

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: P141875

Luminaire Tested: **ECM-F02-LED-E1-T3**

Issue Date: 03/03/2020

Test Information

Test Method: LM-79-08
Report Number: P141875
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33683)
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-T3
Description: EPIC CLASSICAL MEDIUM DECORATIVE LED LUMINAIRE
(2) LIGHTBARS WITH AccuLED OPTICS - TYPE 3
Light Source: (14) 4000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4847.9 lumens
Efficiency: N/A
Efficacy: 88.1 lumens/watt
Luminous Opening: Rectangular (W 0.33' x L: 1' x H: 0')
IES Classification: Type III - Short - Semi-Cutoff
BUG Rating: B2 - U0 - G2

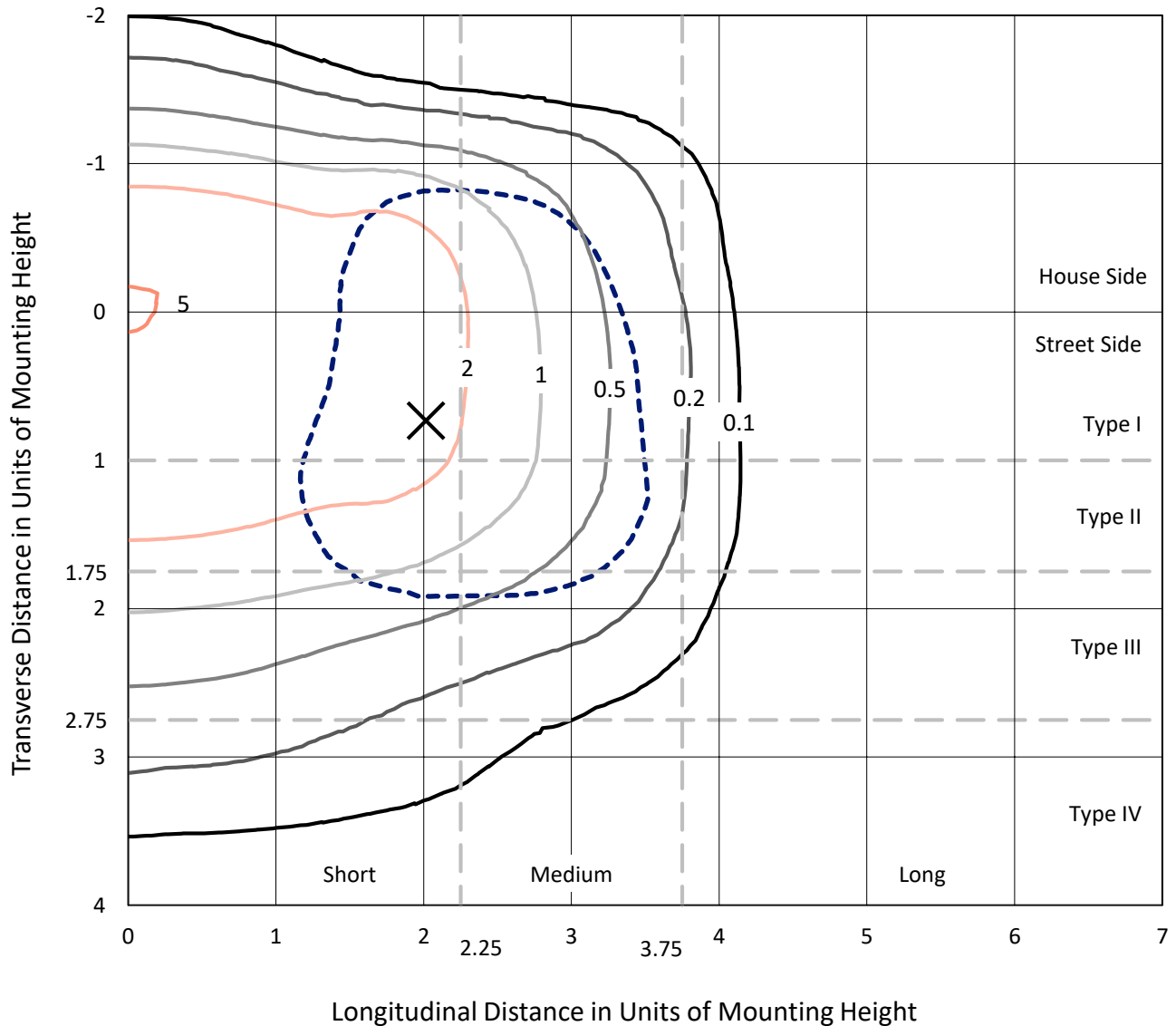
Input Watts (W): 55
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

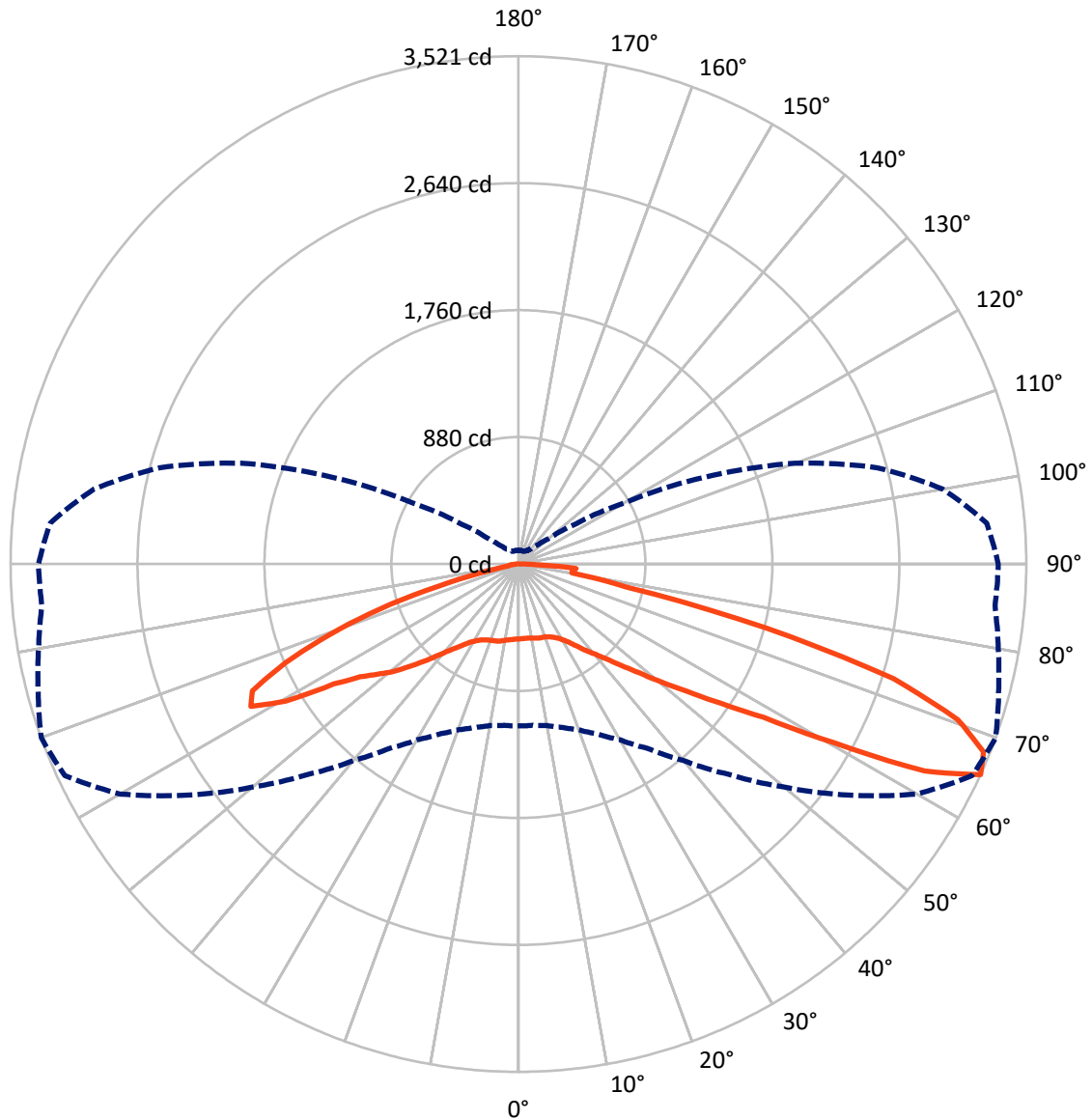
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 5.2 fc
 Type III - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 70-Deg Lateral - - - Horizontal Cone Through 65-Deg Vertical

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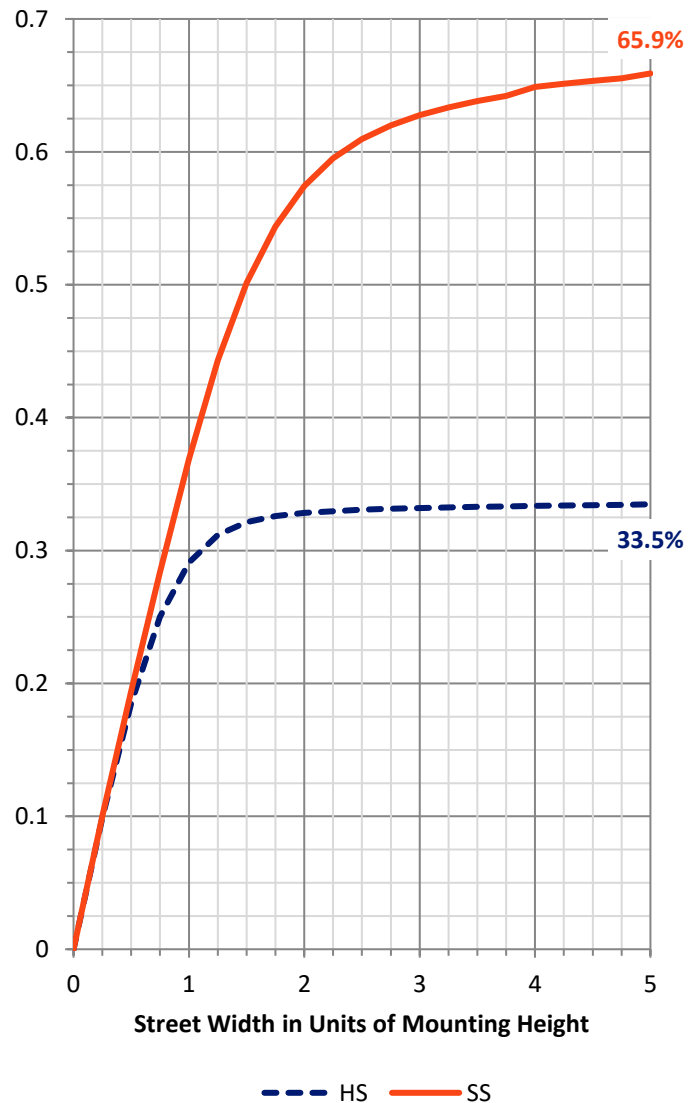
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1636.5	0.0	1636.5
	% Fixture	33.8	0.0	33.8
Street Side	Lumens	3211.4	0.0	3211.4
	% Fixture	66.2	0.0	66.2
Total	Lumens	4847.9	0.0	4847.9
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	50.0	1.0
10°-20°	148.1	3.1
20°-30°	254.6	5.3
30°-40°	408.2	8.4
40°-50°	668.3	13.8
50°-60°	1046.0	21.6
60°-70°	1470.1	30.3
70°-80°	695.7	14.4
80°-90°	106.9	2.2
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°	4847.9	100.0
0°-180°	4847.9	100.0

Coefficient of Utilization



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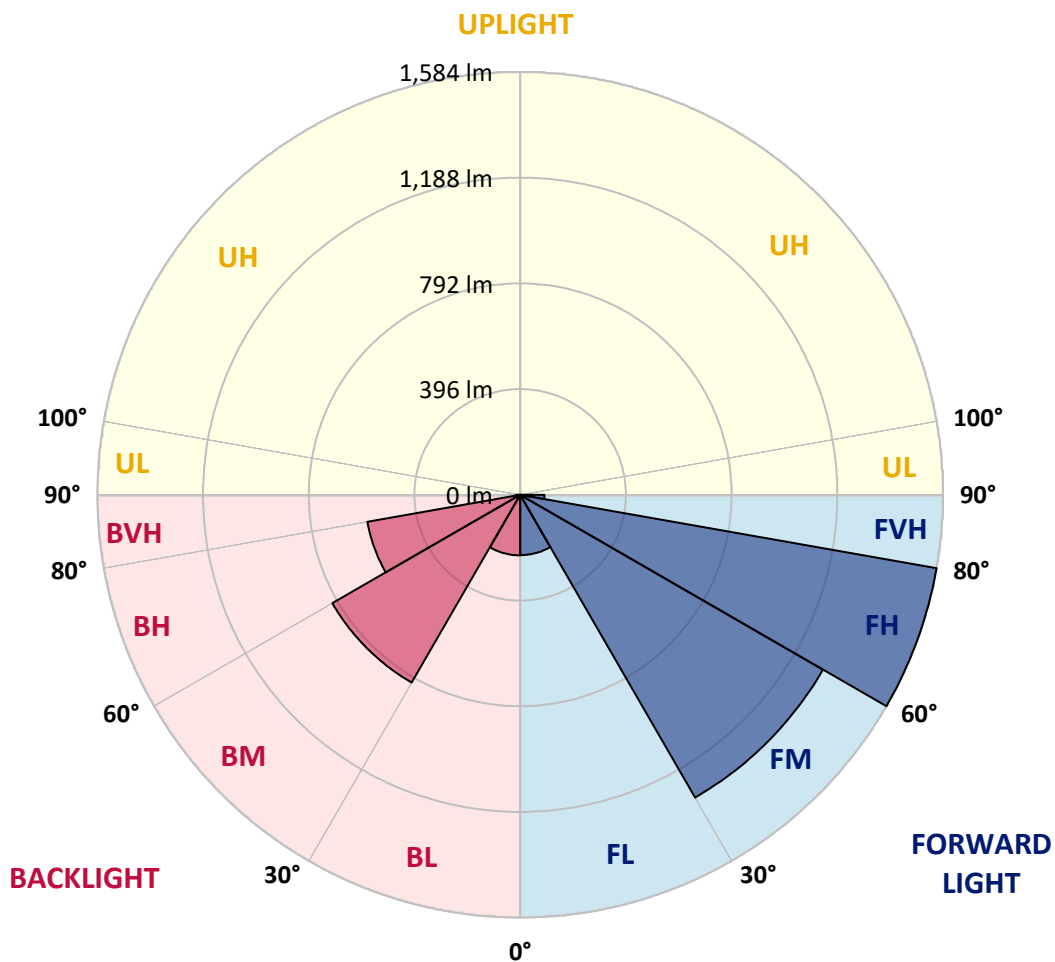
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	225.9	4.7			
FM	(30°-60°)	1310.0	27.0			
FH	(60°-80°)	1584.4	32.7			G1/1800
FVH	(80°-90°)	91.1	1.9			G1/100
BL	(0°-30°)	226.9	4.7	B1/500		
BM	(30°-60°)	812.5	16.8	B1/1000		
BH	(60°-80°)	581.3	12.0	B2/1000		G2/1000
BVH	(80°-90°)	15.8	0.3			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 III Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	519.5	519.5	519.5	519.5	519.5	519.5	519.5	519.5	519.5	519.5	519.5
2.5°	516.8	517.3	517.3	516.2	516.2	516.8	516.8	517.3	517.3	517.3	517.9
5°	516.8	517.3	517.3	516.8	516.2	517.3	516.8	517.3	517.3	517.3	517.3
7.5°	515.7	516.2	516.2	515.7	516.2	516.8	516.8	517.9	518.4	518.4	519.0
10°	510.2	510.7	511.3	511.3	512.4	514.0	514.6	516.8	517.3	519.0	520.1
12.5°	500.3	500.3	501.4	502.5	504.1	507.4	509.1	512.4	515.1	517.3	521.2
15°	491.5	491.5	492.6	493.1	496.4	498.6	501.9	505.8	510.7	515.1	521.2
17.5°	495.9	495.9	495.3	494.8	495.3	495.3	498.1	501.9	506.3	512.4	520.1
20°	512.9	512.4	510.2	509.1	508.5	506.3	504.7	504.1	506.3	510.7	518.4
22.5°	527.8	526.7	526.1	525.0	526.7	525.6	523.4	520.6	517.3	515.7	520.1
25°	536.6	537.1	537.1	537.1	540.4	541.5	542.6	539.3	535.5	530.0	530.5
27.5°	548.7	549.2	548.1	550.3	554.2	557.0	559.7	561.9	559.7	556.4	552.6
30°	574.6	574.6	572.9	574.6	577.9	580.6	584.5	588.3	588.3	585.0	581.2
32.5°	601.5	602.1	602.1	603.2	608.1	610.3	615.8	619.7	622.4	620.2	622.4
35°	634.0	633.5	635.1	635.7	643.4	646.1	657.1	659.9	664.3	665.4	667.0
37.5°	687.9	689.0	685.7	683.5	690.1	690.1	704.4	712.2	711.1	718.8	724.3
40°	774.9	769.9	768.3	767.2	771.0	770.5	769.9	780.4	785.3	786.5	789.2
42.5°	871.2	872.9	871.2	875.1	875.1	872.3	870.1	868.5	877.8	883.9	885.0
45°	984.0	986.2	982.9	980.2	987.3	991.2	991.2	995.6	1003.3	1006.0	1004.4
47.5°	1074.3	1080.3	1077.6	1081.4	1093.0	1106.2	1123.8	1135.4	1143.6	1151.3	1163.4
50°	1155.7	1158.5	1165.1	1177.7	1194.8	1215.7	1244.3	1273.0	1289.5	1308.7	1323.0
52.5°	1205.3	1213.5	1223.4	1244.3	1273.0	1302.1	1346.2	1392.9	1434.8	1456.2	1473.3
55°	1235.0	1241.0	1254.2	1282.9	1323.0	1366.5	1421.6	1485.9	1541.5	1588.9	1625.7
57.5°	1233.9	1238.8	1257.0	1288.4	1336.2	1390.7	1459.5	1539.9	1621.9	1700.6	1769.9
60°	1210.2	1214.6	1232.8	1266.4	1318.6	1383.6	1466.1	1564.6	1675.8	1794.1	1915.8
62.5°	1173.9	1177.2	1193.2	1226.7	1279.6	1348.9	1445.8	1575.1	1733.1	1919.6	2155.7
65°	1122.7	1122.7	1137.6	1172.2	1222.9	1300.5	1407.2	1559.1	1777.6	2061.6	2405.0
67.5°	1047.3	1047.3	1059.4	1088.0	1127.7	1181.6	1288.4	1446.3	1676.9	2017.0	2418.8
70°	904.8	907.0	907.0	924.6	942.2	966.4	1017.0	1138.1	1354.4	1686.8	2082.0
72.5°	663.2	623.0	654.4	683.0	702.8	716.0	745.2	783.1	892.1	1141.4	1499.2
75°	417.7	428.2	451.8	484.3	533.3	583.9	639.5	663.2	653.3	683.0	923.5
77.5°	253.2	244.4	267.5	315.9	370.9	439.7	543.7	634.0	685.7	682.4	653.8
80°	109.5	106.8	122.2	145.3	172.3	234.4	329.7	453.5	591.1	670.9	658.8
82.5°	39.1	39.6	50.1	59.4	71.5	91.9	130.4	208.6	330.8	471.1	582.3
85°	11.6	12.7	17.6	24.8	28.1	31.9	44.0	65.5	111.7	178.3	317.0
87.5°	3.3	3.9	5.0	8.8	8.3	7.7	8.8	13.8	10.5	8.8	44.0
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°	95°	100°	105°
0°	519.5	519.5	519.5	519.5	519.5	519.5	519.5	519.5	519.5	519.5	519.5
2.5°	517.3	517.3	517.3	517.9	517.3	517.3	517.9	517.9	518.4	519.0	520.1
5°	516.8	516.8	517.3	517.3	517.3	517.9	518.4	519.0	520.1	521.7	523.4
7.5°	518.4	518.4	517.9	518.4	518.4	519.0	520.1	520.6	522.8	524.5	527.2
10°	520.1	520.1	520.6	521.2	521.2	522.3	523.9	524.5	526.7	530.0	532.7
12.5°	522.3	523.9	526.1	527.2	528.3	529.4	531.1	532.2	534.9	539.3	542.6
15°	523.9	527.8	530.0	532.7	534.4	534.9	536.6	538.8	541.5	545.9	549.8
17.5°	523.9	528.9	532.2	534.9	537.7	539.3	541.0	543.2	547.0	551.5	555.3
20°	523.4	530.5	534.9	539.3	544.3	545.9	548.7	550.9	555.3	560.8	563.6
22.5°	526.1	534.4	540.4	548.1	553.7	558.1	561.4	565.2	568.5	572.4	573.5
25°	534.4	542.6	552.6	561.9	569.6	576.2	580.6	583.9	587.8	589.4	587.2
27.5°	548.1	554.2	568.0	581.7	593.8	602.1	607.0	611.4	612.5	615.8	607.6
30°	572.9	575.7	590.0	609.8	623.5	637.3	643.9	648.3	648.9	646.7	632.4
32.5°	613.6	608.7	621.3	647.8	668.7	680.2	690.7	693.4	691.8	684.6	661.5
35°	663.2	655.5	661.5	700.0	723.2	740.2	750.1	752.9	749.0	736.4	704.4
37.5°	724.3	721.5	724.3	761.1	801.3	817.3	821.7	825.0	815.6	792.5	750.7
40°	792.0	792.5	789.2	822.8	873.4	896.5	907.0	899.8	888.3	855.2	809.0
42.5°	885.5	882.2	870.7	900.9	965.9	989.5	998.9	993.4	981.8	940.0	886.1
45°	1009.3	998.3	987.3	1003.3	1066.0	1096.8	1110.6	1106.8	1086.4	1035.8	985.1
47.5°	1160.7	1149.1	1128.8	1126.0	1189.3	1225.6	1230.6	1224.5	1209.1	1158.5	1096.3
50°	1319.7	1316.4	1307.1	1285.1	1341.8	1378.1	1374.8	1370.4	1353.3	1288.9	1225.1
52.5°	1484.3	1490.9	1484.8	1469.4	1530.0	1544.8	1545.9	1532.7	1512.9	1453.5	1366.5
55°	1657.1	1681.9	1691.2	1703.3	1751.2	1749.0	1736.4	1705.0	1709.9	1642.2	1521.7
57.5°	1840.4	1916.3	1976.3	2003.3	2049.0	2062.2	2030.2	2040.7	2036.3	1966.4	1776.5
60°	2082.0	2263.6	2419.9	2516.2	2577.8	2554.2	2598.8	2601.0	2676.4	2522.8	2226.7
62.5°	2467.2	2800.7	3078.1	3161.2	3177.2	3171.7	3118.8	3171.7	3157.4	2970.2	2586.6
65°	2791.4	3188.2	3470.0	3520.6	3446.3	3378.0	3316.4	3326.9	3258.6	2987.8	2576.2
67.5°	2835.4	3230.6	3492.0	3477.7	3315.3	3188.7	3086.4	3006.0	2866.8	2621.9	2263.0
70°	2487.0	2905.8	3242.7	3231.7	3006.0	2837.1	2670.8	2549.8	2407.8	2218.5	1878.9
72.5°	1934.5	2307.6	2634.0	2718.7	2496.4	2309.8	2157.4	2003.3	1856.9	1676.9	1462.8
75°	1317.0	1597.7	1749.6	1772.7	1569.0	1429.3	1370.4	1244.3	1089.1	1050.6	892.1
77.5°	765.0	872.9	826.6	765.0	615.8	452.4	345.6	295.5	296.6	340.7	326.4
80°	621.9	592.2	467.2	374.8	254.8	129.9	87.0	74.8	75.4	87.5	84.8
82.5°	641.2	658.2	541.0	378.6	260.9	137.6	66.0	49.0	57.2	62.2	61.1
85°	475.0	622.4	558.1	401.8	280.1	146.4	42.9	27.0	38.0	46.2	49.5
87.5°	133.2	209.1	162.4	107.3	78.1	26.4	17.1	14.3	17.6	24.2	24.2
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):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	519.5	519.5	519.5	519.5	519.5	519.5	519.5	519.5	519.5	519.5	519.5
2.5°	520.6	522.8	522.3	523.4	523.9	525.6	526.7	526.1	526.1	527.2	528.3
5°	525.0	527.8	527.8	529.4	531.1	533.3	534.9	533.8	534.4	535.5	536.6
7.5°	529.4	532.7	533.3	534.9	536.0	537.1	538.2	536.6	536.0	536.0	535.5
10°	534.9	538.2	537.7	537.7	537.1	536.0	533.8	530.0	527.2	525.6	524.5
12.5°	544.3	546.5	543.2	539.9	534.4	530.5	525.6	521.2	517.9	515.1	514.0
15°	552.6	551.5	547.6	541.5	533.8	527.8	522.8	516.8	512.9	509.6	508.0
17.5°	557.0	553.1	547.6	542.1	535.5	530.0	523.9	516.8	510.7	506.3	504.1
20°	561.4	555.3	548.1	542.6	537.7	533.3	528.9	520.1	512.4	505.8	502.5
22.5°	568.0	559.7	552.6	547.6	542.6	538.2	533.8	525.6	517.3	508.5	503.6
25°	577.3	566.3	561.4	556.4	550.9	546.5	540.4	532.7	523.9	513.5	506.3
27.5°	592.2	582.3	576.8	571.8	565.2	558.1	551.5	541.0	532.7	520.6	511.3
30°	613.6	603.2	598.2	593.3	585.6	576.2	566.9	553.7	542.1	528.3	516.2
32.5°	640.6	635.1	629.0	620.8	610.3	598.8	585.0	567.4	550.9	533.8	518.4
35°	682.4	673.1	663.2	654.9	639.5	623.5	602.6	576.8	554.8	533.8	515.1
37.5°	730.3	720.4	707.2	692.3	669.2	643.9	614.7	582.3	553.1	527.8	506.9
40°	788.1	775.4	757.8	729.8	695.6	657.7	618.6	577.9	543.7	514.6	490.4
42.5°	864.6	838.7	804.6	763.3	714.9	663.2	613.6	566.3	527.8	495.9	471.6
45°	951.0	909.7	854.7	793.1	725.9	661.0	602.6	547.6	504.1	468.9	443.6
47.5°	1044.0	979.6	898.7	811.8	727.0	648.9	581.2	519.5	470.5	433.1	401.8
50°	1149.1	1042.9	929.5	821.1	719.9	627.4	550.3	479.4	428.7	384.1	355.5
52.5°	1239.4	1098.5	951.0	817.3	694.5	590.0	499.7	430.9	371.5	331.9	303.8
55°	1346.2	1152.4	962.6	798.0	653.8	531.6	445.2	368.7	312.6	277.4	253.2
57.5°	1526.1	1243.8	972.5	758.9	586.7	458.4	369.8	298.3	254.3	223.4	206.4
60°	1873.4	1421.0	1013.2	700.6	501.4	370.4	285.6	233.3	195.4	175.0	162.9
62.5°	2100.7	1541.5	995.0	610.9	391.8	277.4	209.1	168.4	146.4	131.5	126.0
65°	2042.9	1419.9	844.2	484.3	273.0	184.4	140.3	115.6	105.7	98.0	94.7
67.5°	1754.5	1145.3	612.0	313.1	172.8	112.3	91.9	82.0	77.6	74.3	73.7
70°	1397.9	807.4	363.8	166.2	95.8	74.3	65.5	61.6	60.0	60.0	60.0
72.5°	1014.3	465.0	178.9	89.7	64.4	56.7	52.8	51.7	51.2	51.2	51.7
75°	579.5	201.4	91.9	61.6	52.8	49.0	46.8	46.8	46.8	46.8	47.3
77.5°	202.0	91.9	64.9	51.7	45.7	43.5	42.4	43.5	44.0	44.0	44.0
80°	73.7	64.9	55.6	45.1	40.7	38.5	38.5	40.2	41.3	40.2	39.6
82.5°	58.3	51.2	45.1	39.1	35.8	34.7	35.2	36.3	35.8	35.2	33.6
85°	44.6	33.6	31.4	29.2	28.6	28.6	30.8	31.4	29.2	28.1	26.4
87.5°	22.0	17.6	16.0	18.7	18.2	16.5	17.1	17.1	14.3	13.2	13.8
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):

	165°	170°	175°	180°
0°	519.5	519.5	519.5	519.5
2.5°	528.3	528.9	530.5	530.0
5°	536.0	536.6	537.7	537.7
7.5°	534.4	534.9	534.9	534.9
10°	521.7	521.7	522.8	522.8
12.5°	511.8	511.3	511.3	510.2
15°	505.8	504.7	505.2	503.6
17.5°	501.4	500.8	500.8	499.7
20°	499.7	498.6	498.1	497.0
22.5°	498.6	498.1	497.0	495.9
25°	501.4	498.6	498.1	497.0
27.5°	504.1	501.4	499.2	498.6
30°	506.9	501.9	499.2	498.1
32.5°	506.3	499.7	495.9	494.2
35°	500.3	492.0	487.1	485.4
37.5°	488.7	479.4	471.6	468.9
40°	472.2	460.1	452.9	449.1
42.5°	452.4	438.6	432.6	429.3
45°	419.9	408.9	401.8	399.0
47.5°	383.6	368.7	362.1	359.4
50°	336.8	324.7	319.2	315.4
52.5°	287.3	276.3	271.3	269.1
55°	239.4	233.9	226.2	224.5
57.5°	194.3	192.6	187.1	186.6
60°	158.0	155.2	151.3	151.3
62.5°	124.4	121.6	120.0	120.0
65°	95.8	95.2	94.1	93.6
67.5°	73.7	75.4	75.9	74.8
70°	61.6	62.2	62.2	62.2
72.5°	53.4	53.4	53.4	52.8
75°	48.4	48.4	47.3	46.8
77.5°	44.6	44.0	44.6	44.0
80°	39.1	38.5	37.4	36.3
82.5°	32.5	31.9	29.2	29.2
85°	25.3	23.7	21.5	19.3
87.5°	14.3	12.7	9.4	6.6
90°	0.0	0.0	0.0	0.0

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