

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: P139456

Luminaire Tested: **ENT-F02-LED-E1-BL2-7050**

Issue Date: 03/03/2020

Test Information

Test Method: LM-79-08
Report Number: P139456
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33644)
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-BL2-7050
Description: ENTRI LED LUMINAIRE
(2) LIGHTBARS WITH AccuLED OPTICS - TYPE 2
Light Source: (14) 5000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4638.7 lumens
Efficiency: N/A
Efficacy: 94.1 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 0.33' x H: 0')
IES Classification: Type II - Short - Semi-Cutoff
BUG Rating: B1 - U0 - G1

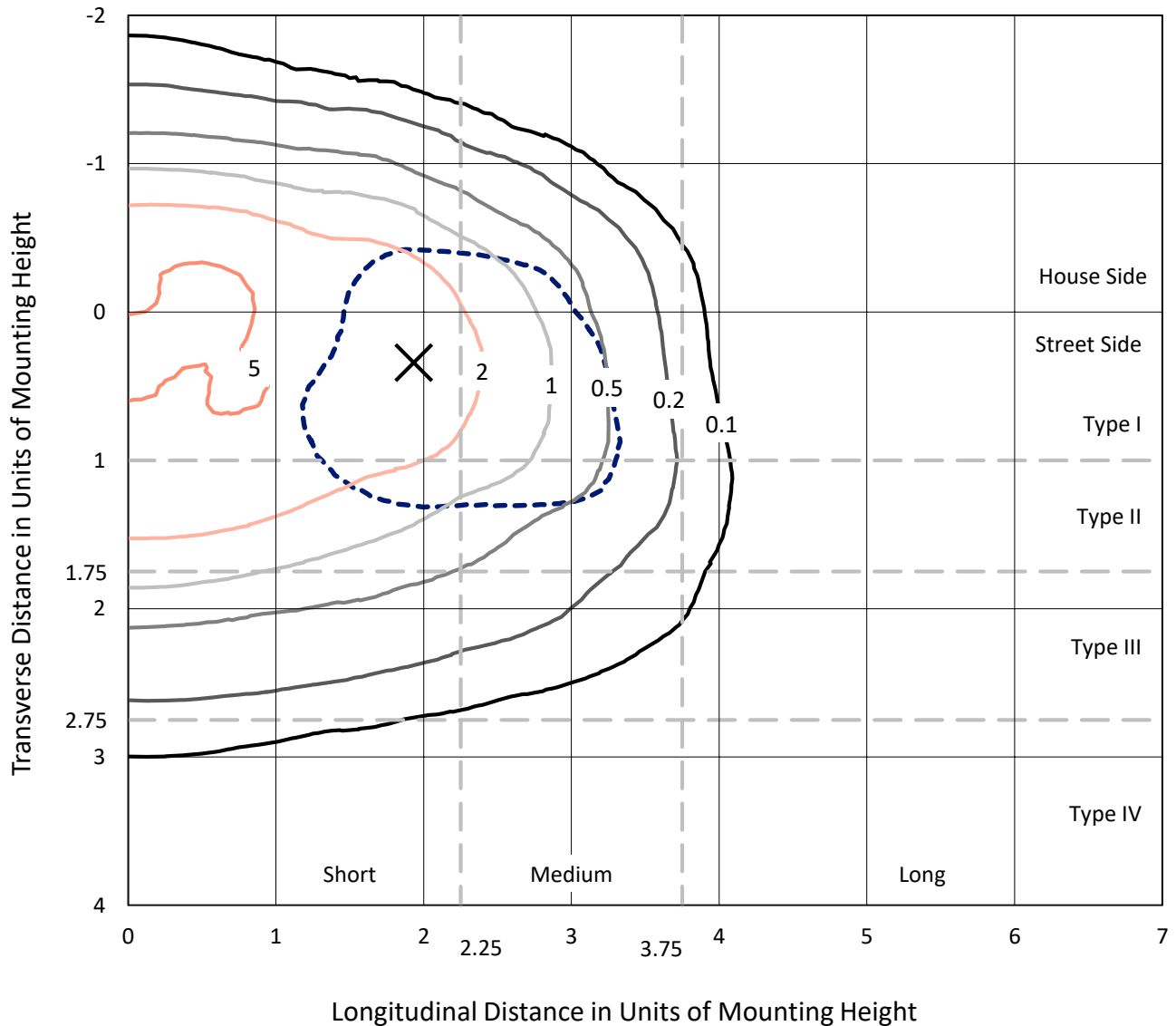
Input Watts (W): 49.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

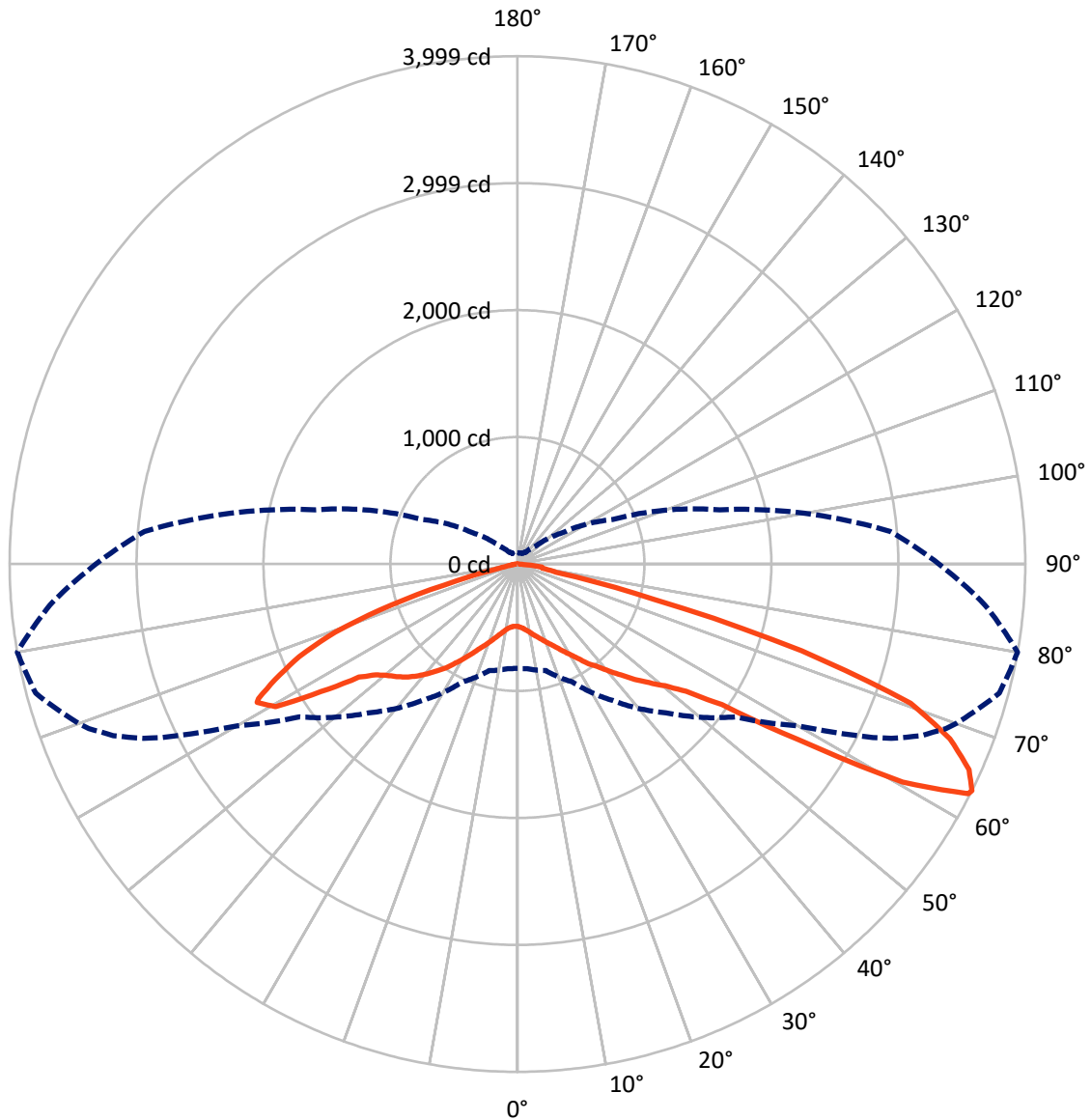
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 6 fc
 Type II - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 80-Deg Lateral - - - Horizontal Cone Through 63-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1444.7	0.0	1444.7
	% Fixture	31.1	0.0	31.1
Street Side	Lumens	3194.1	0.0	3194.1
	% Fixture	68.9	0.0	68.9
Total	Lumens	4638.7	0.0	4638.7
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	49.2	1.1
10°-20°	168.9	3.6
20°-30°	317.3	6.8
30°-40°	503.7	10.9
40°-50°	760.3	16.4
50°-60°	1068.6	23.0
60°-70°	1246.8	26.9
70°-80°	481.9	10.4
80°-90°	41.9	0.9
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°	4638.7	100.0
0°-180°	4638.7	100.0



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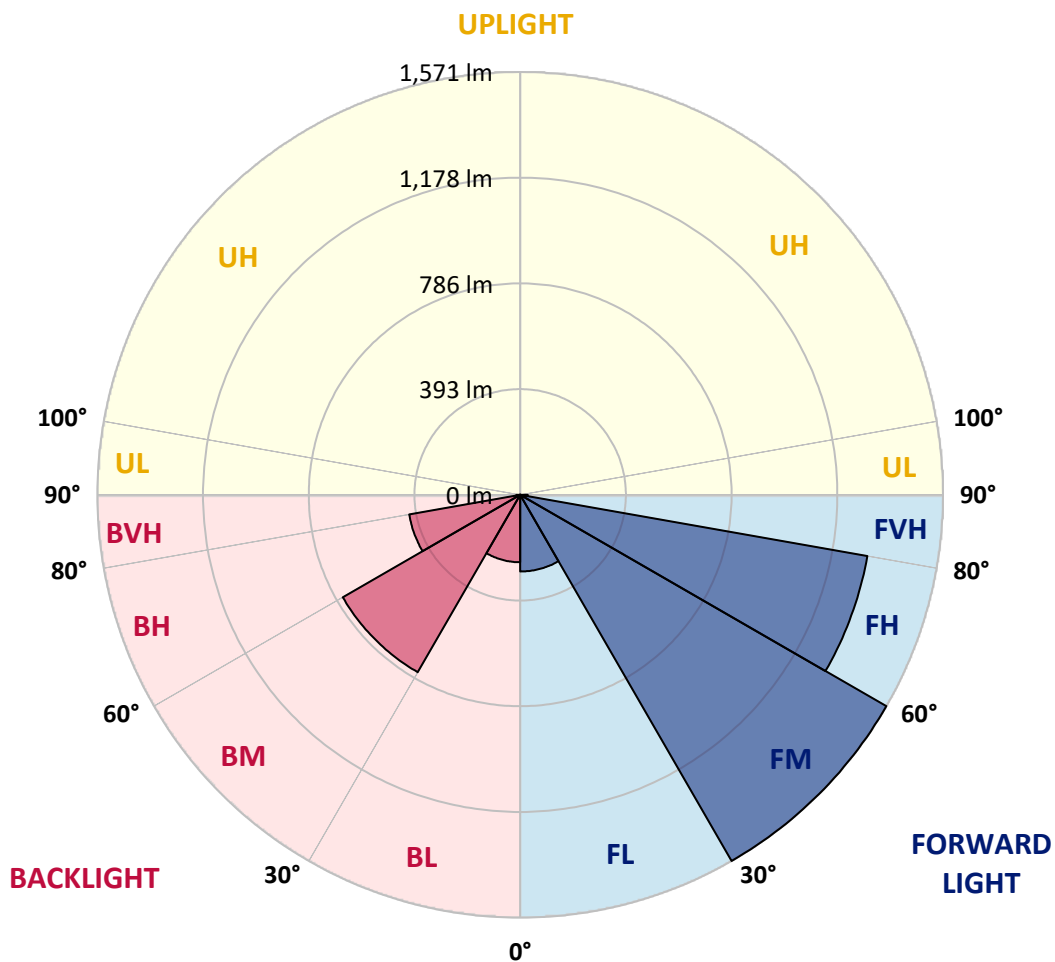
CATALOG NUMBER: ENT-F02-LED-E1-BL2-7050

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	284.9	6.1			
FM	(30°-60°)	1571.3	33.9			
FH	(60°-80°)	1310.0	28.2			G1/1800
FVH	(80°-90°)	27.9	0.6			G1/100
BL	(0°-30°)	250.6	5.4	B1/500		
BM	(30°-60°)	761.3	16.4	B1/1000		
BH	(60°-80°)	418.8	9.0	B1/500		G1/500
BVH	(80°-90°)	14.0	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 II Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	60°	61°	62°	64°
0°	491.3	491.3	491.3	491.3	491.3	491.3	491.3	491.3	491.3	491.3	491.3
2.5°	515.9	514.2	515.0	514.2	514.2	512.5	507.4	507.4	506.6	507.4	505.7
5°	543.8	543.0	542.1	540.4	540.4	537.0	528.6	526.9	527.7	526.0	522.6
7.5°	575.2	574.3	572.6	569.2	567.5	562.5	550.6	548.9	548.1	546.4	543.8
10°	606.5	605.7	603.1	598.9	594.6	587.0	575.2	570.9	570.1	569.2	566.7
12.5°	638.7	636.2	637.0	629.4	622.6	613.3	599.7	595.5	594.6	593.8	593.0
15°	674.3	673.4	671.7	661.6	648.9	636.2	622.6	617.5	614.1	615.0	614.1
17.5°	708.2	707.3	701.4	687.0	670.0	655.6	638.7	635.3	635.3	634.5	634.5
20°	732.7	731.9	725.9	708.2	686.1	670.0	656.5	656.5	655.6	656.5	657.3
22.5°	743.7	743.7	736.1	716.6	692.9	681.0	676.8	679.4	680.2	681.0	682.7
25°	748.0	748.0	740.3	717.5	695.4	697.1	702.2	706.5	708.2	708.2	714.1
27.5°	755.6	756.4	746.3	721.7	703.9	720.0	732.7	738.6	741.2	742.9	750.5
30°	778.5	777.6	769.1	742.9	729.3	752.2	775.1	781.0	786.9	786.9	795.4
32.5°	812.3	811.5	806.4	786.1	780.2	809.0	829.3	842.0	841.1	842.8	848.8
35°	857.2	858.1	861.5	856.4	861.5	890.3	913.1	918.2	919.1	919.9	920.8
37.5°	908.1	908.9	927.5	943.6	966.5	1008.9	1022.4	1025.0	1019.0	1019.0	1017.3
40°	946.2	950.4	991.9	1034.3	1082.6	1140.2	1160.5	1155.4	1151.2	1147.8	1137.6
42.5°	1024.1	1026.7	1070.7	1131.7	1199.5	1279.1	1314.7	1297.7	1296.9	1281.6	1274.0
45°	1102.0	1108.8	1156.3	1224.9	1306.2	1416.3	1468.8	1454.4	1451.9	1445.1	1423.9
47.5°	1163.9	1173.2	1225.7	1307.0	1400.2	1527.3	1621.3	1631.5	1625.5	1617.9	1601.0
50°	1216.4	1224.0	1277.4	1366.3	1473.1	1612.0	1746.7	1783.1	1788.2	1784.8	1780.6
52.5°	1250.3	1257.9	1310.4	1405.3	1515.4	1674.7	1839.8	1911.8	1927.1	1926.2	1944.0
55°	1251.1	1259.6	1313.8	1418.0	1539.1	1717.9	1926.2	2039.8	2058.4	2081.3	2119.4
57.5°	1204.5	1213.0	1280.8	1401.1	1545.9	1751.8	2010.1	2210.0	2260.8	2305.7	2410.8
60°	1074.9	1078.3	1152.9	1313.8	1513.7	1744.1	2073.6	2356.6	2428.6	2526.0	2695.4
62.5°	875.9	882.7	928.4	1085.1	1363.8	1677.2	2099.1	2520.0	2638.6	2780.9	3052.0
63°	820.8	826.7	869.1	1024.1	1313.0	1656.0	2098.2	2546.3	2676.8	2823.3	3115.5
65°	633.6	635.3	666.6	783.5	1077.5	1501.9	2052.5	2509.0	2674.2	2845.3	3152.0
67.5°	510.8	516.7	548.1	630.2	851.3	1261.3	1847.5	2173.6	2286.3	2454.8	2819.9
70°	399.8	410.0	439.6	532.8	725.9	1015.6	1554.4	1814.4	1883.9	1964.4	2274.4
72.5°	264.3	266.8	271.9	323.6	506.6	790.3	1293.5	1470.5	1497.6	1555.2	1706.9
75°	124.5	133.8	141.5	167.7	244.8	517.6	937.7	1044.4	1076.6	1136.8	1191.8
77.5°	54.2	53.4	56.8	77.1	128.8	230.4	583.6	771.7	782.7	769.1	745.4
80°	16.9	17.8	18.6	20.3	40.7	110.1	252.4	518.4	572.6	609.0	598.9
82.5°	1.7	0.8	2.5	5.1	8.5	16.1	94.9	243.1	305.8	375.3	464.2
85°	0.0	0.0	0.8	0.8	1.7	3.4	5.9	25.4	42.4	49.1	97.4
87.5°	0.0	0.0	0.8	0.8	1.7	2.5	2.5	3.4	3.4	3.4	3.4
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):

	65°	66°	67°	68°	69°	70°	75°	80°	85°	90°	95°
0°	491.3	491.3	491.3	491.3	491.3	491.3	491.3	491.3	491.3	491.3	491.3
2.5°	504.9	504.9	503.2	504.0	503.2	503.2	501.5	499.8	498.9	494.7	492.2
5°	522.6	522.6	521.8	520.1	520.1	519.3	515.0	510.8	508.2	503.2	498.1
7.5°	543.0	542.1	540.4	538.7	538.7	537.9	532.0	527.7	522.6	515.0	509.1
10°	566.7	565.8	564.2	561.6	561.6	560.8	554.8	548.1	543.8	534.5	526.9
12.5°	592.1	589.6	588.7	587.0	585.3	585.3	580.2	573.5	570.1	559.9	552.3
15°	613.3	611.6	610.7	609.9	609.0	607.4	603.1	597.2	594.6	586.2	580.2
17.5°	633.6	633.6	634.5	632.8	631.9	630.2	627.7	626.0	623.4	615.8	612.4
20°	657.3	657.3	659.0	658.2	657.3	659.9	659.0	658.2	658.2	651.4	648.9
22.5°	685.3	684.4	687.0	686.1	687.0	689.5	692.9	691.2	694.6	690.4	688.7
25°	717.5	716.6	719.2	720.9	722.6	724.2	731.0	732.7	737.0	736.1	732.7
27.5°	753.9	754.7	755.6	759.8	762.4	764.1	773.4	778.5	786.9	783.5	786.9
30°	796.3	800.5	803.9	808.1	809.0	810.7	825.9	831.0	835.2	837.8	842.8
32.5°	854.7	857.2	858.1	863.2	864.9	867.4	883.5	890.3	896.2	897.1	906.4
35°	925.9	927.5	930.1	932.6	936.0	934.3	953.0	963.1	970.7	971.6	981.8
37.5°	1019.9	1013.9	1016.5	1013.1	1008.0	1008.0	1013.9	1024.1	1032.6	1039.4	1049.5
40°	1132.5	1128.3	1127.5	1119.8	1111.4	1103.7	1100.4	1106.3	1113.1	1119.0	1131.7
42.5°	1261.3	1257.1	1242.7	1237.6	1223.2	1214.7	1191.8	1194.4	1206.2	1209.6	1217.2
45°	1412.1	1396.8	1391.7	1360.4	1354.5	1342.6	1299.4	1296.0	1306.2	1307.0	1302.0
47.5°	1584.0	1573.0	1561.2	1539.1	1516.3	1496.8	1430.7	1396.0	1407.0	1406.1	1381.6
50°	1771.2	1769.5	1751.8	1737.4	1717.0	1689.1	1571.3	1507.8	1516.3	1508.6	1463.7
52.5°	1950.0	1944.9	1944.0	1933.0	1925.4	1916.1	1772.9	1663.7	1644.2	1628.1	1570.5
55°	2138.0	2150.7	2142.3	2160.0	2173.6	2171.9	2112.6	1952.5	1853.4	1840.7	1752.6
57.5°	2451.4	2481.9	2522.6	2524.3	2560.7	2613.2	2720.0	2604.8	2356.6	2307.4	2189.7
60°	2810.6	2889.4	2991.0	3041.0	3118.9	3200.3	3467.9	3485.7	3138.4	2948.7	2732.7
62.5°	3171.5	3274.8	3395.1	3473.0	3569.6	3633.1	3916.0	3983.8	3667.0	3317.1	2961.4
63°	3247.7	3353.6	3457.8	3534.0	3615.3	3673.8	3927.9	3999.0	3695.8	3318.0	2947.0
65°	3287.5	3386.6	3467.9	3535.7	3589.9	3629.7	3830.5	3907.6	3657.7	3195.2	2785.2
67.5°	2985.1	3144.3	3246.8	3329.0	3384.1	3439.1	3623.8	3672.1	3495.0	2956.3	2539.5
70°	2470.9	2654.7	2816.5	2944.4	3039.3	3123.2	3317.1	3284.1	3131.6	2569.2	2154.1
72.5°	1817.8	1977.9	2135.5	2280.3	2404.0	2510.7	2638.6	2339.6	2107.5	1708.6	1490.9
75°	1222.3	1257.1	1329.1	1401.1	1446.0	1476.5	1397.7	1113.9	904.7	811.5	709.8
77.5°	721.7	698.0	700.5	682.7	670.9	668.3	560.8	311.7	164.3	167.7	176.2
80°	576.0	549.8	521.8	490.5	470.1	448.1	365.1	199.9	71.2	57.6	60.1
82.5°	465.9	459.1	443.9	411.7	379.5	341.4	260.9	192.3	40.7	32.2	34.7
85°	90.6	101.6	91.5	100.0	74.5	70.3	41.5	44.9	16.1	14.4	17.8
87.5°	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	6.8
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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CANDELA DISTRIBUTION (continued):

	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	491.3	491.3	491.3	491.3	491.3	491.3	491.3	491.3	491.3
2.5°	487.9	484.5	482.0	478.6	476.9	474.4	473.5	471.0	471.8
5°	489.6	483.7	478.6	473.5	470.1	468.4	466.7	465.0	465.0
7.5°	498.1	490.5	484.5	478.6	476.1	472.7	471.8	469.3	469.3
10°	515.9	507.4	499.8	493.0	489.6	485.4	483.7	481.1	481.1
12.5°	542.1	534.5	526.0	515.9	509.1	504.0	499.8	498.1	498.1
15°	571.8	565.8	559.1	545.5	534.5	525.2	516.7	513.3	512.5
17.5°	607.4	602.3	595.5	580.2	562.5	543.0	528.6	521.8	521.0
20°	650.6	645.5	635.3	614.1	586.2	555.7	532.8	522.6	521.8
22.5°	694.6	694.6	677.7	642.9	601.4	560.8	530.3	516.7	514.2
25°	742.9	745.4	720.0	665.8	609.9	558.2	519.3	502.3	498.9
27.5°	801.3	798.8	756.4	683.6	610.7	548.1	501.5	481.1	477.8
30°	865.7	848.8	786.1	693.8	604.8	529.4	477.8	454.9	452.3
32.5°	930.1	893.7	808.1	695.4	587.9	502.3	446.4	422.7	419.3
35°	998.7	933.5	821.7	686.1	559.9	465.9	407.4	384.6	381.2
37.5°	1056.3	964.0	825.9	661.6	517.6	423.5	371.9	348.1	342.2
40°	1108.8	986.0	818.3	621.8	470.1	382.0	334.6	314.3	312.6
42.5°	1157.1	996.2	791.2	570.1	422.7	346.5	303.3	283.8	282.1
45°	1194.4	989.4	745.4	513.3	383.7	316.0	275.3	257.5	254.1
47.5°	1218.1	964.8	682.7	465.9	351.5	284.6	244.8	226.2	222.8
50°	1236.7	928.4	619.2	429.5	320.2	252.4	213.5	196.5	194.0
52.5°	1261.3	881.8	564.2	396.4	283.8	216.0	181.3	165.2	162.6
55°	1315.5	842.0	525.2	360.0	244.8	177.9	149.1	138.9	135.5
57.5°	1499.3	855.5	500.6	316.0	199.9	143.2	123.7	117.7	116.9
60°	1692.5	913.1	488.8	265.1	155.0	116.0	105.0	103.3	102.5
62.5°	1682.3	861.5	439.6	208.4	119.4	95.7	90.6	91.5	91.5
63°	1648.4	830.1	423.5	195.7	113.5	93.2	88.1	88.1	88.1
65°	1443.4	703.9	343.9	148.2	94.9	83.0	78.8	79.6	80.5
67.5°	1191.8	508.2	226.2	103.3	85.6	75.4	70.3	68.6	68.6
70°	911.5	342.2	133.8	89.8	84.7	70.3	61.8	60.1	60.1
72.5°	598.0	209.2	90.6	89.8	83.9	66.9	57.6	54.2	54.2
75°	274.5	103.3	75.4	86.4	79.6	61.8	50.8	46.6	45.7
77.5°	106.7	65.2	67.8	72.8	61.8	50.8	45.7	42.4	41.5
80°	61.8	52.5	59.3	52.5	44.9	39.0	39.0	36.4	35.6
82.5°	44.9	44.9	45.7	38.1	33.9	32.2	32.2	29.6	28.8
85°	32.2	33.0	38.1	30.5	26.3	22.9	21.2	21.2	20.3
87.5°	16.1	26.3	21.2	12.7	11.9	11.0	11.0	11.0	10.2
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)