

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: P401404

Luminaire Tested: **ENT-SA1C-830-U-SLR**

Issue Date: 5/20/2020

Test Information

Test Method: LM-79-08
Report Number: P401404
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2004-754-9)
Test Lab: INNOVATION CENTER
Issue Date: 5/20/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: ENT-SA1C-830-U-SLR
Description: ENTRI LED LUMINAIRE
(1) 80 CRI, 3000K, 615mA LIGHTSQUARE WITH 16 LEDS AND SPILL LIGHT ELIMINATOR RIGHT OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3170 lumens
Efficiency: N/A
Efficacy: 95.2 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type IV - Short - Non-Cutoff
BUG Rating: B1 - U0 - G1

Input Watts (W): 33.3
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

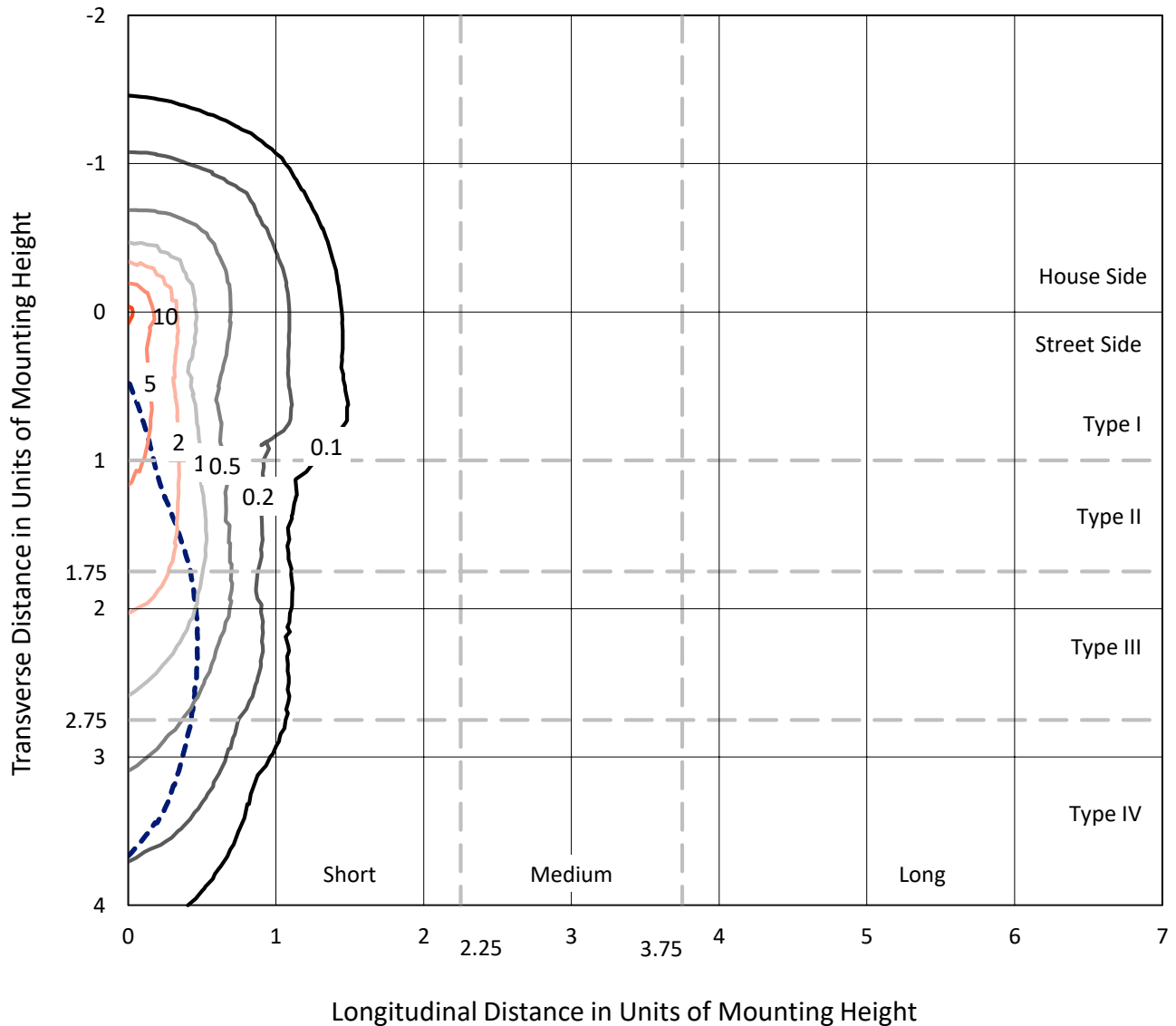


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

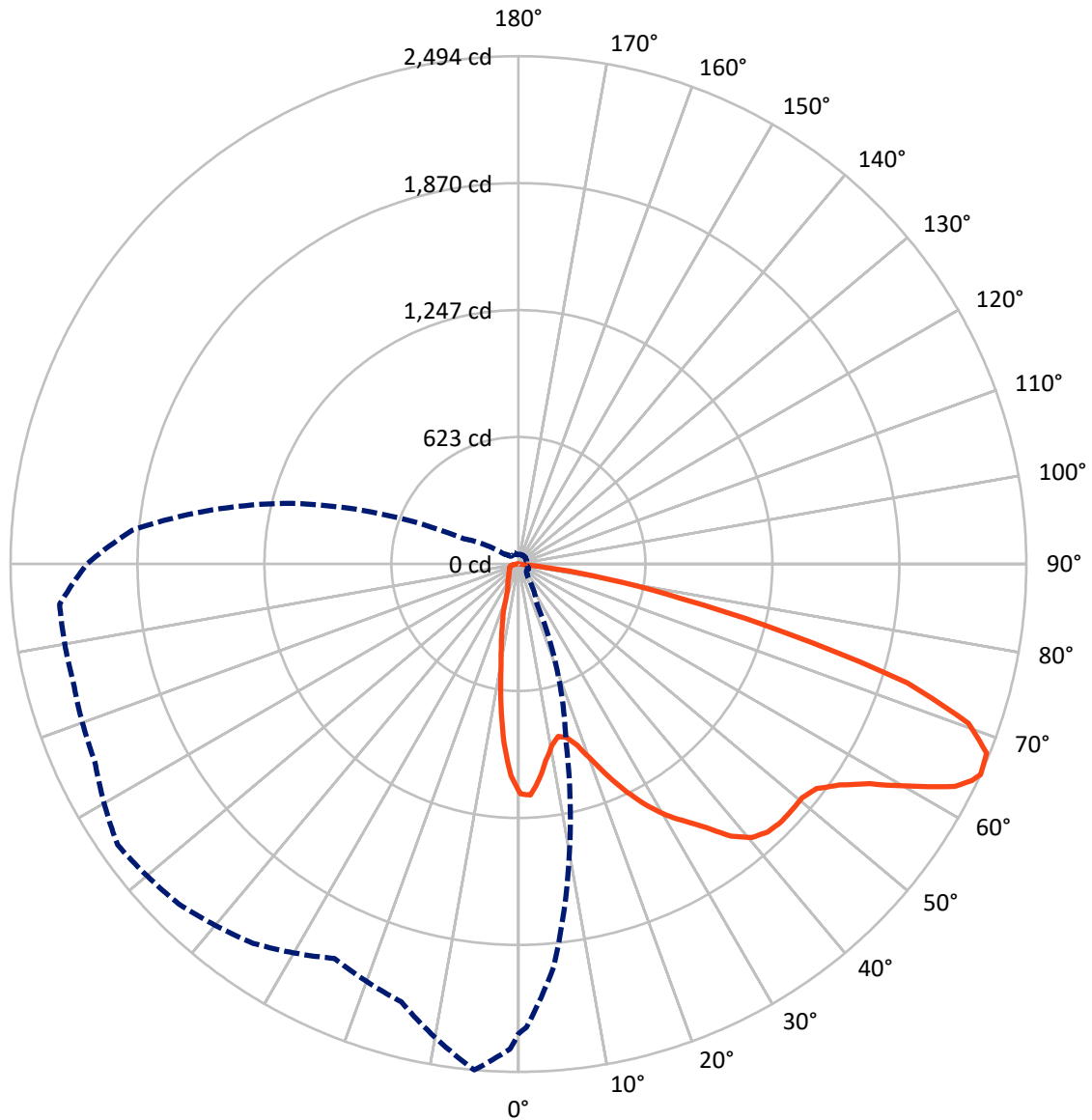


Based on 10 foot mounting height. Maximum calculated value = 11.3 fc
 Type IV - Short - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 355-Deg Lateral - - - Horizontal Cone Through 65-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	650.4	0.0	650.4
	% Fixture	20.5	0.0	20.5
Street Side	Lumens	2519.6	0.0	2519.6
	% Fixture	79.5	0.0	79.5
Total	Lumens	3170.0	0.0	3170.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	86.1	2.7
10°-20°	171.4	5.4
20°-30°	237.7	7.5
30°-40°	332.2	10.5
40°-50°	452.1	14.3
50°-60°	618.2	19.5
60°-70°	755.9	23.8
70°-80°	456.3	14.4
80°-90°	60.2	1.9
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°	3170.0	100.0
0°-180°	3170.0	100.0



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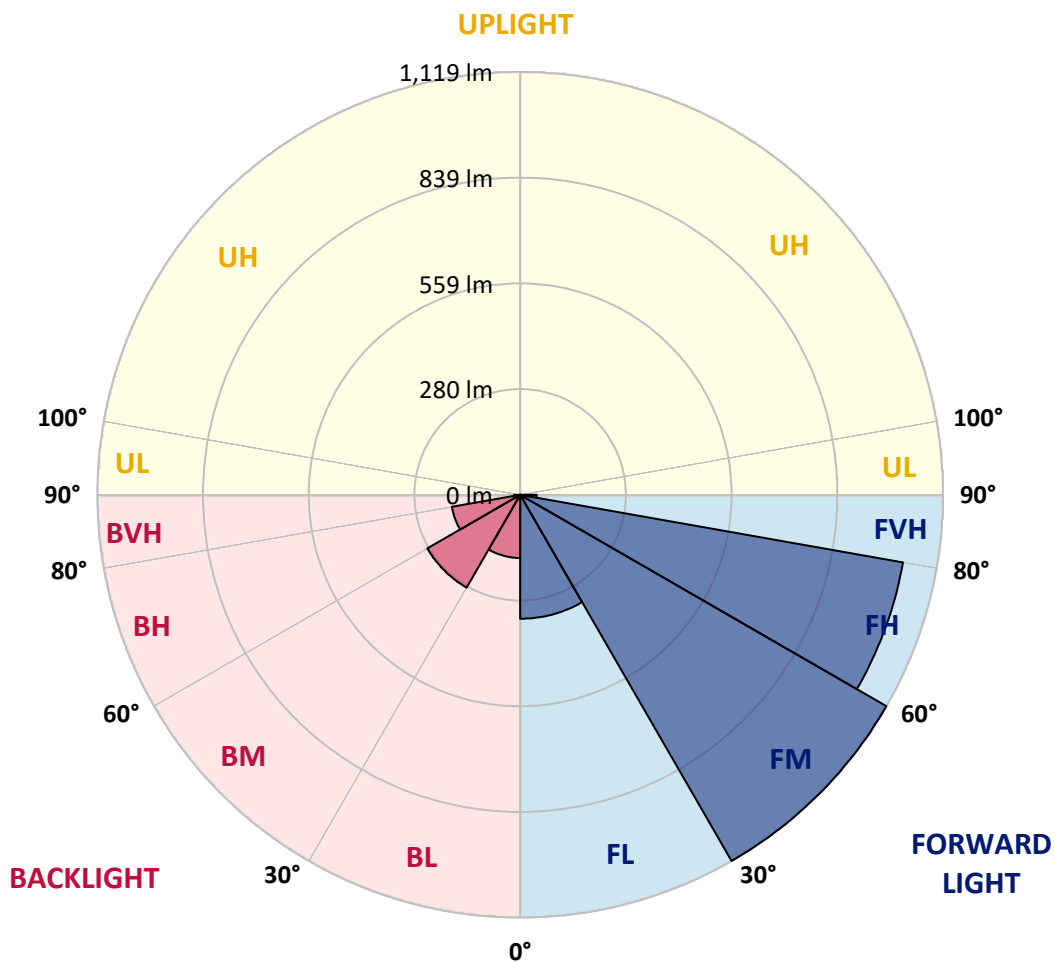
CATALOG NUMBER: ENT-SA1C-830-U-SLR

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	328.0	10.3			
FM	(30°-60°)	1119.0	35.3			
FH	(60°-80°)	1028.6	32.4			G1/1800
FVH	(80°-90°)	44.0	1.4			G1/100
BL	(0°-30°)	167.1	5.3	B1/500		
BM	(30°-60°)	283.5	8.9	B1/1000		
BH	(60°-80°)	183.6	5.8	B1/500		G1/500
BVH	(80°-90°)	16.2	0.5			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 IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	1°	5°	15°	25°	35°	45°	55°	65°	75°	85°
0°	1128.1	1128.1	1128.1	1128.1	1128.1	1128.1	1128.1	1128.1	1128.1	1128.1	1128.1
2.5°	1125.4	1122.2	1114.3	1093.1	1070.3	1043.2	1038.5	1009.3	1012.5	1004.0	1006.1
5°	1027.9	1023.6	1001.9	959.5	901.7	868.3	842.3	827.0	814.2	807.9	815.8
7.5°	933.0	927.1	901.2	826.4	762.3	709.3	666.9	640.9	615.4	595.3	585.8
10°	856.1	854.0	819.5	735.2	654.7	590.0	562.4	534.9	513.1	484.5	461.2
12.5°	817.4	811.1	770.2	672.2	593.7	554.0	528.0	493.0	463.3	428.3	398.1
15°	819.0	811.6	760.7	657.9	572.5	524.3	484.5	442.6	399.2	363.6	332.9
17.5°	864.6	859.3	797.3	671.1	554.5	487.7	425.7	371.6	323.9	279.4	251.8
20°	941.5	933.5	847.6	687.0	531.7	445.8	361.5	287.3	235.9	196.7	174.9
22.5°	1041.6	1026.8	919.2	706.6	508.9	398.1	292.1	209.4	163.8	144.2	138.4
25°	1148.7	1137.1	1005.6	731.5	484.5	346.2	216.3	152.1	136.2	128.3	124.0
27.5°	1247.3	1228.2	1098.4	759.1	452.2	294.2	164.3	130.9	120.3	116.6	114.0
30°	1317.8	1301.4	1162.5	790.9	424.1	240.1	140.5	118.7	110.3	104.4	103.4
32.5°	1385.1	1361.8	1209.2	805.8	400.8	211.0	129.9	110.3	102.3	96.5	94.4
35°	1464.7	1441.3	1262.7	807.9	383.3	198.8	119.8	103.9	95.4	90.1	87.5
37.5°	1558.5	1526.7	1323.1	809.5	365.8	194.0	111.3	98.6	90.1	84.3	82.2
40°	1647.5	1623.2	1385.1	806.8	354.1	187.1	106.0	92.8	84.8	79.5	76.9
42.5°	1714.9	1688.9	1438.2	798.9	347.2	175.5	108.1	88.5	81.1	75.3	72.1
45°	1749.3	1726.0	1486.4	791.4	343.5	165.4	106.0	86.9	78.5	71.6	68.4
47.5°	1775.3	1752.5	1535.7	788.3	337.1	158.0	97.5	92.8	75.8	67.9	64.7
50°	1817.2	1797.6	1602.5	806.3	327.1	153.2	89.6	99.1	74.7	64.7	61.0
52.5°	1892.5	1879.7	1712.7	848.2	316.5	145.2	81.6	94.9	75.8	62.6	58.3
55°	2032.9	2025.0	1864.4	903.3	306.4	135.2	73.2	85.9	75.3	58.8	55.7
57.5°	2184.5	2182.4	2048.3	951.5	291.6	118.2	67.9	72.6	71.6	55.7	51.9
60°	2286.3	2279.4	2133.1	978.6	272.5	97.5	63.6	61.5	73.2	52.5	48.2
62.5°	2321.3	2298.5	2107.7	968.5	243.8	84.3	58.8	56.2	67.9	49.3	44.5
64°	2319.2	2285.8	2041.4	930.3	225.3	81.6	56.2	52.5	59.9	47.2	42.9
65°	2307.0	2275.2	1986.3	900.6	215.2	81.6	54.6	50.9	54.6	46.1	41.9
67.5°	2229.1	2187.2	1798.1	762.8	189.2	82.7	50.9	46.6	45.6	42.4	39.2
70°	2051.5	1996.9	1539.9	600.1	175.5	83.2	46.6	42.4	40.8	38.7	36.0
72.5°	1647.5	1574.4	1225.6	428.8	161.2	81.6	42.4	38.7	37.1	35.0	32.3
75°	1104.7	1024.7	903.3	282.5	132.0	73.2	36.6	33.4	32.9	30.7	28.6
77.5°	622.9	589.5	533.3	155.3	91.2	50.4	29.2	27.0	27.6	26.5	24.4
80°	325.5	310.1	285.2	75.3	44.0	24.4	18.6	18.6	21.2	21.2	20.1
82.5°	115.0	115.6	111.9	17.0	9.0	7.4	6.4	9.0	12.2	14.8	14.8
85°	0.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0	1.1	2.1	3.7
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):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1128.1	1128.1	1128.1	1128.1	1128.1	1128.1	1128.1	1128.1	1128.1	1128.1	1128.1
2.5°	988.1	991.3	999.8	998.2	1006.7	1002.9	1014.1	1019.9	1023.1	1039.5	1047.5
5°	809.5	810.5	840.7	847.1	863.0	854.5	874.1	866.7	882.6	884.7	911.2
7.5°	594.8	596.9	611.7	646.7	681.2	695.5	701.3	710.3	702.9	700.3	704.0
10°	452.2	453.8	455.4	480.3	510.5	540.7	540.7	541.2	528.0	514.7	512.1
12.5°	386.4	376.4	360.5	361.0	382.2	396.5	407.6	396.0	393.9	400.2	407.1
15°	318.1	308.0	297.4	284.7	285.2	295.3	301.1	300.6	311.2	315.9	330.3
17.5°	247.0	232.7	233.2	225.8	215.8	222.1	223.7	233.2	247.0	253.4	256.0
20°	165.9	165.9	170.2	179.2	174.4	178.6	179.2	186.6	193.0	189.2	193.0
22.5°	137.3	136.8	138.4	144.2	149.0	152.7	153.7	153.2	146.8	144.2	149.5
25°	124.6	124.0	124.6	127.8	133.1	137.8	135.7	132.5	125.1	124.6	125.6
27.5°	114.0	114.5	115.6	117.7	120.9	126.7	124.6	118.2	114.5	113.4	113.4
30°	105.0	105.0	107.1	109.2	112.9	118.2	114.5	109.2	105.5	104.4	103.9
32.5°	95.9	97.5	99.1	101.2	104.4	109.7	106.5	101.8	98.1	95.9	94.4
35°	86.9	88.0	91.2	94.4	97.0	101.2	99.1	94.9	91.2	86.4	84.3
37.5°	81.6	81.6	83.2	88.0	90.1	93.3	92.2	88.5	82.7	79.0	78.5
40°	76.9	76.9	77.4	80.0	83.8	87.5	85.3	79.5	75.8	74.2	73.7
42.5°	72.1	72.1	72.6	72.6	77.4	83.8	78.5	72.6	71.0	70.0	69.4
45°	67.9	67.9	67.9	67.3	70.0	77.9	72.1	67.3	66.3	66.3	65.7
47.5°	64.7	64.1	63.6	62.6	64.1	70.5	65.7	63.1	62.6	63.1	62.6
50°	60.4	59.9	59.4	58.8	59.9	62.6	61.5	58.8	59.4	59.4	59.9
52.5°	56.7	56.2	55.7	55.1	56.2	58.3	58.3	56.2	56.2	56.7	57.3
55°	54.6	53.5	53.0	53.0	53.5	56.2	55.7	54.1	54.1	55.1	55.7
57.5°	51.4	50.4	50.4	49.8	50.9	54.1	53.5	51.9	51.9	52.5	53.5
60°	48.2	47.7	47.2	48.2	48.8	51.9	51.4	50.4	49.8	51.4	51.4
62.5°	44.5	44.5	44.5	45.6	46.1	49.8	49.3	48.8	48.8	49.3	48.8
64°	42.4	42.4	42.9	43.5	44.5	47.7	47.7	47.7	47.7	47.7	47.2
65°	41.3	41.3	42.4	42.9	43.5	47.2	46.6	47.2	47.7	47.2	46.1
67.5°	38.7	38.7	40.3	40.3	40.8	45.1	44.5	45.6	46.6	45.6	44.5
70°	35.5	36.0	37.6	37.1	38.2	42.9	41.3	43.5	45.6	44.0	42.9
72.5°	32.3	32.9	35.0	33.9	34.5	40.3	38.2	40.3	43.5	42.4	41.3
75°	29.2	29.7	31.3	30.7	31.8	37.1	35.0	37.1	40.3	40.3	39.8
77.5°	24.9	26.0	27.0	26.5	28.6	33.4	31.3	32.9	35.5	37.6	36.6
80°	20.1	21.7	22.3	22.8	24.9	28.6	27.0	27.6	30.2	31.8	32.3
82.5°	13.8	16.4	17.5	18.0	21.2	22.3	22.8	22.3	23.9	26.0	24.4
85°	4.2	5.3	10.1	12.7	15.9	15.9	18.6	17.5	18.6	16.4	13.8
87.5°	0.0	0.0	0.0	3.7	9.5	9.5	13.3	12.2	12.7	9.5	8.5
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):

	185°	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°
0°	1128.1	1128.1	1128.1	1128.1	1128.1	1128.1	1128.1	1128.1	1128.1	1128.1	1128.1
2.5°	1049.1	1058.1	1078.2	1101.5	1114.3	1141.8	1158.8	1176.8	1194.8	1198.6	1204.4
5°	916.5	927.1	949.9	981.2	1012.5	1049.1	1091.5	1136.5	1186.4	1207.6	1228.2
7.5°	714.0	716.2	748.5	805.2	832.8	884.7	945.2	1014.6	1091.5	1131.2	1173.6
10°	527.4	549.2	573.6	620.7	690.2	750.1	824.8	905.9	986.0	1043.8	1087.8
12.5°	414.5	442.1	482.4	534.3	586.8	643.5	729.9	816.9	915.5	967.4	1021.5
15°	341.4	376.4	428.8	483.5	532.2	582.6	659.4	766.0	892.2	945.2	993.4
17.5°	270.4	309.0	365.2	422.5	480.8	542.3	631.3	763.3	917.1	978.6	1028.4
20°	207.3	237.5	284.7	342.4	410.8	495.1	609.1	783.5	990.8	1067.6	1100.5
22.5°	153.7	171.2	208.3	268.8	349.3	453.2	586.8	812.1	1081.9	1172.0	1197.0
25°	127.2	132.0	149.0	201.4	284.7	406.1	569.9	849.2	1173.1	1274.4	1292.4
27.5°	114.5	117.2	125.1	144.7	222.6	367.4	547.6	892.2	1269.1	1375.6	1374.0
30°	103.4	103.9	108.7	122.5	180.8	332.9	521.6	939.9	1354.4	1448.2	1443.5
32.5°	93.3	93.3	99.7	110.3	154.3	301.6	490.3	974.3	1428.6	1507.6	1492.2
35°	84.3	85.9	91.7	102.3	136.8	266.6	461.2	987.0	1492.2	1579.2	1535.7
37.5°	77.9	80.0	85.9	95.9	121.9	240.7	437.3	1001.9	1570.7	1665.6	1584.5
40°	73.7	75.3	80.6	89.1	110.3	218.9	411.4	1012.0	1648.6	1757.8	1635.9
42.5°	69.4	71.0	76.3	84.3	105.0	193.5	386.4	1017.8	1729.7	1837.9	1678.8
45°	65.7	67.9	73.2	80.6	105.5	170.7	365.8	1015.7	1778.5	1895.6	1712.2
47.5°	63.1	65.2	71.0	80.6	102.3	157.4	348.3	1008.2	1814.5	1933.3	1727.6
50°	60.4	62.6	69.4	89.1	97.0	153.7	335.0	1007.2	1852.2	1940.7	1727.6
52.5°	57.8	61.5	70.0	89.6	89.1	152.1	324.4	1035.3	1904.1	1953.4	1743.0
55°	56.2	59.4	72.1	82.7	77.9	146.8	318.1	1074.0	1991.6	2023.4	1820.4
57.5°	54.1	56.7	71.0	77.4	69.4	134.6	312.8	1111.1	2106.6	2153.3	1974.6
60°	51.4	54.6	68.9	66.3	63.1	114.5	309.6	1141.8	2149.6	2237.0	2140.5
62.5°	48.8	52.5	75.3	57.8	58.3	95.4	303.7	1171.5	2058.9	2216.9	2247.1
64°	47.2	50.9	70.0	54.1	55.7	86.9	297.9	1173.1	1978.9	2169.2	2267.2
65°	46.1	49.3	65.2	51.9	53.5	84.8	292.6	1150.8	1903.6	2118.3	2261.4
67.5°	44.5	46.6	50.4	48.2	49.8	81.1	256.6	1052.8	1743.5	1987.3	2170.8
70°	42.4	44.0	44.5	44.0	46.6	78.5	216.8	913.4	1568.6	1850.0	2029.7
72.5°	40.3	40.3	40.3	39.8	42.9	74.7	195.1	737.9	1355.5	1669.8	1854.3
75°	38.7	37.1	36.6	35.5	39.2	72.6	176.0	554.0	1047.5	1391.0	1553.7
77.5°	35.5	33.9	32.3	31.3	35.0	64.7	146.8	391.2	772.4	1012.0	1199.1
80°	30.7	29.7	27.6	26.0	29.2	50.9	111.3	241.7	565.1	683.3	786.7
82.5°	24.9	24.4	22.3	20.1	21.2	36.6	75.8	123.0	376.9	371.1	439.5
85°	15.4	19.1	16.4	13.3	14.3	21.2	30.7	39.2	115.6	69.4	107.6
87.5°	9.0	12.2	10.1	6.9	5.3	9.5	8.5	8.0	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):

	285°	295°	305°	315°	325°	335°	345°	355°	359°	360°
0°	1128.1	1128.1	1128.1	1128.1	1128.1	1128.1	1128.1	1128.1	1128.1	1128.1
2.5°	1218.2	1225.1	1228.8	1215.0	1200.1	1186.9	1161.4	1136.0	1122.7	1125.4
5°	1268.0	1279.7	1282.8	1262.7	1220.8	1177.9	1115.9	1062.3	1030.0	1027.9
7.5°	1248.9	1287.1	1293.4	1271.7	1211.8	1131.8	1047.5	972.7	940.4	933.0
10°	1181.1	1239.4	1258.5	1251.0	1192.7	1101.0	998.7	903.8	871.5	856.1
12.5°	1111.6	1172.6	1184.2	1191.7	1156.1	1078.8	966.4	868.8	830.1	817.4
15°	1066.0	1107.9	1111.1	1118.0	1110.6	1068.1	981.2	883.1	836.5	819.0
17.5°	1059.7	1044.8	1034.8	1049.1	1058.1	1068.7	1019.9	936.7	886.9	864.6
20°	1060.7	1014.6	986.0	984.9	1023.6	1082.5	1098.4	1026.8	962.1	941.5
22.5°	1099.4	998.7	951.0	945.2	992.3	1105.8	1178.4	1133.9	1069.2	1041.6
25°	1157.2	989.2	926.1	927.7	974.9	1121.2	1246.8	1241.0	1184.2	1148.7
27.5°	1212.9	1005.1	922.9	927.1	980.7	1131.2	1303.5	1341.7	1278.1	1247.3
30°	1257.4	1040.6	932.4	936.2	998.7	1145.0	1331.6	1431.3	1354.4	1317.8
32.5°	1296.1	1074.0	946.8	949.4	1027.3	1164.6	1358.1	1506.5	1428.6	1385.1
35°	1331.1	1102.6	968.5	977.5	1063.9	1192.7	1385.1	1588.2	1519.3	1464.7
37.5°	1361.8	1137.6	1011.4	1026.3	1117.4	1233.5	1420.1	1695.8	1620.5	1558.5
40°	1379.3	1168.9	1075.0	1097.3	1186.9	1286.5	1464.7	1765.8	1717.5	1647.5
42.5°	1392.6	1211.8	1177.3	1217.6	1294.5	1336.4	1485.9	1797.0	1774.8	1714.9
45°	1399.5	1296.6	1331.1	1368.7	1415.9	1391.0	1474.2	1807.6	1800.7	1749.3
47.5°	1430.7	1424.4	1509.2	1561.1	1558.5	1473.1	1451.9	1806.6	1817.7	1775.3
50°	1494.3	1573.3	1692.1	1743.0	1723.4	1550.0	1447.7	1805.0	1851.6	1817.2
52.5°	1570.2	1722.3	1889.8	1911.0	1869.7	1627.9	1479.5	1832.6	1915.2	1892.5
55°	1669.8	1862.2	2045.1	2052.0	1993.7	1703.7	1547.4	1913.7	2034.0	2032.9
57.5°	1808.7	1987.9	2175.5	2167.0	2084.9	1808.7	1656.6	2035.0	2166.0	2184.5
60°	1959.8	2120.4	2281.0	2276.2	2188.8	1929.6	1806.6	2214.8	2281.5	2286.3
62.5°	2104.5	2243.4	2382.8	2360.0	2261.4	2054.7	2014.4	2405.6	2356.8	2321.3
64°	2198.8	2284.7	2408.8	2372.7	2278.9	2114.6	2134.2	2467.6	2378.0	2319.2
65°	2261.4	2294.8	2402.9	2359.5	2273.1	2136.8	2224.8	2493.6	2381.7	2307.0
67.5°	2373.8	2237.0	2245.0	2210.5	2133.1	2116.2	2373.3	2479.3	2340.9	2229.1
70°	2342.5	2004.3	1895.1	1873.4	1780.6	1876.0	2354.7	2344.6	2187.7	2051.5
72.5°	2075.3	1609.4	1452.5	1432.9	1304.0	1421.7	2031.9	1996.9	1760.5	1647.5
75°	1710.1	1219.8	1037.4	1053.8	955.8	1064.4	1616.3	1368.2	1172.0	1104.7
77.5°	1327.4	861.9	716.7	697.1	677.5	689.1	1111.1	821.7	684.9	622.9
80°	846.0	541.8	537.5	491.4	475.5	400.8	570.9	437.3	344.0	325.5
82.5°	449.5	312.2	354.6	284.1	228.5	164.3	193.5	129.9	109.7	115.0
85°	123.0	64.7	18.0	0.0	0.0	0.0	0.0	0.5	0.5	0.5
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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