	21.9	19.6	18.8
85°	17.3	15.8	12.8	9.8	9.0
87.5°	1.5	0.8	0.8	0.0	0.0
90°	0.0	0.0	0.0	0.0	0.0

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