

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: P139597

Luminaire Tested: **ENT-F02-LED-E1-BL3-7060**

Issue Date: 03/03/2020

Test Information

Test Method: LM-79-08
Report Number: P139597
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33645)
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-BL3-7060
Description: ENTRI LED LUMINAIRE
(2) LIGHTBARS WITH AccuLED OPTICS - TYPE 3 W/ SPILL LIGHT CONTROL
Light Source: (14) 5700K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4578.2 lumens
Efficiency: N/A
Efficacy: 92.9 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 0.33' x H: 0')
IES Classification: Type III - Short - Semi-Cutoff
BUG Rating: B1 - U0 - G1

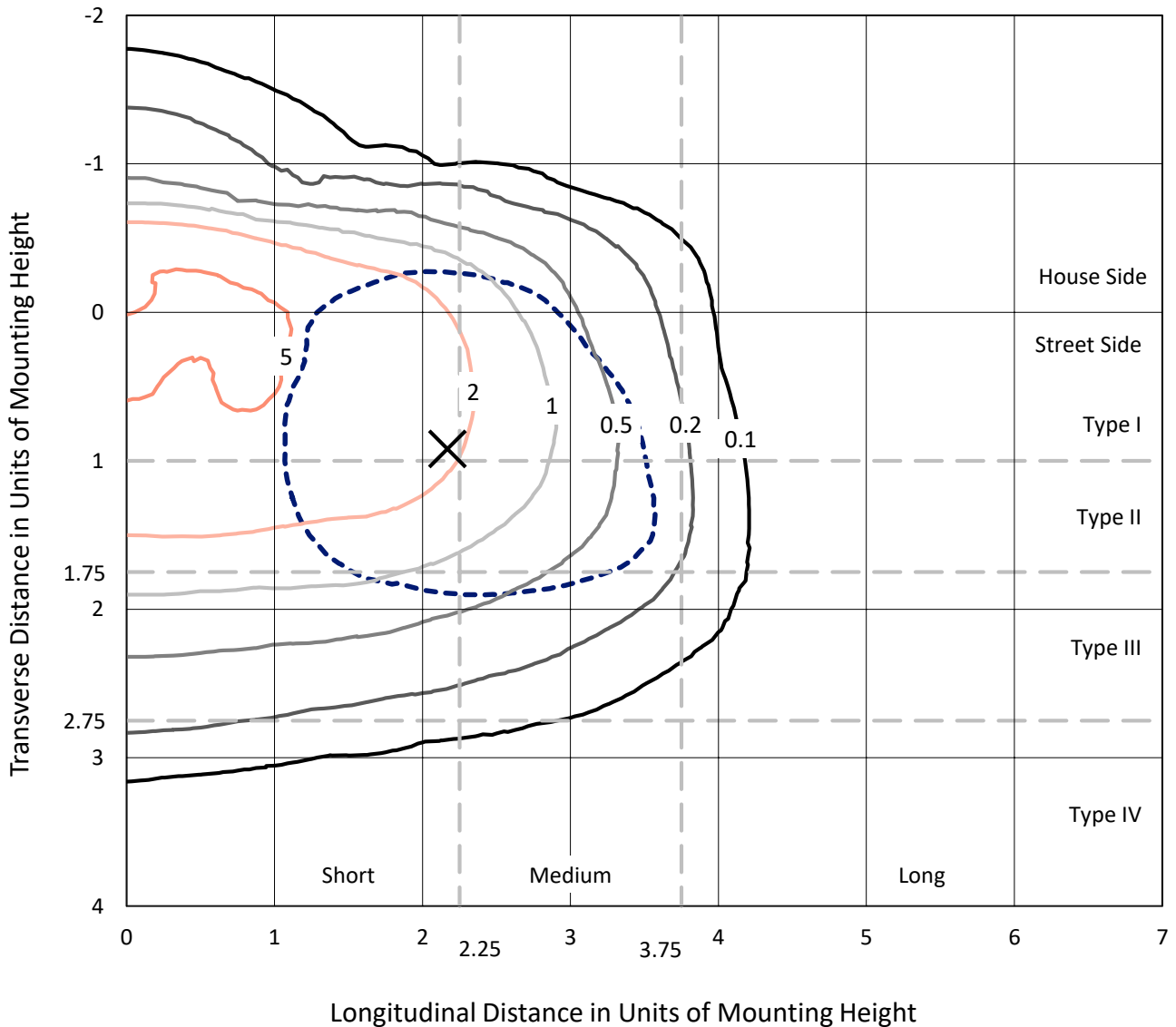
Input Watts (W): 49.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

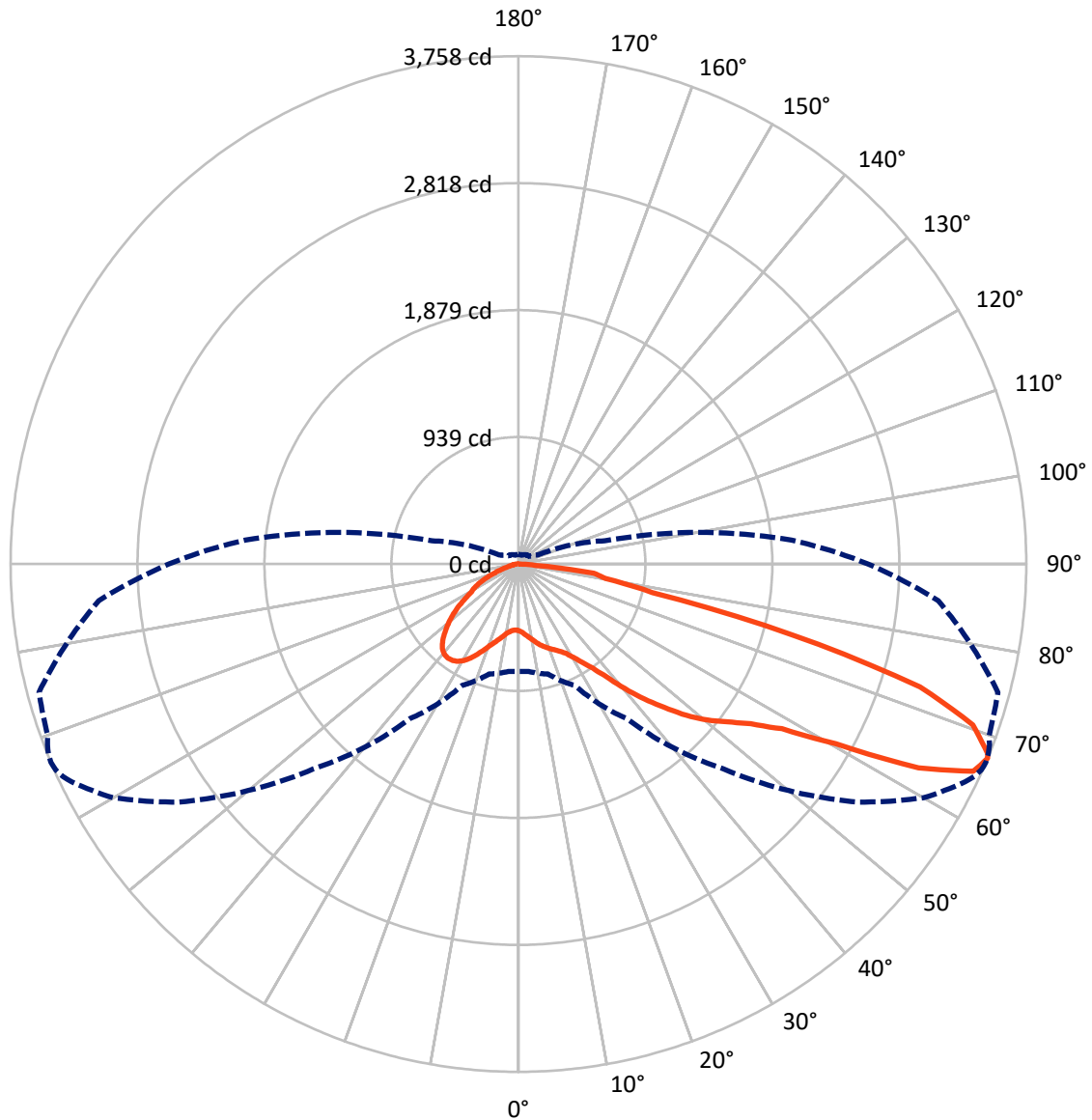
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 6.3 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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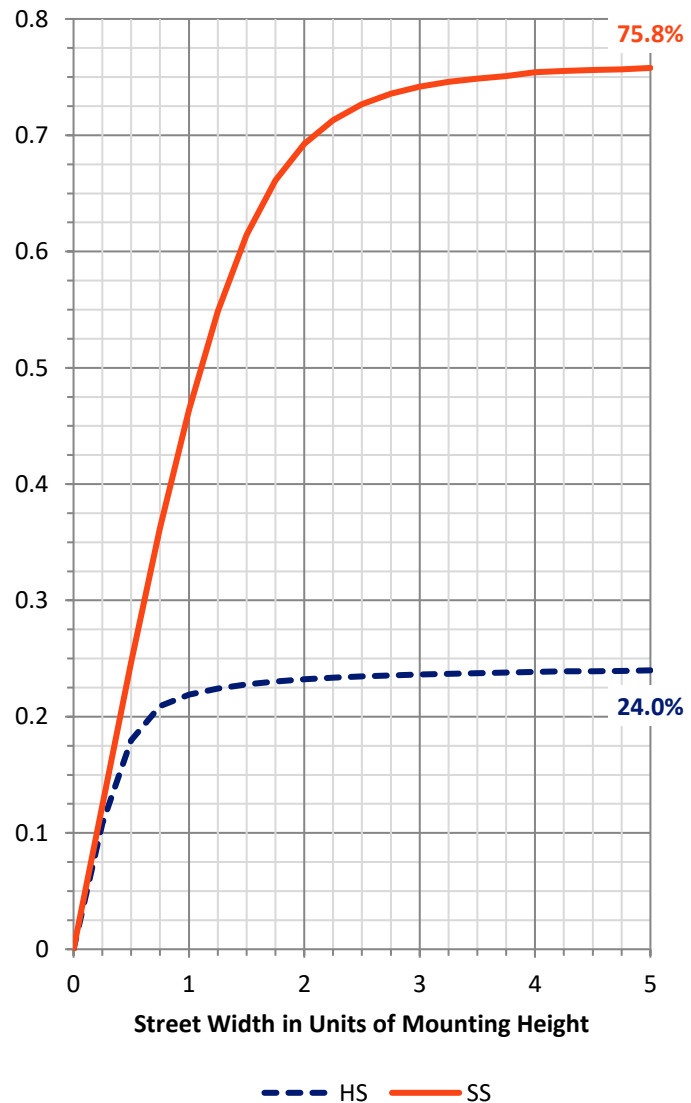
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1111.6	0.0	1111.6
	% Fixture	24.3	0.0	24.3
Street Side	Lumens	3466.6	0.0	3466.6
	% Fixture	75.7	0.0	75.7
Total	Lumens	4578.2	0.0	4578.2
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	49.7	1.1
10°-20°	171.9	3.8
20°-30°	311.6	6.8
30°-40°	455.4	9.9
40°-50°	690.0	15.1
50°-60°	989.5	21.6
60°-70°	1264.5	27.6
70°-80°	590.3	12.9
80°-90°	55.3	1.2
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°	4578.2	100.0
0°-180°	4578.2	100.0



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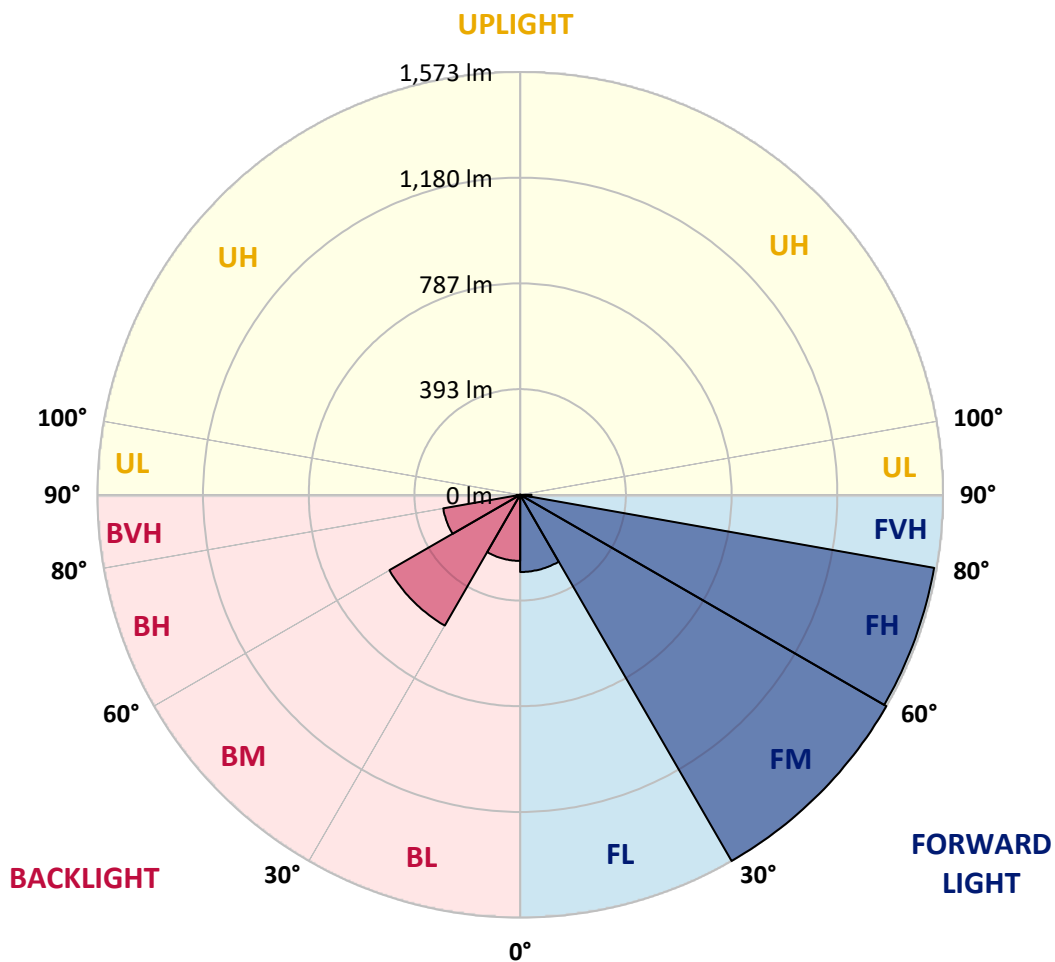
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	287.2	6.3			
FM	(30°-60°)	1573.4	34.4			
FH	(60°-80°)	1564.1	34.2			G1/1800
FVH	(80°-90°)	42.0	0.9			G1/100
BL	(0°-30°)	245.9	5.4	B1/500		
BM	(30°-60°)	561.5	12.3	B1/1000		
BH	(60°-80°)	290.8	6.4	B1/500		G1/500
BVH	(80°-90°)	13.3	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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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	60°	61°	62°	64°
0°	493.0	493.0	493.0	493.0	493.0	493.0	493.0	493.0	493.0	493.0	493.0
2.5°	512.5	512.5	513.3	513.3	512.5	512.5	507.4	507.4	507.4	506.6	506.6
5°	540.4	541.3	541.3	540.4	538.7	535.4	528.6	528.6	528.6	527.7	526.0
7.5°	572.6	571.8	572.6	570.1	566.7	562.5	553.1	552.3	550.6	550.6	548.9
10°	608.2	605.7	608.2	604.8	598.0	590.4	579.4	576.0	576.0	576.0	572.6
12.5°	644.6	643.8	645.5	639.5	627.7	619.2	608.2	604.0	603.1	603.1	601.4
15°	684.4	683.6	678.5	669.2	653.9	646.3	633.6	628.5	627.7	627.7	625.1
17.5°	725.9	725.9	713.2	693.8	672.6	661.6	652.2	648.9	648.0	648.0	647.2
20°	761.5	761.5	744.6	712.4	681.9	670.0	666.6	666.6	666.6	666.6	667.5
22.5°	787.8	785.2	762.4	722.6	685.3	675.1	683.6	684.4	684.4	686.1	687.0
25°	799.6	798.8	771.7	724.2	684.4	682.7	701.4	703.9	705.6	707.3	709.8
27.5°	800.5	800.5	773.4	723.4	683.6	696.3	723.4	731.0	732.7	736.1	740.3
30°	792.0	792.9	770.0	722.6	689.5	721.7	758.1	772.5	775.9	781.0	787.8
32.5°	781.9	783.5	770.0	731.0	715.8	765.8	814.0	834.4	837.8	844.5	851.3
35°	783.5	786.1	788.6	764.9	774.2	841.1	910.6	922.5	921.6	932.6	936.0
37.5°	794.6	800.5	819.1	823.4	858.9	952.1	1025.0	1050.4	1050.4	1060.5	1057.2
40°	796.3	805.6	852.2	901.3	971.6	1086.0	1185.9	1215.6	1215.6	1219.8	1218.1
42.5°	836.1	844.5	911.5	998.7	1098.7	1233.3	1343.5	1369.7	1375.7	1371.4	1374.8
45°	908.1	914.0	996.2	1106.3	1221.5	1374.8	1497.6	1523.0	1529.0	1524.7	1519.7
47.5°	999.5	1008.0	1095.3	1225.7	1344.3	1505.3	1655.2	1684.8	1690.8	1684.0	1686.5
50°	1075.8	1091.9	1185.1	1339.2	1462.9	1617.1	1777.2	1817.8	1822.9	1822.9	1824.6
52.5°	1145.2	1159.6	1249.4	1421.4	1558.6	1717.9	1867.8	1920.3	1926.2	1930.5	1933.9
55°	1174.0	1188.4	1278.2	1457.0	1617.1	1811.9	1972.8	2043.1	2046.5	2057.5	2071.9
57.5°	1174.9	1186.8	1274.8	1456.1	1647.6	1896.6	2116.0	2225.3	2238.8	2253.2	2277.8
60°	1095.3	1109.7	1197.8	1413.8	1673.0	1991.5	2332.8	2533.6	2553.1	2594.6	2648.8
62.5°	975.0	985.1	1061.4	1274.0	1673.0	2122.8	2681.8	3013.9	3079.1	3146.9	3246.8
65°	863.2	870.8	919.1	1102.9	1554.4	2229.5	3046.9	3429.0	3499.3	3550.1	3634.8
67°	793.7	797.1	842.8	992.8	1395.1	2143.9	3071.5	3457.8	3517.9	3570.4	3677.2
67.5°	770.0	772.5	815.7	964.8	1346.0	2092.3	3034.2	3434.0	3499.3	3552.6	3661.1
70°	592.1	584.5	621.8	759.0	1087.6	1669.6	2664.1	3124.9	3199.4	3270.6	3401.9
72.5°	353.2	342.2	365.9	440.5	704.8	1173.2	2020.3	2564.1	2659.0	2747.9	2919.9
75°	212.6	213.5	231.3	282.9	384.6	737.8	1305.3	1668.7	1757.7	1841.5	1977.1
77.5°	105.9	105.0	121.1	164.3	280.4	458.3	758.1	962.3	991.9	1031.7	1015.6
80°	33.9	33.0	35.6	44.9	100.8	307.5	476.9	604.0	617.5	625.1	634.5
82.5°	5.1	5.9	6.8	11.0	18.6	73.7	296.5	420.1	438.8	460.8	503.2
85°	0.0	0.0	0.8	0.8	2.5	5.9	28.0	72.0	75.4	91.5	107.6
87.5°	0.0	0.0	0.0	0.8	1.7	2.5	4.2	4.2	4.2	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):

	65°	66°	67°	68°	69°	70°	75°	85°	90°	95°	105°
0°	493.0	493.0	493.0	493.0	493.0	493.0	493.0	493.0	493.0	493.0	493.0
2.5°	505.7	505.7	504.9	504.0	504.0	504.0	502.3	501.5	496.4	494.7	491.3
5°	526.0	526.0	524.3	523.5	522.6	522.6	520.1	515.0	508.2	504.0	497.2
7.5°	548.1	547.2	545.5	545.5	542.1	542.1	538.7	529.4	522.6	516.7	508.2
10°	573.5	572.6	570.1	569.2	567.5	565.8	562.5	551.4	544.7	537.0	526.9
12.5°	601.4	599.7	598.0	597.2	595.5	593.8	590.4	580.2	573.5	565.8	554.0
15°	626.0	625.1	623.4	622.6	622.6	620.9	618.4	609.0	602.3	593.8	584.5
17.5°	648.0	647.2	646.3	646.3	645.5	645.5	644.6	636.2	631.9	625.1	615.8
20°	666.6	667.5	667.5	667.5	668.3	669.2	670.9	666.6	662.4	656.5	651.4
22.5°	687.0	687.8	690.4	690.4	692.1	692.9	698.8	698.0	696.3	692.1	687.8
25°	711.5	713.2	714.9	717.5	718.3	720.9	731.0	735.3	731.9	729.3	733.6
27.5°	743.7	747.1	748.8	752.2	753.9	757.3	772.5	781.9	779.3	780.2	789.5
30°	792.0	795.4	800.5	802.2	808.1	809.8	827.6	842.0	842.0	840.3	857.2
32.5°	856.4	858.9	864.9	869.1	872.5	875.9	892.8	908.1	909.8	914.8	921.6
35°	941.1	942.8	946.2	953.0	952.1	953.8	963.1	978.4	986.8	998.7	978.4
37.5°	1052.9	1058.8	1057.2	1058.0	1051.2	1055.5	1058.8	1074.9	1092.7	1104.6	1025.8
40°	1212.2	1216.4	1212.2	1206.2	1201.2	1198.6	1193.5	1211.3	1226.6	1218.1	1063.1
42.5°	1367.2	1368.9	1365.5	1355.3	1351.1	1342.6	1329.1	1351.1	1359.6	1319.7	1082.6
45°	1520.5	1518.0	1512.0	1510.3	1501.9	1493.4	1485.8	1500.2	1496.8	1418.9	1091.0
47.5°	1681.4	1678.9	1674.7	1667.9	1658.6	1656.9	1650.1	1648.4	1623.8	1503.6	1086.8
50°	1822.1	1823.8	1814.4	1817.8	1813.6	1805.1	1799.2	1802.6	1744.1	1578.1	1078.3
52.5°	1943.2	1943.2	1939.0	1943.2	1941.5	1937.3	1942.3	1997.4	1876.3	1683.1	1065.6
55°	2083.8	2088.9	2085.5	2089.7	2092.3	2101.6	2122.8	2251.5	2073.6	1811.9	1036.8
57.5°	2289.6	2302.4	2299.0	2315.9	2331.2	2355.7	2432.8	2568.3	2318.4	1953.4	980.1
60°	2659.0	2700.5	2698.8	2728.4	2758.9	2786.9	2921.6	2947.8	2595.4	2138.0	937.7
62.5°	3273.9	3307.8	3322.2	3354.4	3373.9	3379.0	3487.4	3295.1	2842.8	2305.7	914.0
65°	3672.1	3685.6	3698.3	3694.1	3682.2	3662.8	3669.5	3262.9	2760.6	2198.2	784.4
67°	3719.5	3747.5	3757.6	3750.9	3733.1	3706.0	3672.9	3117.2	2586.1	2030.4	663.3
67.5°	3706.0	3734.8	3744.1	3738.1	3722.9	3702.6	3663.6	3062.2	2526.8	1976.2	631.9
70°	3488.3	3529.8	3567.9	3580.6	3581.4	3578.0	3539.1	2673.4	2150.7	1659.4	479.4
72.5°	2974.1	3027.4	3107.1	3081.7	3122.3	3096.1	3007.1	1827.1	1473.9	1185.9	336.3
75°	2006.7	2030.4	2094.8	2021.1	2027.9	1981.3	1635.7	1061.4	914.0	771.7	202.5
77.5°	1009.7	1025.0	1014.8	970.7	953.8	915.7	708.2	230.4	230.4	274.5	105.9
80°	640.4	646.3	653.1	663.3	676.0	677.7	491.3	67.8	61.0	63.5	57.6
82.5°	525.2	541.3	562.5	566.7	571.8	576.0	338.8	37.3	30.5	33.9	40.7
85°	122.0	132.1	126.2	111.8	119.4	92.3	47.4	15.2	13.6	16.9	28.0
87.5°	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	3.4	5.9	14.4
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):

	115°	125°	135°	145°	155°	165°	175°	180°
0°	493.0	493.0	493.0	493.0	493.0	493.0	493.0	493.0
2.5°	487.9	485.4	482.0	481.1	480.3	478.6	477.8	476.9
5°	490.5	485.4	480.3	476.9	475.2	473.5	471.8	471.8
7.5°	500.6	494.7	487.1	483.7	480.3	477.8	476.1	476.1
10°	517.6	510.8	501.5	497.2	493.0	490.5	488.8	487.1
12.5°	543.0	534.5	523.5	516.7	512.5	511.6	509.9	509.1
15°	574.3	565.0	553.1	546.4	539.6	537.9	536.2	535.4
17.5°	605.7	598.0	588.7	576.9	563.3	552.3	547.2	546.4
20°	641.2	637.8	623.4	597.2	567.5	544.7	535.4	535.4
22.5°	686.1	676.8	642.1	595.5	551.4	519.3	506.6	506.6
25°	735.3	703.9	639.5	576.9	522.6	482.8	465.9	465.9
27.5°	778.5	711.5	624.3	545.5	479.4	436.2	416.8	415.9
30°	812.3	707.3	597.2	501.5	428.6	379.5	357.5	357.5
32.5°	831.0	692.9	559.9	449.8	366.8	310.9	283.8	284.6
35°	836.1	668.3	510.8	381.2	292.2	237.2	212.6	212.6
37.5°	831.0	629.4	449.8	305.8	218.5	179.6	160.9	159.3
40°	814.0	570.9	368.5	223.6	162.6	139.8	132.1	130.4
42.5°	780.2	500.6	277.0	160.1	130.4	121.1	119.4	118.6
45°	726.8	405.7	192.3	125.4	116.9	114.4	114.4	113.5
47.5°	659.9	310.0	137.2	111.0	110.1	110.1	110.1	110.1
50°	585.3	219.4	111.8	105.0	104.2	105.9	106.7	106.7
52.5°	508.2	153.3	102.5	100.8	99.1	101.6	102.5	102.5
55°	424.4	120.3	98.3	96.6	94.0	94.9	96.6	96.6
57.5°	338.0	106.7	96.6	94.0	88.9	88.9	90.6	90.6
60°	268.5	102.5	95.7	89.8	83.0	83.0	84.7	85.6
62.5°	224.5	101.6	95.7	85.6	80.5	77.9	79.6	79.6
65°	187.2	101.6	93.2	85.6	76.2	72.8	74.5	74.5
67°	156.7	100.0	91.5	85.6	74.5	70.3	70.3	70.3
67.5°	148.2	99.1	92.3	85.6	73.7	69.5	68.6	68.6
70°	111.0	89.8	92.3	86.4	72.0	63.5	61.8	61.8
72.5°	86.4	82.2	89.8	88.9	70.3	58.4	55.1	54.2
75°	70.3	74.5	90.6	86.4	66.1	53.4	48.3	47.4
77.5°	60.1	63.5	76.2	69.5	55.1	47.4	42.4	41.5
80°	47.4	54.2	54.2	47.4	40.7	38.1	35.6	35.6
82.5°	38.1	41.5	35.6	32.2	30.5	29.6	28.0	28.0
85°	31.3	33.9	26.3	23.7	22.9	22.0	20.3	20.3
87.5°	24.6	21.2	13.6	12.7	12.7	11.9	11.9	12.7
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)