

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: P401203

Luminaire Tested: **ENT-SA1B-827-U-SLL-HSS**

Issue Date: 5/20/2020

Test Information

Test Method: LM-79-08
Report Number: P401203
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2004-754-8)
Test Lab: INNOVATION CENTER
Issue Date: 5/20/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: ENT-SA1B-827-U-SLL-HSS
Description: ENTRI LED LUMINAIRE
(1) 80 CRI, 2700K, 450mA LIGHTSQUARE WITH 16 LEDS AND SPILL LIGHT ELIMINATOR LEFT OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1895 lumens
Efficiency: N/A
Efficacy: 74.6 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type III - Short - Semi-Cutoff
BUG Rating: B0 - U0 - G1

Input Watts (W): 25.4
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

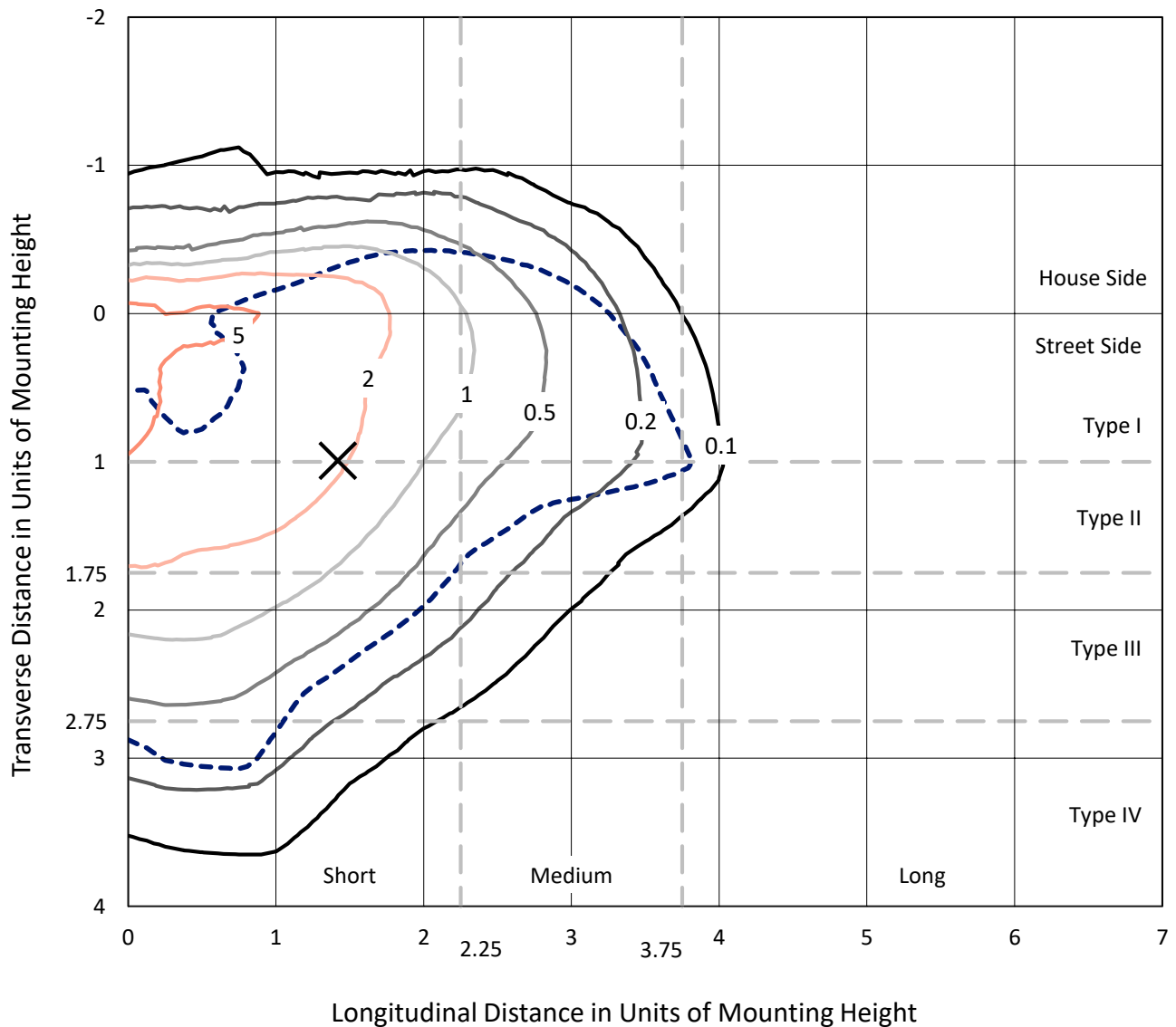


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Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd
 - - - 1/2 Max cd

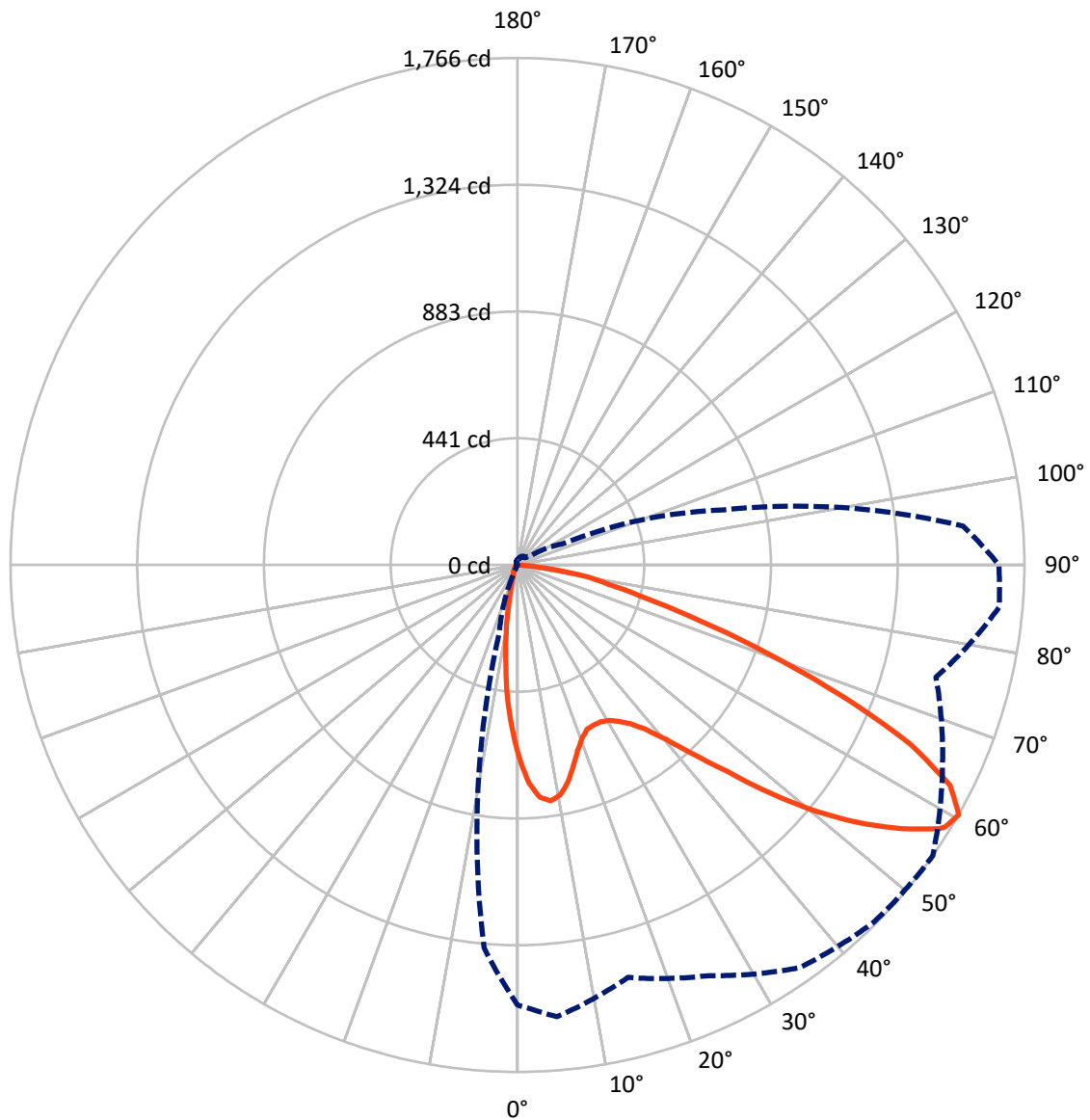


Based on 10 foot mounting height. Maximum calculated value = 7.9 fc
 Type III - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 55-Deg Lateral - - - Horizontal Cone Through 60-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	335.6	0.0	335.6
	% Fixture	17.7	0.0	17.7
Street Side	Lumens	1559.4	0.0	1559.4
	% Fixture	82.3	0.0	82.3
Total	Lumens	1895.0	0.0	1895.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	50.4	2.7
10°-20°	95.8	5.1
20°-30°	136.6	7.2
30°-40°	200.4	10.6
40°-50°	295.5	15.6
50°-60°	437.7	23.1
60°-70°	466.5	24.6
70°-80°	193.5	10.2
80°-90°	18.6	1.0
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°	1895.0	100.0
0°-180°	1895.0	100.0



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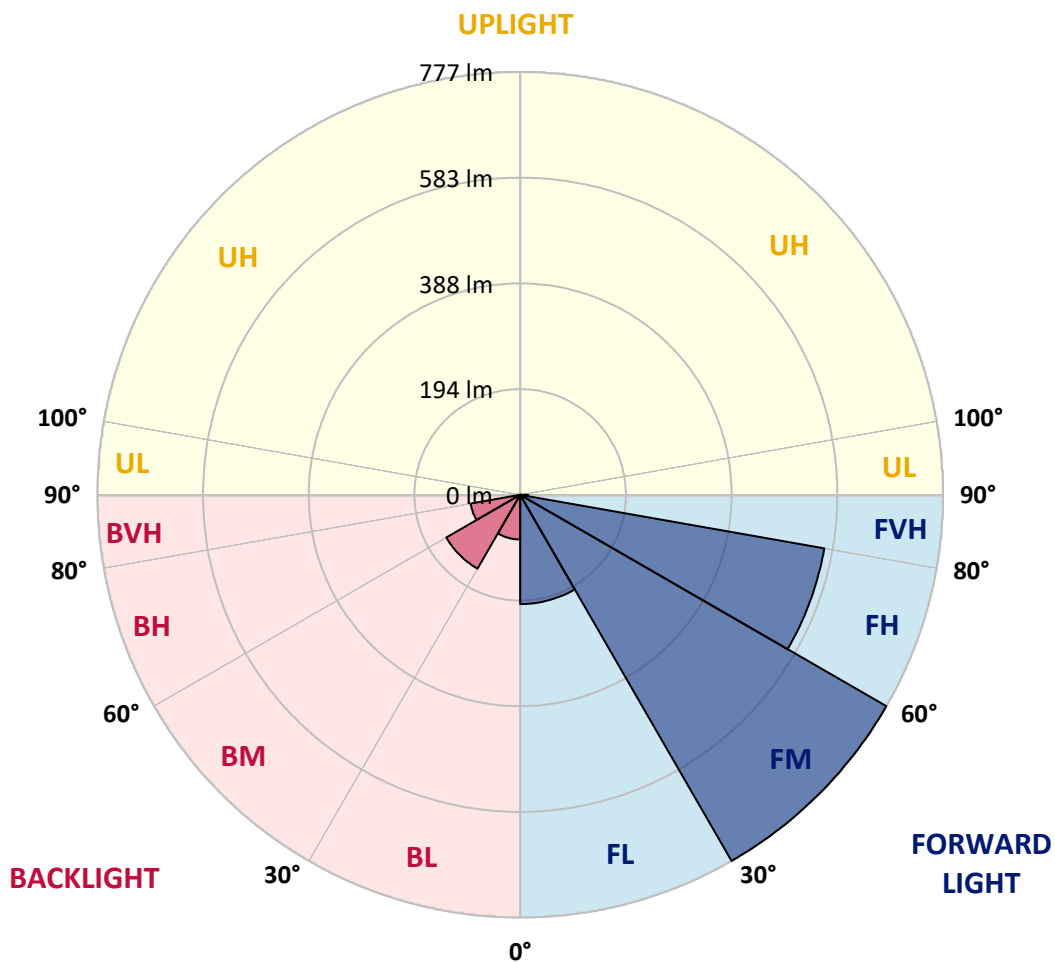
CATALOG NUMBER: ENT-SA1B-827-U-SLL-HSS

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	200.7	10.6			
FM	(30°-60°)	777.0	41.0			
FH	(60°-80°)	567.5	29.9			G0/660
FVH	(80°-90°)	14.2	0.8			G1/100
BL	(0°-30°)	82.0	4.3	B0/110		
BM	(30°-60°)	156.7	8.3	B0/220		
BH	(60°-80°)	92.5	4.9	B0/110		G0/110
BVH	(80°-90°)	4.4	0.2			G0/10
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B0-U0-G1

Type III Short





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CANDELA DISTRIBUTION (FULL):

	0°	1°	5°	15°	25°	35°	45°	55°	65°	75°	85°
0°	669.2	669.2	669.2	669.2	669.2	669.2	669.2	669.2	669.2	669.2	669.2
2.5°	699.0	697.9	707.9	728.7	741.6	749.5	750.9	759.2	750.9	746.6	731.2
5°	678.5	678.2	697.5	743.0	780.3	808.2	821.8	812.5	798.2	769.9	735.5
7.5°	621.9	621.9	658.5	719.4	781.7	830.1	846.6	829.4	795.3	738.4	676.8
10°	575.7	580.0	615.1	687.9	757.0	810.0	828.3	815.0	770.6	696.8	624.4
12.5°	548.1	550.6	589.7	662.8	727.3	770.3	781.4	777.4	745.2	664.9	588.3
15°	550.6	554.2	599.0	658.8	700.8	718.0	721.9	726.9	713.7	652.0	576.4
17.5°	590.1	592.6	637.7	676.4	674.6	669.2	670.7	678.9	694.7	662.8	600.4
20°	653.1	659.6	705.1	705.8	661.0	635.9	629.5	643.1	685.7	691.1	651.7
22.5°	734.1	736.6	782.8	755.2	662.4	613.0	605.5	620.9	688.6	736.9	722.6
25°	827.9	836.9	862.0	819.3	683.2	609.8	604.7	617.6	699.0	785.7	795.7
27.5°	891.3	898.5	922.5	863.0	701.8	611.5	602.2	618.0	711.5	831.5	873.8
30°	948.0	953.0	961.9	886.0	723.0	620.5	605.5	628.0	718.3	841.2	924.3
32.5°	1001.3	1007.4	1002.1	913.6	746.3	637.3	611.5	649.2	733.0	860.5	968.4
35°	1070.1	1070.5	1052.2	941.1	772.8	657.4	629.5	679.3	761.7	890.6	1015.7
37.5°	1151.8	1152.5	1106.3	969.4	802.9	691.1	671.7	725.8	803.2	925.4	1083.4
40°	1223.1	1226.0	1164.7	1002.1	839.8	756.6	754.9	799.6	856.6	971.6	1156.1
42.5°	1285.1	1293.3	1218.4	1029.3	892.1	857.3	861.6	902.5	921.4	1010.3	1201.2
45°	1347.8	1347.4	1262.5	1056.5	979.5	987.0	1027.8	1026.1	994.9	1031.1	1236.7
47.5°	1386.8	1385.0	1289.4	1100.9	1097.3	1169.4	1212.7	1189.1	1076.2	1053.3	1281.1
50°	1401.9	1401.2	1310.5	1157.5	1217.4	1334.5	1396.5	1349.2	1175.8	1090.5	1334.2
52.5°	1444.5	1440.9	1359.2	1222.0	1325.9	1493.6	1544.8	1492.1	1275.0	1157.5	1395.8
55°	1511.1	1512.2	1443.1	1297.6	1413.0	1605.7	1668.4	1621.5	1376.4	1249.6	1480.3
57.5°	1555.9	1559.1	1535.9	1381.8	1506.1	1684.2	1745.1	1731.8	1511.5	1359.6	1579.6
58°	1560.2	1562.7	1550.5	1397.9	1520.1	1693.1	1755.5	1746.2	1541.2	1394.7	1603.2
60°	1532.6	1540.2	1579.2	1486.8	1577.8	1712.1	1757.3	1765.5	1633.3	1508.6	1684.2
62.5°	1457.8	1460.3	1531.2	1586.4	1617.2	1665.2	1669.5	1691.0	1671.3	1642.3	1756.5
65°	1366.0	1366.0	1442.7	1591.0	1515.1	1507.2	1482.1	1503.6	1560.6	1726.1	1751.5
67.5°	1206.6	1207.7	1305.5	1417.3	1256.1	1228.8	1212.7	1220.6	1342.0	1656.2	1654.1
70°	975.2	974.5	1075.1	1147.5	932.2	908.9	928.2	925.7	1090.2	1471.7	1444.1
72.5°	689.6	695.7	799.3	886.3	633.0	545.6	630.9	663.9	820.1	1240.7	1117.4
75°	388.4	396.6	481.1	615.8	399.5	369.0	412.7	459.6	592.9	987.7	750.6
77.5°	194.9	198.1	246.5	296.3	242.2	281.2	278.7	323.5	406.6	666.4	429.2
80°	112.5	118.9	135.4	153.0	135.4	178.4	207.1	243.6	250.4	344.6	239.3
82.5°	45.1	50.5	63.4	72.0	56.2	53.0	36.2	113.9	150.8	166.6	91.7
85°	0.0	0.0	0.4	0.7	1.1	1.1	1.8	20.1	36.9	8.2	15.0
87.5°	0.0	0.0	0.4	0.4	0.7	1.1	1.4	2.5	3.2	3.9	13.6
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°	669.2	669.2	669.2	669.2	669.2	669.2	669.2	669.2	669.2	669.2	669.2
2.5°	725.5	721.5	708.3	688.2	675.7	656.3	648.4	630.2	620.9	605.5	605.5
5°	718.3	702.2	668.9	625.5	594.7	562.5	552.1	530.6	515.2	496.9	489.4
7.5°	653.1	630.5	578.6	528.1	479.0	446.4	414.1	392.3	371.5	356.5	358.6
10°	593.3	561.0	504.1	439.9	389.1	355.0	326.0	300.6	279.1	257.9	254.7
12.5°	554.2	517.3	449.3	380.5	342.5	317.4	290.5	262.6	236.1	212.8	203.5
15°	537.7	497.6	421.7	356.8	322.1	289.8	258.7	224.3	193.8	165.9	158.4
17.5°	555.7	507.7	419.2	341.1	292.7	252.2	208.9	171.2	135.4	115.4	109.3
20°	604.4	542.0	427.4	325.3	260.1	207.8	154.8	112.1	92.1	79.9	76.0
22.5°	675.0	599.0	441.4	309.9	227.1	154.8	106.8	81.0	69.1	62.7	60.9
25°	751.6	672.5	467.2	297.0	194.2	115.0	79.2	66.3	59.1	54.5	52.7
27.5°	838.0	745.2	498.7	287.3	163.7	92.1	68.1	58.4	52.7	49.4	48.0
30°	892.1	797.5	522.7	270.1	142.9	83.8	64.8	55.2	49.1	46.6	45.5
32.5°	941.9	838.7	545.6	250.4	127.2	74.2	63.1	58.0	50.9	45.9	43.7
35°	996.7	881.0	556.7	238.6	116.8	64.5	51.9	45.1	41.2	40.5	39.4
37.5°	1078.4	931.1	563.9	232.2	110.3	58.8	48.4	40.8	36.2	31.9	30.1
40°	1155.7	983.1	567.5	226.1	107.1	55.2	46.2	38.7	33.7	29.7	27.9
42.5°	1216.3	1030.4	569.6	221.8	101.4	53.0	44.4	37.3	31.9	27.9	26.2
45°	1265.7	1085.2	567.8	220.3	96.7	54.5	43.7	36.2	30.5	26.5	24.7
47.5°	1314.1	1144.6	574.6	218.5	92.1	52.3	44.1	35.8	29.4	25.4	23.6
50°	1377.5	1216.6	599.4	213.5	88.8	49.1	47.6	36.2	29.0	24.7	23.3
52.5°	1459.5	1316.2	644.1	208.1	84.9	46.2	49.8	36.2	28.3	24.0	22.2
55°	1559.1	1428.0	693.6	200.3	78.1	42.6	47.6	36.2	27.6	23.6	21.5
57.5°	1640.5	1527.6	732.6	191.0	65.6	38.3	43.7	34.8	25.8	22.2	20.4
58°	1647.6	1539.1	738.0	188.4	64.1	37.6	42.6	34.4	25.1	21.9	20.1
60°	1676.7	1557.7	740.2	174.8	53.4	35.8	36.9	33.3	23.6	20.4	19.0
62.5°	1666.6	1496.1	694.7	150.8	47.6	32.6	30.8	34.0	21.9	18.6	17.2
65°	1616.8	1375.0	608.7	135.1	48.0	29.0	26.5	29.7	20.1	16.8	15.4
67.5°	1498.2	1191.2	494.4	126.5	50.2	25.8	22.9	22.2	17.9	15.0	14.0
70°	1277.9	976.3	374.7	118.9	53.0	22.9	21.1	19.7	16.5	14.0	12.5
72.5°	941.1	723.0	272.6	111.4	51.6	20.4	19.7	17.9	15.0	12.5	11.8
75°	587.2	419.9	186.7	91.0	46.2	17.9	18.3	16.8	13.6	11.8	10.7
77.5°	342.9	294.8	92.1	67.7	31.9	15.8	16.1	15.4	14.0	11.1	10.4
80°	205.3	183.4	39.4	29.0	17.6	14.0	13.6	14.3	13.3	10.4	9.7
82.5°	88.8	79.5	19.0	16.1	14.3	12.2	11.8	12.2	11.5	8.6	8.2
85°	5.0	13.3	9.0	11.8	10.7	9.0	9.0	9.3	8.2	6.8	6.8
87.5°	4.7	10.0	5.7	7.2	7.9	6.8	7.2	7.2	6.8	6.1	5.7
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°	669.2	669.2	669.2	669.2	669.2	669.2	669.2	669.2	669.2	669.2	669.2
2.5°	597.2	593.3	581.5	577.2	558.5	563.2	564.6	562.8	563.5	565.0	570.3
5°	494.8	488.3	472.9	462.9	457.5	453.9	437.1	437.4	439.9	430.3	442.8
7.5°	351.5	358.6	360.1	350.7	345.0	332.8	317.4	308.8	294.1	302.4	304.2
10°	251.5	247.9	254.7	251.5	242.5	237.9	221.4	220.0	218.5	217.5	227.9
12.5°	191.7	180.9	173.0	174.8	168.0	156.6	153.7	154.1	155.5	155.5	158.4
15°	151.9	135.4	122.9	115.4	116.4	105.0	101.7	91.0	89.6	86.3	87.1
17.5°	106.4	99.6	92.1	83.5	79.9	69.5	57.0	51.2	46.9	47.6	49.8
20°	73.4	70.6	68.4	64.1	60.5	48.4	40.5	38.0	37.6	38.3	39.1
22.5°	59.1	56.2	54.1	52.7	48.0	39.1	34.8	33.0	33.0	33.0	33.3
25°	50.9	48.0	45.1	45.1	40.8	34.0	30.8	29.4	29.0	28.7	29.4
27.5°	47.3	43.3	40.5	38.7	35.5	30.1	27.2	25.8	25.4	25.4	25.8
30°	43.7	39.8	36.9	34.4	30.8	26.9	24.0	22.9	22.2	22.2	22.6
32.5°	41.6	37.6	34.0	30.8	26.9	23.6	21.1	19.7	19.0	19.3	19.7
35°	36.9	33.7	30.5	27.2	23.6	20.8	18.3	16.8	16.5	16.5	16.8
37.5°	29.0	26.5	25.8	24.0	20.8	17.9	15.4	14.0	13.6	13.6	14.0
40°	26.2	22.9	21.5	20.8	19.0	15.4	12.5	11.1	11.1	10.7	11.5
42.5°	24.0	20.8	18.3	17.6	16.5	13.3	10.0	9.0	8.6	8.6	9.0
45°	22.6	19.0	15.8	14.0	14.0	10.7	8.2	6.8	6.4	6.4	6.8
47.5°	21.9	17.9	14.0	11.5	11.1	9.0	6.4	5.0	4.7	4.7	4.7
50°	21.1	16.5	12.5	9.7	8.6	7.5	5.0	3.9	3.6	3.6	3.6
52.5°	20.1	15.8	11.5	8.6	6.8	5.7	3.9	2.9	2.5	2.1	2.5
55°	19.3	14.7	11.1	7.9	5.7	4.3	2.9	2.1	1.8	1.8	1.8
57.5°	18.3	13.6	10.0	7.5	5.4	3.2	2.1	1.4	1.1	1.1	1.4
58°	17.9	13.6	9.7	7.2	5.0	3.2	2.1	1.4	1.1	1.1	1.4
60°	16.8	12.5	9.3	6.4	4.7	2.9	1.8	1.1	0.7	0.7	1.1
62.5°	15.8	11.5	8.2	5.7	3.9	2.5	1.4	0.7	0.4	0.4	0.4
65°	14.0	10.4	7.2	5.4	3.2	1.8	1.1	0.4	0.0	0.0	0.0
67.5°	12.5	9.7	6.4	4.7	2.9	1.4	0.7	0.0	0.0	0.0	0.0
70°	11.5	9.0	5.7	3.9	2.5	1.1	0.4	0.0	0.0	0.0	0.0
72.5°	10.7	8.2	5.4	3.6	1.8	1.1	0.4	0.0	0.0	0.0	0.0
75°	10.4	7.9	5.4	3.2	1.8	1.1	0.7	0.4	0.0	0.0	0.4
77.5°	10.0	7.9	5.4	3.2	2.1	1.1	1.1	0.7	0.7	0.4	1.1
80°	9.3	7.2	4.7	2.9	1.8	1.4	1.1	0.7	0.0	0.0	0.0
82.5°	7.9	5.7	3.9	2.9	1.8	1.1	0.4	0.0	0.0	0.0	0.0
85°	6.4	4.7	3.2	1.8	1.1	0.4	0.0	0.0	0.0	0.0	0.0
87.5°	5.7	3.6	2.5	1.4	0.7	0.4	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°	669.2	669.2	669.2	669.2	669.2	669.2	669.2	669.2	669.2	669.2
2.5°	575.0	591.5	598.3	621.2	631.3	652.0	669.9	685.3	692.9	699.0
5°	446.0	461.8	478.6	512.7	542.0	573.6	613.0	653.8	665.6	678.5
7.5°	311.3	334.6	362.9	393.4	435.3	482.9	539.5	590.1	615.5	621.9
10°	241.8	269.4	299.5	329.6	364.3	415.2	472.2	537.4	564.6	575.7
12.5°	181.6	218.5	254.4	289.8	319.9	364.0	426.0	503.7	533.8	548.1
15°	109.3	150.8	194.9	242.5	284.5	336.0	405.9	496.5	534.5	550.6
17.5°	54.5	74.5	115.0	186.7	248.6	312.8	405.5	522.3	569.3	590.1
20°	40.5	45.9	61.3	116.4	206.7	293.4	409.8	566.4	635.6	653.1
22.5°	34.8	38.7	44.1	68.1	154.8	275.5	424.9	624.8	710.8	734.1
25°	30.5	33.7	38.0	46.9	106.0	254.4	453.2	707.2	796.1	827.9
27.5°	26.9	29.7	33.3	39.4	70.9	214.6	469.3	776.3	864.8	891.3
30°	23.6	25.8	29.4	33.7	52.3	165.9	484.4	837.3	927.2	948.0
32.5°	20.8	22.6	25.4	28.7	39.8	125.7	485.1	889.6	981.6	1001.3
35°	17.6	19.7	21.9	24.7	31.5	98.2	470.4	941.5	1046.1	1070.1
37.5°	14.7	16.5	19.0	21.5	28.7	76.0	439.9	1002.4	1124.6	1151.8
40°	12.5	14.3	16.5	19.3	25.4	55.2	391.2	1057.6	1198.0	1223.1
42.5°	10.0	11.8	14.3	19.0	21.1	39.8	342.1	1110.6	1261.8	1285.1
45°	7.9	10.0	13.3	18.3	17.6	27.9	299.9	1157.5	1316.6	1347.8
47.5°	5.7	8.2	13.3	16.5	14.3	20.1	278.4	1202.7	1365.7	1386.8
50°	4.3	6.8	14.3	14.0	12.2	17.2	281.6	1252.8	1388.3	1401.9
52.5°	3.2	5.7	11.1	10.0	10.4	15.0	294.1	1319.1	1434.8	1444.5
55°	2.9	4.3	6.8	7.5	9.3	14.3	290.9	1381.8	1494.3	1511.1
57.5°	2.5	3.6	5.4	6.1	8.2	13.6	272.6	1409.4	1532.6	1555.9
58°	2.1	3.6	5.0	6.1	8.2	13.3	268.0	1401.9	1530.8	1560.2
60°	1.8	3.2	4.7	5.4	7.2	11.8	245.4	1338.1	1491.4	1532.6
62.5°	1.4	2.1	3.6	3.9	5.7	9.7	202.1	1234.9	1406.9	1457.8
65°	0.7	1.4	2.1	2.9	3.9	7.2	143.7	1112.8	1316.2	1366.0
67.5°	0.0	0.7	1.4	1.8	2.5	5.4	82.8	944.4	1167.2	1206.6
70°	0.0	0.4	0.7	1.1	1.4	3.6	43.7	693.2	904.2	975.2
72.5°	0.4	0.4	0.4	0.0	0.7	2.9	19.3	411.3	616.6	689.6
75°	0.4	0.4	0.0	0.0	0.0	1.4	8.2	216.7	353.6	388.4
77.5°	1.4	0.7	0.0	0.0	0.0	0.4	3.9	116.8	183.4	194.9
80°	0.4	0.0	0.0	0.0	0.0	0.0	1.4	39.1	110.0	112.5
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	47.3	45.1
85°	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
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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