

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: P401763

Luminaire Tested: **ENT-SA1E-830-U-SLR-HSS**

Issue Date: 5/20/2020

Test Information

Test Method: LM-79-08
Report Number: P401763
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2004-754-10)
Test Lab: INNOVATION CENTER
Issue Date: 5/20/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: ENT-SA1E-830-U-SLR-HSS
Description: ENTRI LED LUMINAIRE
(1) 80 CRI, 3000K, 1050mA LIGHTSQUARE WITH 16 LEDS AND SPILL LIGHT
ELIMINATOR RIGHT OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4203 lumens
Efficiency: N/A
Efficacy: 73.5 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type IV - Short - Semi-Cutoff
BUG Rating: B1 - U0 - G1

Input Watts (W): 57.2
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

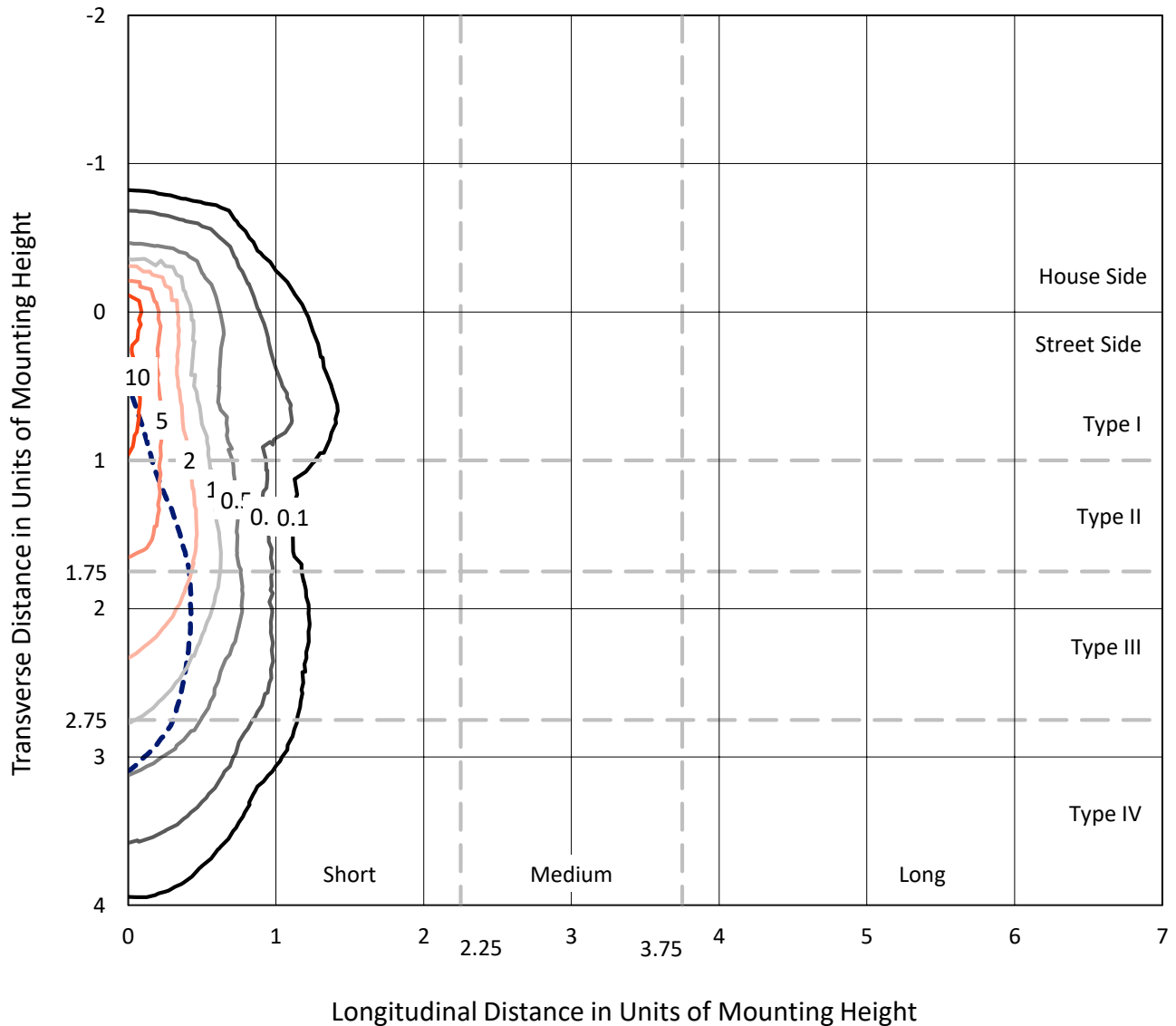


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

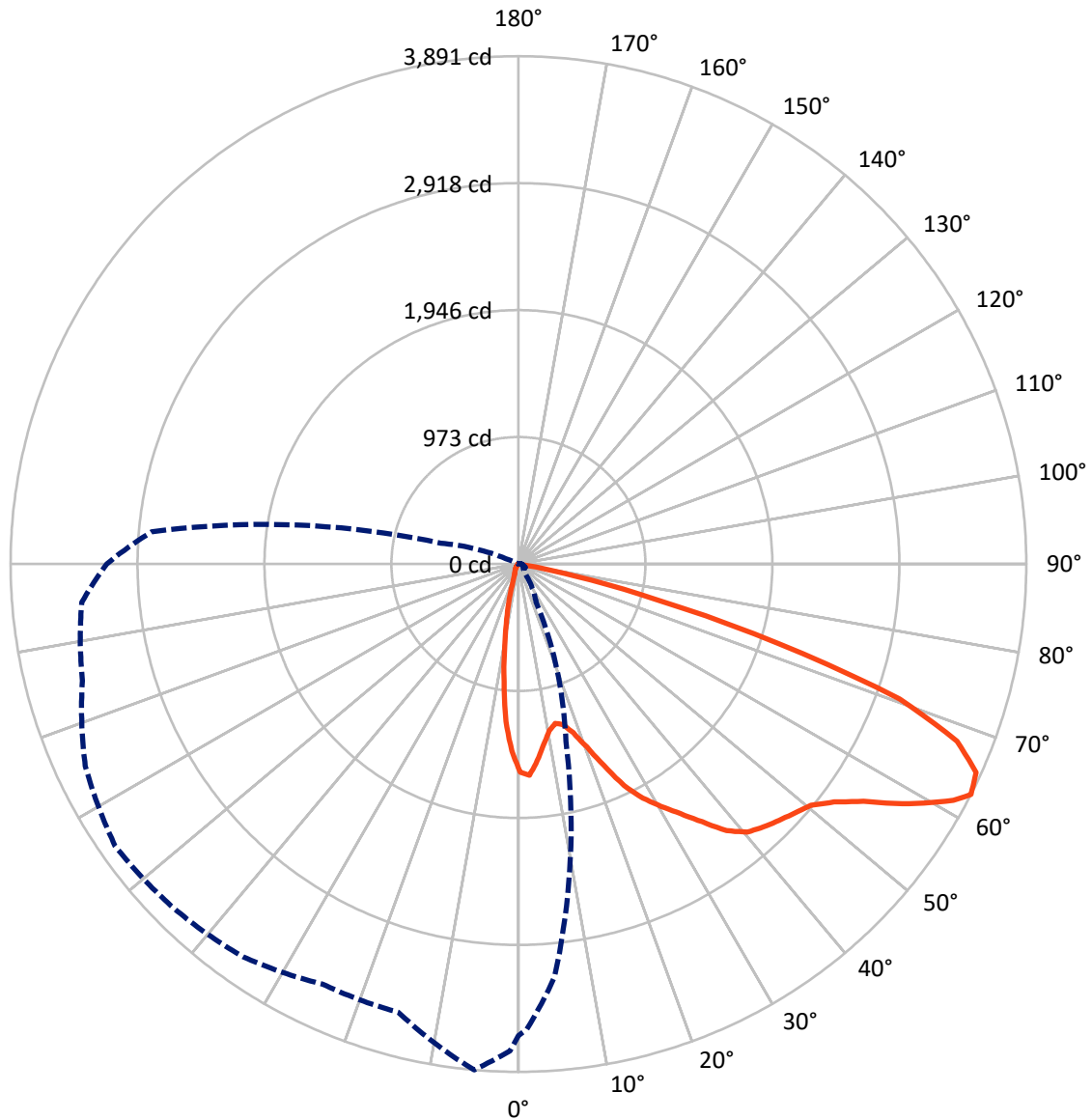


Based on 10 foot mounting height. Maximum calculated value = 15.9 fc
 Type IV - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 355-Deg Lateral - - - Horizontal Cone Through 62.5-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	591.2	0.0	591.2
	% Fixture	14.1	0.0	14.1
Street Side	Lumens	3611.8	0.0	3611.8
	% Fixture	85.9	0.0	85.9
Total	Lumens	4203.0	0.0	4203.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	119.6	2.8
10°-20°	227.2	5.4
20°-30°	316.2	7.5
30°-40°	457.3	10.9
40°-50°	655.7	15.6
50°-60°	951.3	22.6
60°-70°	1029.2	24.5
70°-80°	415.7	9.9
80°-90°	30.8	0.7
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°	4203.0	100.0
0°-180°	4203.0	100.0



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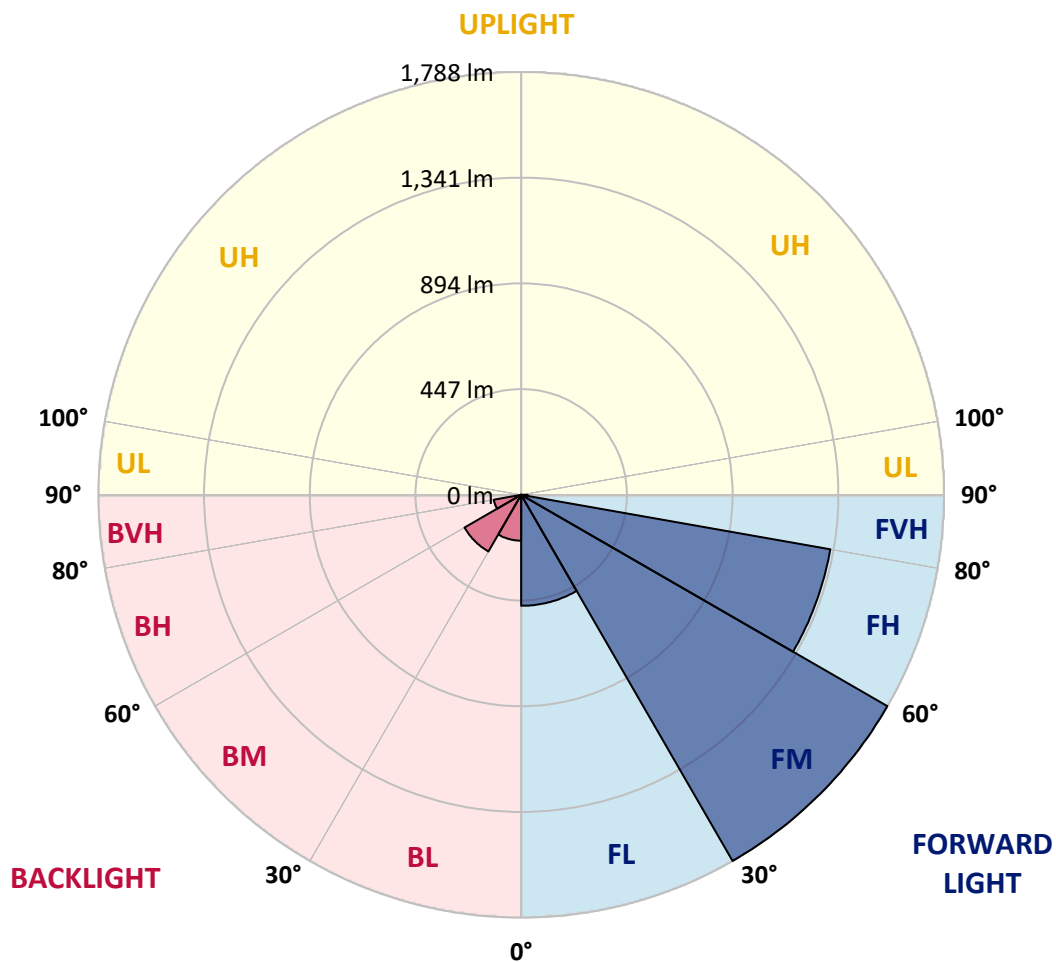
CATALOG NUMBER: ENT-SA1E-830-U-SLR-HSS

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	469.2	11.2			
FM	(30°-60°)	1787.7	42.5			
FH	(60°-80°)	1327.3	31.6			G1/1800
FVH	(80°-90°)	27.7	0.7			G1/100
BL	(0°-30°)	193.8	4.6	B1/500		
BM	(30°-60°)	276.6	6.6	B1/1000		
BH	(60°-80°)	117.6	2.8	B1/500		G1/500
BVH	(80°-90°)	3.1	0.1			G0/10
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°	1594.3	1594.3	1594.3	1594.3	1594.3	1594.3	1594.3	1594.3	1594.3	1594.3	1594.3
2.5°	1600.9	1594.3	1579.3	1546.9	1500.3	1470.4	1451.2	1426.3	1400.5	1392.2	1375.6
5°	1461.2	1450.4	1429.6	1348.1	1274.9	1201.7	1149.3	1099.4	1082.8	1049.6	1069.5
7.5°	1326.5	1321.5	1273.3	1167.6	1051.2	957.2	897.4	824.2	802.5	768.5	741.0
10°	1220.9	1216.7	1158.5	1020.4	894.9	816.7	769.3	721.9	674.5	626.2	588.0
12.5°	1167.6	1158.5	1091.1	942.3	825.8	761.0	711.1	647.9	597.1	532.3	485.7
15°	1176.0	1167.6	1090.3	929.8	792.6	702.7	628.7	553.9	482.4	418.3	372.6
17.5°	1242.5	1239.2	1145.2	940.6	752.6	633.7	534.8	434.1	349.3	280.3	241.2
20°	1372.2	1362.3	1225.9	963.9	711.1	553.9	418.3	294.4	223.7	176.3	159.7
22.5°	1532.7	1510.3	1353.1	998.0	671.1	468.2	302.7	197.9	159.7	141.4	129.7
25°	1721.5	1722.4	1511.1	1043.7	631.2	388.4	212.1	157.2	134.7	121.4	111.4
27.5°	1874.6	1862.9	1653.3	1089.5	588.0	318.5	178.0	137.2	118.1	104.0	98.1
30°	1987.7	1970.2	1747.3	1121.1	532.3	269.5	159.7	130.6	111.4	95.6	88.2
32.5°	2104.1	2082.5	1832.1	1138.5	499.0	246.2	141.4	113.9	99.8	93.1	83.2
35°	2240.5	2221.4	1926.1	1136.9	481.5	232.9	128.1	103.1	84.8	74.0	67.4
37.5°	2392.7	2353.6	2023.4	1129.4	469.1	226.2	116.4	95.6	79.0	67.4	59.0
40°	2523.2	2484.2	2113.2	1119.4	460.7	219.6	109.8	90.7	74.8	62.4	54.1
42.5°	2625.5	2588.1	2197.2	1106.9	456.6	205.4	113.1	87.3	71.5	59.0	49.9
45°	2713.7	2675.4	2297.0	1105.3	454.9	195.4	111.4	86.5	69.9	54.9	46.6
47.5°	2816.0	2796.0	2428.4	1132.7	448.3	188.0	102.3	93.1	69.0	53.2	44.1
50°	2967.4	2949.9	2600.6	1214.2	438.3	180.5	93.1	102.3	69.0	51.6	41.6
52.5°	3179.4	3159.5	2871.7	1320.7	429.1	172.2	84.0	99.0	69.9	49.1	39.9
55°	3399.0	3395.7	3127.9	1433.8	420.8	153.9	74.0	89.0	68.2	45.7	37.4
57.5°	3571.1	3568.6	3320.0	1510.3	405.0	123.9	67.4	74.0	63.2	41.6	34.1
60°	3641.8	3621.0	3340.8	1510.3	368.4	102.3	61.5	58.2	64.0	37.4	29.9
61°	3641.8	3615.2	3303.3	1487.8	350.1	97.3	58.2	54.1	65.7	35.8	28.3
62.5°	3613.5	3569.5	3175.3	1407.2	321.0	97.3	53.2	48.2	59.9	34.1	25.8
65°	3488.0	3415.6	2875.0	1223.4	291.1	99.8	45.7	40.8	43.2	29.1	22.5
67.5°	3177.8	3096.3	2485.8	968.0	267.0	105.6	38.3	35.8	33.3	25.8	20.0
70°	2618.1	2549.0	2028.4	725.2	247.8	107.3	33.3	29.9	28.3	22.5	17.5
72.5°	1673.3	1559.4	1266.6	491.5	198.8	93.1	27.4	28.3	25.8	18.3	14.1
75°	808.4	840.0	736.8	247.8	133.9	60.7	21.6	23.3	20.8	16.6	12.5
77.5°	361.8	355.1	351.8	63.2	34.1	20.8	13.3	15.8	16.6	15.0	10.8
80°	37.4	50.7	29.9	19.1	12.5	9.1	7.5	8.3	10.0	10.8	5.8
82.5°	1.7	0.8	0.8	2.5	2.5	1.7	0.0	0.0	1.7	1.7	0.8
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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°	1594.3	1594.3	1594.3	1594.3	1594.3	1594.3	1594.3	1594.3	1594.3	1594.3	1594.3
2.5°	1360.6	1383.0	1373.1	1370.6	1383.9	1377.2	1397.2	1398.0	1413.0	1432.9	1445.4
5°	1069.5	1052.0	1087.0	1110.3	1139.4	1130.2	1165.2	1161.0	1180.1	1211.7	1199.2
7.5°	742.7	745.2	763.5	784.3	862.4	878.2	889.9	899.0	898.2	905.7	919.0
10°	568.0	553.9	541.4	570.5	601.3	635.4	640.4	652.9	618.8	632.9	639.5
12.5°	464.9	448.3	420.8	405.8	413.3	433.3	441.6	449.1	429.1	430.0	444.9
15°	352.6	330.2	319.4	299.4	291.9	290.2	294.4	283.6	281.1	272.0	277.8
17.5°	229.5	222.9	217.1	212.9	207.1	205.4	190.4	164.7	149.7	146.4	146.4
20°	153.0	148.0	148.0	156.4	153.9	147.2	127.2	105.6	94.8	91.5	93.1
22.5°	125.6	122.3	117.3	117.3	120.6	115.6	97.3	81.5	74.0	74.0	74.0
25°	108.9	107.3	102.3	97.3	99.0	94.8	79.0	69.0	64.0	63.2	64.0
27.5°	95.6	94.8	89.0	84.0	84.0	80.7	68.2	59.0	55.7	54.1	54.9
30°	86.5	84.8	78.2	74.0	73.2	69.9	58.2	51.6	48.2	47.4	47.4
32.5°	79.8	76.5	70.7	66.5	64.0	59.0	50.7	44.1	40.8	39.9	39.9
35°	64.0	64.0	61.5	59.0	55.7	48.2	42.4	36.6	33.3	32.4	32.4
37.5°	55.7	52.4	48.2	49.1	47.4	40.8	34.9	29.1	26.6	25.8	25.8
40°	50.7	46.6	40.8	38.3	39.1	35.8	29.1	22.5	19.1	20.0	19.1
42.5°	45.7	42.4	35.8	29.9	29.1	29.9	22.5	15.8	13.3	13.3	13.3
45°	42.4	39.1	31.6	24.9	20.8	23.3	17.5	10.8	8.3	8.3	8.3
47.5°	39.9	36.6	28.3	20.8	15.0	15.8	12.5	6.7	5.0	3.3	4.2
50°	38.3	34.1	25.8	16.6	10.8	9.1	8.3	3.3	0.8	0.8	0.0
52.5°	35.8	32.4	23.3	14.1	8.3	5.8	4.2	0.8	0.0	0.0	0.0
55°	34.1	29.9	20.8	12.5	6.7	3.3	0.8	0.0	0.0	0.0	0.0
57.5°	30.8	27.4	18.3	10.0	5.0	1.7	0.0	0.0	0.0	0.0	0.0
60°	27.4	24.9	15.8	7.5	3.3	0.0	0.0	0.0	0.0	0.0	0.0
61°	25.8	23.3	15.0	6.7	2.5	0.0	0.0	0.0	0.0	0.0	0.0
62.5°	24.1	21.6	13.3	5.0	1.7	0.0	0.0	0.0	0.0	0.0	0.0
65°	20.8	18.3	11.6	3.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
67.5°	18.3	16.6	10.0	1.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70°	15.8	14.1	7.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
72.5°	13.3	12.5	5.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75°	11.6	10.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	9.1	8.3	4.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	5.0	4.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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):

	185°	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°
0°	1594.3	1594.3	1594.3	1594.3	1594.3	1594.3	1594.3	1594.3	1594.3	1594.3	1594.3
2.5°	1457.1	1486.2	1513.6	1548.5	1567.7	1620.1	1657.5	1689.1	1714.0	1719.0	1739.0
5°	1232.5	1273.3	1299.9	1373.1	1413.8	1501.1	1568.5	1648.3	1719.9	1759.0	1794.7
7.5°	928.1	948.1	993.8	1067.0	1163.5	1239.2	1353.1	1453.7	1582.6	1653.3	1719.9
10°	655.3	673.6	741.0	817.5	905.7	1032.9	1171.0	1303.2	1433.8	1524.4	1602.6
12.5°	460.7	520.6	587.1	684.5	770.9	864.1	1011.3	1166.0	1329.0	1415.5	1500.3
15°	302.7	355.9	448.3	570.5	678.6	769.3	906.5	1087.8	1294.9	1391.4	1472.0
17.5°	149.7	188.8	270.3	401.7	545.6	688.6	854.1	1073.7	1339.0	1447.9	1523.6
20°	94.0	105.6	135.6	227.0	392.5	603.8	815.0	1101.9	1458.7	1579.3	1628.4
22.5°	75.7	79.0	90.7	120.6	239.5	499.0	780.9	1140.2	1590.1	1737.3	1788.1
25°	64.9	67.4	74.0	89.0	138.9	374.2	739.3	1207.6	1743.2	1921.1	1933.6
27.5°	55.7	58.2	64.0	75.7	99.0	252.0	679.5	1286.6	1926.1	2082.5	2074.2
30°	47.4	50.7	56.6	64.9	78.2	170.5	568.0	1366.4	2060.8	2186.4	2173.1
32.5°	40.8	43.2	48.2	55.7	64.9	117.3	426.6	1418.8	2173.1	2284.6	2255.5
35°	33.3	35.8	39.9	46.6	52.4	83.2	322.7	1420.5	2288.7	2406.0	2332.8
37.5°	26.6	28.3	32.4	38.3	43.2	64.9	237.0	1393.0	2431.8	2564.0	2421.0
40°	20.0	22.5	26.6	31.6	36.6	54.9	177.1	1326.5	2571.5	2722.0	2527.4
42.5°	13.3	16.6	20.8	25.8	34.9	44.1	124.7	1215.9	2684.6	2862.6	2631.4
45°	8.3	10.8	15.8	21.6	35.8	34.9	83.2	1083.6	2765.3	2969.8	2702.1
47.5°	4.2	6.7	11.6	20.8	31.6	25.8	51.6	957.2	2838.4	3032.2	2734.5
50°	0.8	2.5	8.3	25.8	26.6	19.1	34.1	878.2	2876.7	3016.4	2731.2
52.5°	0.0	0.0	5.8	24.9	19.1	15.0	26.6	866.6	2936.6	3037.2	2788.5
55°	0.0	0.0	2.5	10.8	10.8	12.5	23.3	850.8	3043.0	3161.1	2961.5
57.5°	0.0	0.0	0.0	5.0	6.7	10.0	21.6	809.2	3155.3	3292.5	3171.9
60°	0.0	0.0	0.0	2.5	4.2	8.3	19.1	714.4	3052.2	3293.4	3346.6
61°	0.0	0.0	0.0	2.5	3.3	7.5	17.5	681.1	2959.9	3240.1	3368.2
62.5°	0.0	0.0	0.0	0.8	2.5	5.8	15.0	615.4	2821.8	3154.5	3358.2
65°	0.0	0.0	0.0	0.0	0.8	3.3	11.6	497.3	2591.4	2939.1	3243.5
67.5°	0.0	0.0	0.0	0.0	0.0	0.8	7.5	350.1	2260.4	2695.4	2998.1
70°	0.0	0.0	0.0	0.0	0.0	0.0	3.3	202.9	1821.3	2282.1	2568.2
72.5°	0.0	0.0	0.0	0.0	0.0	0.0	1.7	92.3	1181.8	1762.3	2025.9
75°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	39.1	727.7	1273.3	1513.6
77.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	17.5	493.2	847.5	1018.8
80°	0.0	1.7	0.8	0.0	0.0	0.0	0.0	6.7	303.6	528.9	574.7
82.5°	0.0	0.8	0.8	0.0	0.0	0.0	0.0	0.0	157.2	373.4	380.9
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	65.7	79.0
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):

	285°	295°	305°	315°	325°	335°	345°	355°	359°	360°
0°	1594.3	1594.3	1594.3	1594.3	1594.3	1594.3	1594.3	1594.3	1594.3	1594.3
2.5°	1757.3	1762.3	1765.6	1759.8	1724.0	1704.1	1664.1	1620.1	1605.1	1600.9
5°	1859.6	1887.9	1882.9	1844.6	1782.2	1705.7	1610.9	1512.8	1475.4	1461.2
7.5°	1839.6	1913.6	1927.8	1887.9	1782.2	1648.3	1511.1	1394.7	1340.6	1326.5
10°	1738.2	1831.3	1876.2	1863.7	1764.8	1610.1	1441.3	1298.2	1239.2	1220.9
12.5°	1640.0	1729.8	1758.1	1768.1	1714.0	1580.1	1406.3	1252.5	1190.9	1167.6
15°	1574.3	1630.0	1628.4	1646.7	1642.5	1568.5	1428.8	1275.8	1206.7	1176.0
17.5°	1552.7	1536.1	1514.4	1529.4	1558.5	1571.8	1502.0	1358.9	1278.3	1242.5
20°	1566.0	1484.5	1437.1	1436.3	1497.8	1599.3	1609.3	1496.2	1420.5	1372.2
22.5°	1634.2	1458.7	1385.5	1387.2	1462.9	1640.0	1733.2	1675.8	1592.6	1532.7
25°	1734.8	1463.7	1365.6	1375.6	1459.6	1675.8	1867.1	1880.4	1773.9	1721.5
27.5°	1837.1	1507.0	1366.4	1377.2	1473.7	1694.9	1943.6	2030.9	1939.4	1874.6
30°	1908.7	1560.2	1381.4	1393.0	1496.2	1709.9	1972.7	2154.8	2060.0	1987.7
32.5°	1976.0	1615.1	1405.5	1417.1	1541.1	1740.7	2027.6	2279.6	2175.6	2104.1
35°	2041.7	1669.1	1450.4	1471.2	1613.4	1796.4	2083.3	2425.9	2339.4	2240.5
37.5°	2098.3	1729.0	1527.8	1571.8	1711.5	1882.0	2159.0	2592.3	2503.3	2392.7
40°	2145.7	1799.7	1687.4	1736.5	1861.2	1972.7	2243.0	2701.2	2642.2	2523.2
42.5°	2183.9	1924.5	1916.1	1985.2	2072.5	2076.6	2267.1	2753.6	2731.2	2625.5
45°	2248.0	2148.2	2216.4	2329.5	2323.6	2201.4	2260.4	2801.9	2803.5	2713.7
47.5°	2352.8	2428.4	2625.5	2702.1	2663.0	2371.9	2267.1	2849.3	2886.7	2816.0
50°	2502.5	2746.1	3003.9	3105.4	2991.5	2543.2	2326.1	2905.8	3018.9	2967.4
52.5°	2630.5	2986.5	3353.2	3443.9	3288.4	2726.2	2464.2	3028.1	3196.1	3179.4
55°	2813.5	3193.6	3601.9	3671.8	3547.0	2933.3	2649.7	3207.7	3390.7	3399.0
57.5°	3000.6	3380.7	3764.1	3834.8	3740.0	3191.1	2913.3	3465.5	3573.6	3571.1
60°	3208.5	3555.3	3837.3	3876.4	3822.3	3448.9	3196.9	3701.7	3699.2	3641.8
61°	3327.5	3611.1	3832.3	3843.9	3791.5	3524.6	3343.3	3792.4	3717.5	3641.8
62.5°	3458.9	3661.8	3770.7	3731.6	3675.1	3551.2	3555.3	3891.3	3730.0	3613.5
65°	3591.9	3534.5	3487.1	3300.0	3246.8	3306.7	3734.1	3853.9	3654.3	3488.0
67.5°	3364.1	3028.9	2926.6	2738.6	2528.2	2772.7	3564.5	3625.2	3399.0	3177.8
70°	2749.5	2225.5	2104.1	2097.4	1946.1	2214.7	3143.7	3099.6	2821.0	2618.1
72.5°	2154.8	1518.6	1353.1	1391.4	1361.4	1650.8	2571.5	2080.0	1808.9	1673.3
75°	1689.1	1079.5	931.5	924.8	892.4	1124.4	1882.9	1096.1	904.8	808.4
77.5°	1114.4	777.6	775.1	716.1	691.1	609.6	845.0	439.1	358.4	361.8
80°	642.0	476.5	558.9	443.3	444.1	357.6	341.8	64.0	51.6	37.4
82.5°	368.4	228.7	173.0	68.2	143.0	143.0	27.4	0.8	0.8	1.7
85°	35.8	10.8	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0
87.5°	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

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