

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: P141716

Luminaire Tested: **ECM-F02-LED-E1-T2-7050**

Issue Date: 03/03/2020

Test Information

Test Method: LM-79-08
Report Number: P141716
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33682)
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-T2-7050
Description: EPIC CLASSICAL MEDIUM DECORATIVE 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: 4994.5 lumens
Efficiency: N/A
Efficacy: 90.8 lumens/watt
Luminous Opening: Rectangular (W 0.33' x L: 1' x H: 0')
IES Classification: Type II - Short - Semi-Cutoff
BUG Rating: B2 - U0 - G2

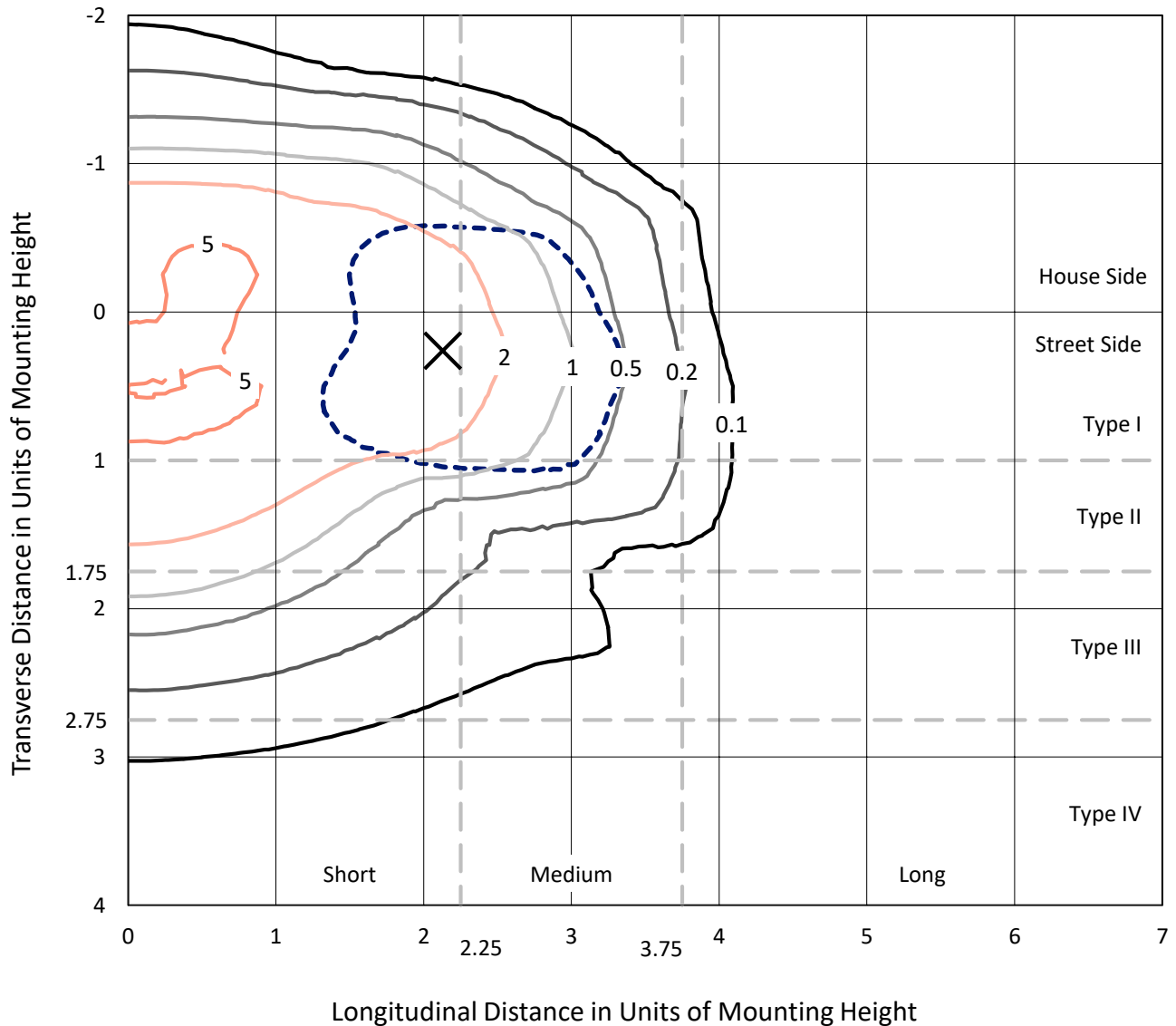
Input Watts (W): 55
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

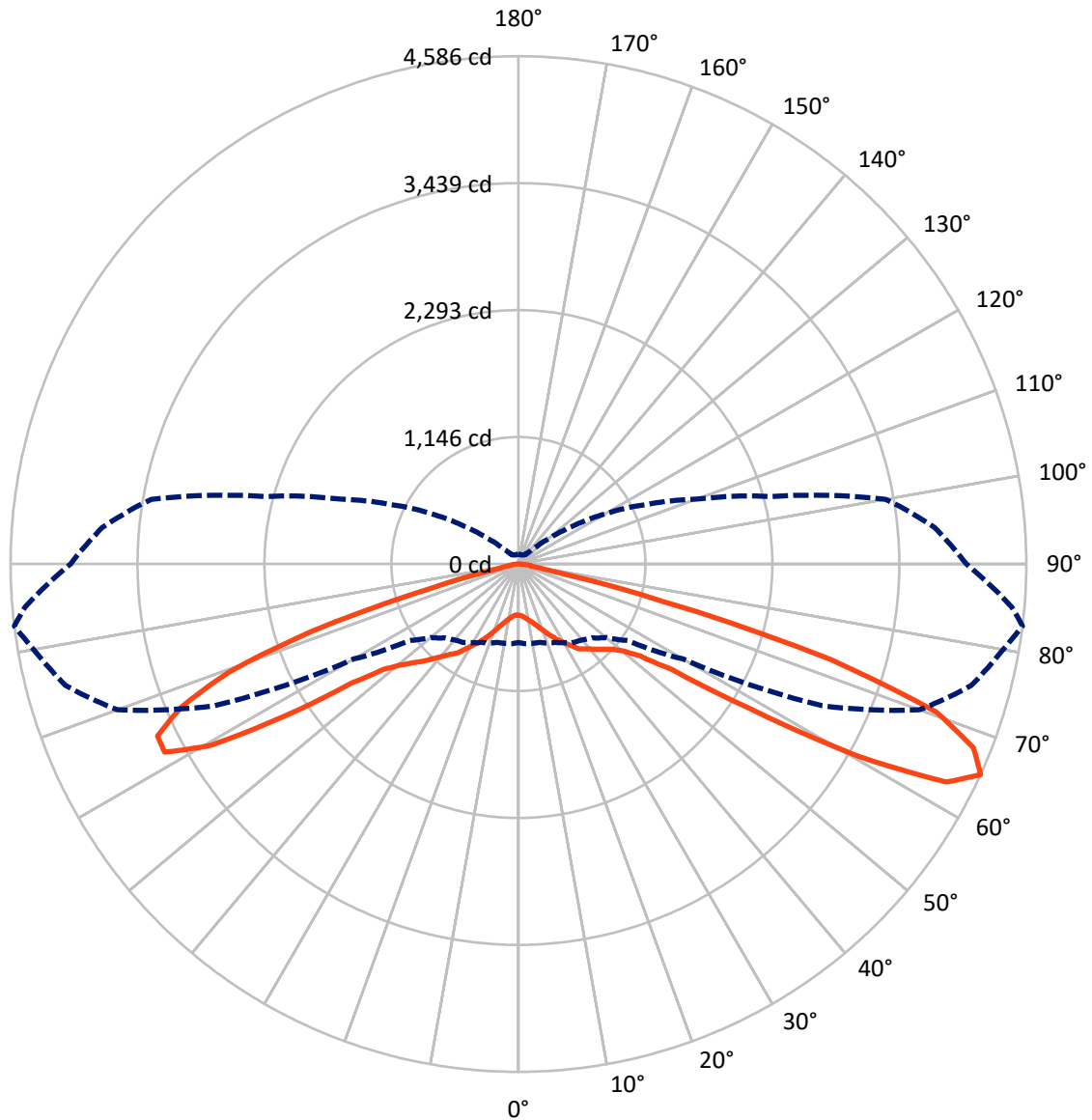
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 5.8 fc
 Type II - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 83-Deg Lateral - - - Horizontal Cone Through 65-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1852.6	0.0	1852.6
	% Fixture	37.1	0.0	37.1
Street Side	Lumens	3141.9	0.0	3141.9
	% Fixture	62.9	0.0	62.9
Total	Lumens	4994.5	0.0	4994.5
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	46.5	0.9
10°-20°	163.0	3.3
20°-30°	322.1	6.4
30°-40°	554.3	11.1
40°-50°	836.2	16.7
50°-60°	1163.6	23.3
60°-70°	1343.1	26.9
70°-80°	488.1	9.8
80°-90°	77.5	1.6
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°	4994.5	100.0
0°-180°	4994.5	100.0



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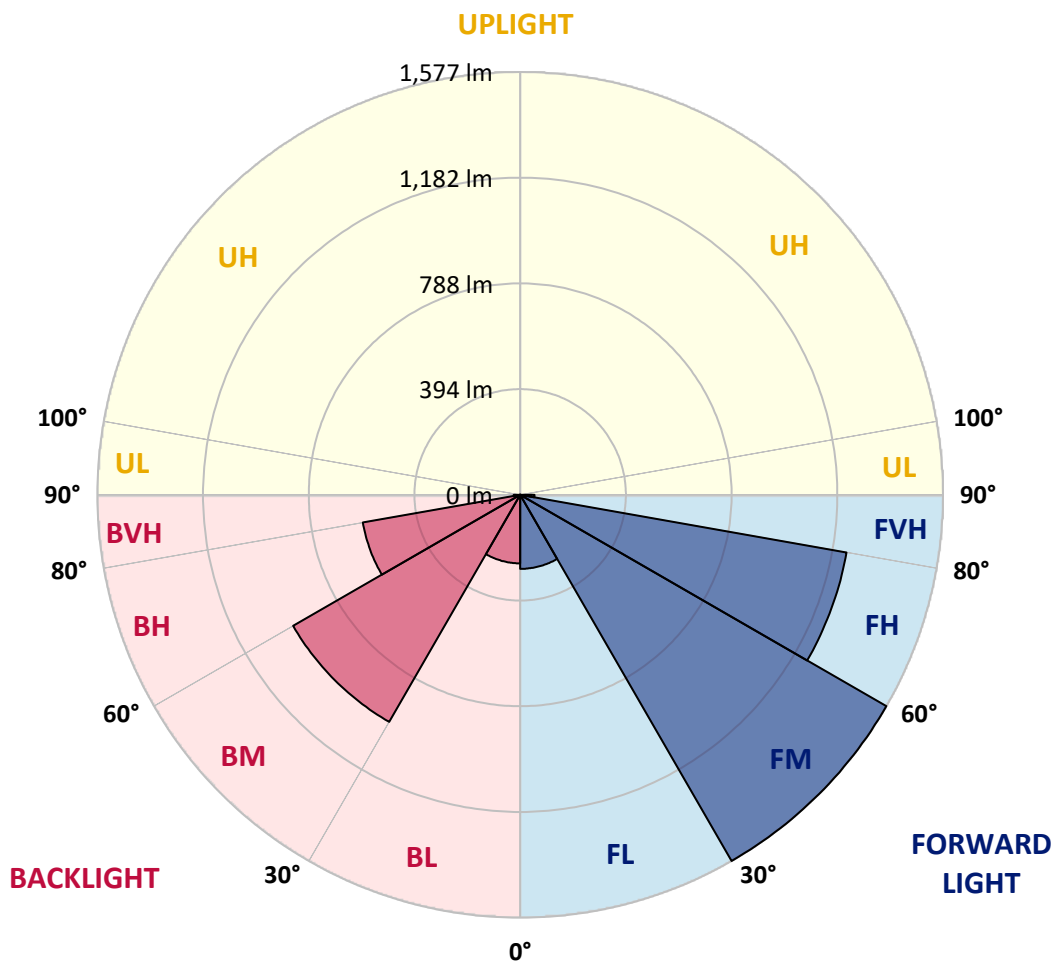
CATALOG NUMBER: ECM-F02-LED-E1-T2-7050

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	276.1	5.5			
FM (30°-60°)	1576.6	31.6			
FH (60°-80°)	1235.6	24.7			G1/1800
FVH (80°-90°)	53.5	1.1			G1/100
BL (0°-30°)	255.5	5.1	B1/500		
BM (30°-60°)	977.5	19.6	B1/1000		
BH (60°-80°)	595.7	11.9	B2/1000		G2/1000
BVH (80°-90°)	24.0	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 II Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	462.5	462.5	462.5	462.5	462.5	462.5	462.5	462.5	462.5	462.5	462.5
2.5°	485.1	486.2	485.1	485.1	484.5	484.0	484.0	483.4	482.3	481.1	480.6
5°	511.6	512.2	510.5	510.5	511.1	510.5	508.8	509.4	504.9	503.2	502.0
7.5°	541.0	542.7	540.4	539.3	538.7	537.6	535.9	533.1	529.7	526.9	525.2
10°	574.3	576.0	574.9	572.6	569.2	567.5	565.8	561.3	557.4	552.9	549.5
12.5°	613.8	614.4	613.3	608.8	606.5	601.4	595.8	590.7	585.0	578.3	572.6
15°	652.8	653.4	651.7	647.2	644.3	638.1	630.2	623.4	613.8	605.9	598.6
17.5°	682.7	683.9	680.5	677.1	673.1	665.2	657.9	650.0	639.8	631.4	624.0
20°	692.9	694.6	692.3	690.6	688.4	684.4	677.1	670.3	661.3	655.1	649.4
22.5°	688.4	690.1	689.0	689.0	689.0	688.4	685.0	683.3	677.7	674.8	673.7
25°	681.6	683.3	682.2	683.3	685.6	688.4	688.4	691.8	691.2	695.7	698.6
27.5°	699.1	700.2	697.4	697.4	699.7	704.2	703.1	709.8	711.0	720.0	728.5
30°	760.1	760.1	755.6	751.1	752.8	751.6	750.5	755.0	755.0	763.5	767.5
32.5°	851.0	844.8	844.3	843.7	839.7	842.6	833.5	834.1	830.1	831.3	829.6
35°	951.0	950.4	948.2	947.0	945.3	953.8	947.0	952.7	938.6	933.5	923.9
37.5°	1038.5	1040.8	1042.5	1050.9	1054.9	1071.8	1075.8	1078.6	1063.9	1064.5	1043.0
40°	1126.6	1129.4	1135.6	1150.9	1162.2	1178.0	1185.3	1197.2	1198.3	1200.6	1184.8
42.5°	1222.6	1218.1	1226.6	1245.8	1259.9	1275.7	1285.3	1307.3	1319.7	1326.0	1328.2
45°	1300.0	1294.9	1298.8	1310.1	1323.1	1343.5	1364.4	1397.1	1423.7	1452.5	1468.3
47.5°	1340.1	1341.2	1344.0	1350.8	1359.8	1379.6	1409.0	1450.8	1493.7	1540.0	1581.2
50°	1353.1	1353.6	1357.6	1364.4	1372.8	1393.7	1424.2	1471.7	1523.6	1588.5	1651.8
52.5°	1357.0	1354.8	1358.7	1362.1	1367.7	1385.3	1414.1	1463.7	1522.5	1601.0	1694.7
55°	1342.3	1339.5	1346.3	1350.8	1355.3	1369.4	1391.5	1437.2	1498.2	1587.4	1710.0
57.5°	1285.9	1286.4	1296.0	1307.9	1319.7	1338.9	1367.7	1411.2	1471.7	1559.7	1697.0
60°	1190.4	1188.7	1200.6	1215.3	1235.6	1266.1	1301.7	1345.7	1396.0	1469.4	1604.4
62.5°	1017.1	1023.8	1027.8	1049.8	1050.9	1094.4	1117.6	1161.6	1204.5	1261.0	1382.4
65°	708.2	722.8	726.8	732.4	759.0	781.6	818.8	865.1	893.4	943.1	1033.4
67.5°	441.0	451.8	452.3	467.0	490.2	516.2	545.0	591.8	634.7	642.6	687.8
70°	365.9	366.5	374.4	385.1	403.2	429.7	458.0	490.7	529.7	554.6	550.0
72.5°	303.3	306.6	312.3	323.0	342.8	366.5	402.6	444.4	493.0	542.7	586.7
75°	203.3	208.9	210.6	215.7	225.3	246.8	273.9	313.4	376.1	450.1	543.8
77.5°	107.9	109.0	112.9	116.9	122.0	135.0	152.5	172.8	214.0	277.8	388.0
80°	54.8	57.0	59.9	62.7	62.1	65.5	70.6	79.6	93.7	122.0	175.6
82.5°	19.8	25.4	33.3	37.3	37.3	38.4	40.1	41.8	40.7	45.2	56.5
85°	9.0	10.2	13.0	20.3	20.9	20.9	20.9	22.0	20.9	18.6	22.0
87.5°	0.0	1.7	1.7	5.1	5.6	5.1	5.6	7.3	5.6	4.5	4.0
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°	83°	85°	90°	95°	100°
0°	462.5	462.5	462.5	462.5	462.5	462.5	462.5	462.5	462.5	462.5	462.5
2.5°	477.8	476.6	473.8	472.7	469.3	467.0	465.9	464.8	463.1	460.8	459.1
5°	498.6	495.3	491.3	489.0	484.5	480.0	478.3	476.1	472.1	468.7	464.8
7.5°	520.7	516.7	512.2	507.1	502.6	497.5	495.3	493.0	487.4	482.8	477.2
10°	544.4	538.7	533.7	529.1	525.2	519.5	515.6	513.9	508.8	502.0	496.4
12.5°	567.0	560.8	555.7	550.0	546.1	541.6	537.6	535.9	532.0	525.8	521.2
15°	590.7	584.5	578.8	574.9	570.4	567.5	565.3	562.5	560.8	555.7	553.4
17.5°	616.1	610.5	605.4	602.0	600.3	599.7	599.2	598.0	596.3	593.0	591.3
20°	644.9	639.8	638.1	637.6	638.1	638.7	639.8	639.8	640.4	638.1	637.6
22.5°	672.6	672.6	675.4	678.8	682.2	684.4	686.1	683.9	684.4	687.8	690.6
25°	703.1	708.2	715.5	721.1	726.2	730.2	732.4	733.6	734.7	739.8	744.9
27.5°	735.8	743.7	754.5	761.8	771.4	777.6	782.1	781.6	783.3	790.0	799.1
30°	776.5	784.4	795.7	805.9	818.8	827.9	829.6	828.4	830.7	836.9	855.0
32.5°	833.5	835.2	842.6	852.7	866.8	875.9	877.6	880.4	885.5	896.8	918.8
35°	913.7	906.4	905.8	910.3	923.9	941.4	943.1	944.8	947.0	961.7	991.1
37.5°	1022.1	992.2	974.1	960.0	961.7	967.9	971.3	972.4	978.1	1000.7	1050.4
40°	1158.2	1102.3	1062.2	1022.1	1007.5	1008.6	1009.7	1008.6	1019.9	1054.9	1119.8
42.5°	1307.3	1258.2	1188.2	1105.2	1063.4	1049.8	1051.5	1052.6	1070.1	1121.0	1193.2
45°	1465.4	1433.8	1352.5	1222.6	1132.8	1098.4	1097.2	1099.5	1128.3	1200.0	1276.3
47.5°	1604.4	1612.3	1552.4	1399.9	1245.8	1158.2	1150.9	1154.8	1201.7	1278.5	1355.9
50°	1714.5	1766.4	1761.9	1641.1	1428.7	1261.6	1235.6	1241.2	1296.6	1376.2	1445.7
52.5°	1797.5	1903.1	1970.9	1922.9	1738.2	1449.1	1381.9	1372.3	1441.7	1525.9	1568.8
55°	1852.8	2023.9	2201.8	2284.8	2209.7	1854.0	1678.3	1657.4	1732.6	1839.8	1858.5
57.5°	1889.5	2170.8	2553.7	2874.4	2976.6	2671.7	2451.4	2363.9	2418.7	2532.2	2507.9
60°	1828.6	2228.9	2978.3	3553.2	3844.0	3768.4	3523.3	3391.1	3288.9	3280.4	3145.5
62.5°	1594.8	2090.6	3150.6	3876.2	4285.1	4379.4	4335.9	4179.5	3896.5	3739.6	3434.6
65°	1202.8	1712.8	3028.0	3851.4	4234.8	4443.8	4585.5	4473.1	4043.9	3772.3	3366.8
67.5°	768.6	1105.7	2518.6	3552.6	3912.9	4147.8	4431.3	4379.9	3831.6	3484.9	3043.8
70°	561.3	612.7	1708.8	3007.1	3403.5	3610.2	3999.9	3977.3	3360.1	2970.4	2533.3
72.5°	646.6	456.9	936.9	2246.4	2553.1	2715.7	2938.8	2884.0	2347.5	2077.0	1767.6
75°	729.0	511.1	528.0	1332.7	1426.5	1312.4	1342.9	1166.1	909.8	806.4	794.6
77.5°	613.8	641.0	478.9	572.6	527.4	380.1	284.6	223.1	174.5	187.5	208.4
80°	356.9	720.6	633.6	298.2	334.3	266.0	118.6	98.3	81.3	82.4	83.6
82.5°	110.1	450.1	891.7	364.2	330.9	375.0	109.0	66.6	53.6	60.4	68.3
85°	36.7	188.6	714.9	382.3	214.0	199.9	48.0	32.8	27.1	37.8	53.6
87.5°	9.0	45.7	132.7	50.3	31.6	19.2	16.4	11.9	13.0	23.7	33.3
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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CANDELA DISTRIBUTION (continued):

	105°	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°
0°	462.5	462.5	462.5	462.5	462.5	462.5	462.5	462.5	462.5	462.5	462.5
2.5°	458.0	456.3	454.6	453.5	451.8	451.8	450.1	450.1	447.8	446.7	446.7
5°	461.4	458.0	455.2	452.3	449.5	448.4	446.1	445.0	442.7	441.0	439.9
7.5°	472.7	468.2	464.8	461.4	458.0	456.3	454.0	451.8	451.2	450.1	449.0
10°	491.9	485.7	482.8	480.6	476.1	474.9	472.7	471.0	469.3	467.6	468.2
12.5°	516.7	512.2	511.1	506.6	505.4	503.7	500.3	499.2	494.7	491.3	489.6
15°	548.3	546.6	546.6	544.4	541.0	538.2	533.1	530.3	522.4	517.3	511.6
17.5°	590.1	588.4	589.0	586.7	582.8	577.7	572.1	563.6	551.7	542.7	531.4
20°	638.7	638.1	639.3	637.6	632.5	625.7	612.2	599.7	583.4	567.0	554.6
22.5°	692.9	695.7	696.9	692.3	686.7	672.6	657.9	639.8	617.8	596.3	578.8
25°	750.5	757.3	761.2	755.0	748.3	730.2	708.2	683.9	652.8	626.8	603.7
27.5°	807.0	821.1	826.7	823.4	812.6	787.2	757.9	725.7	687.8	653.4	623.4
30°	874.2	892.8	903.0	897.9	877.0	843.7	808.1	764.6	716.6	675.4	639.3
32.5°	944.8	967.9	975.3	964.5	934.0	892.3	845.9	792.9	738.6	691.2	650.6
35°	1023.3	1044.7	1046.4	1025.5	985.4	932.3	874.7	810.9	748.8	695.7	651.1
37.5°	1091.6	1113.1	1111.4	1080.3	1031.7	965.7	892.3	814.9	742.6	682.2	633.6
40°	1163.3	1187.0	1174.0	1134.0	1071.3	987.1	894.5	801.3	718.9	652.8	599.7
42.5°	1239.0	1249.2	1226.0	1175.7	1095.0	986.6	875.3	769.1	681.6	608.2	552.3
45°	1308.4	1300.5	1267.2	1200.0	1093.3	962.3	837.5	729.0	631.9	558.5	503.7
47.5°	1370.6	1345.7	1294.3	1200.0	1066.8	919.4	788.9	677.1	580.5	506.6	452.3
50°	1437.8	1385.8	1305.6	1179.1	1018.7	867.4	737.5	625.1	525.8	450.1	390.8
52.5°	1527.0	1433.8	1305.6	1141.3	969.1	814.9	683.3	564.7	461.9	382.9	324.1
55°	1735.9	1534.3	1328.2	1120.4	925.0	759.5	618.9	486.8	386.8	311.2	262.6
57.5°	2146.5	1754.6	1441.7	1158.8	908.6	699.7	535.9	400.4	305.5	242.3	201.6
60°	2488.1	1932.5	1533.8	1188.2	882.1	622.3	434.3	306.6	227.0	179.0	152.5
62.5°	2576.2	1934.7	1495.9	1111.9	774.8	506.6	320.2	211.2	155.9	129.9	115.8
65°	2356.0	1711.1	1272.3	906.9	590.1	351.8	200.5	128.2	103.9	94.9	89.2
67.5°	1980.5	1363.2	943.1	632.5	372.1	193.7	112.4	88.1	79.1	76.2	73.4
70°	1519.1	957.8	613.8	370.5	194.8	100.5	80.2	72.3	68.3	66.6	64.4
72.5°	936.3	565.8	333.7	177.9	97.1	76.8	71.7	68.9	63.8	61.6	59.3
75°	397.6	242.8	138.4	90.4	77.9	73.4	69.5	66.1	62.1	58.7	56.5
77.5°	133.8	92.6	81.9	79.1	77.9	73.4	68.3	63.8	59.9	55.9	53.6
80°	81.3	74.0	75.7	75.1	77.9	72.8	66.1	61.0	56.5	52.5	49.7
82.5°	70.6	70.0	71.7	73.4	77.4	70.0	62.1	54.8	49.1	45.2	42.4
85°	61.0	62.1	63.2	64.4	66.6	59.3	50.3	43.5	39.0	33.9	31.6
87.5°	40.7	44.0	46.3	46.9	45.2	28.2	16.4	19.2	19.8	16.9	15.2
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):

	160°	165°	170°	175°	180°
0°	462.5	462.5	462.5	462.5	462.5
2.5°	445.0	444.4	446.1	444.4	444.4
5°	439.3	438.8	438.8	438.8	437.7
7.5°	448.4	447.8	447.3	447.3	446.7
10°	465.9	465.3	465.3	464.8	464.8
12.5°	486.8	484.5	484.0	482.8	483.4
15°	507.1	500.9	499.2	497.5	495.8
17.5°	522.9	515.6	511.6	508.2	508.2
20°	542.7	533.1	528.0	522.9	522.9
22.5°	565.3	552.3	545.5	539.9	537.6
25°	583.9	567.5	557.9	551.2	549.5
27.5°	598.0	577.1	564.7	556.8	554.6
30°	609.3	585.6	570.9	562.5	559.1
32.5°	616.7	590.7	574.9	566.4	563.0
35°	612.7	585.0	565.8	555.7	553.4
37.5°	593.0	563.6	541.0	530.3	526.3
40°	556.8	525.2	501.5	488.5	486.2
42.5°	509.4	477.8	455.2	441.6	435.4
45°	458.6	425.8	404.3	391.9	384.6
47.5°	403.8	371.6	349.6	337.1	332.1
50°	346.2	315.1	296.5	282.9	277.8
52.5°	286.3	258.6	240.0	228.7	223.1
55°	229.3	206.7	190.9	183.5	179.6
57.5°	179.0	164.3	155.3	150.8	148.0
60°	138.9	131.6	128.2	124.8	125.4
62.5°	108.4	106.7	105.6	103.9	104.5
65°	87.5	86.4	87.0	86.4	87.0
67.5°	71.7	72.3	73.4	73.4	74.0
70°	63.2	63.8	64.9	64.9	64.9
72.5°	58.7	59.9	61.0	60.4	60.4
75°	55.3	58.2	60.4	58.2	55.9
77.5°	52.0	58.7	64.9	59.9	53.6
80°	47.4	62.1	69.5	60.4	51.4
82.5°	45.2	59.9	61.0	52.5	45.2
85°	41.8	67.8	70.6	48.0	34.4
87.5°	21.5	40.7	46.9	32.2	17.5
90°	0.0	0.0	0.0	0.0	0.0

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