

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: P401024

Luminaire Tested: **ENT-SA1A-827-U-SLL**

Issue Date: 5/20/2020

Test Information

Test Method: LM-79-08
Report Number: P401024
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2004-754-7)
Test Lab: INNOVATION CENTER
Issue Date: 5/20/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: ENT-SA1A-827-U-SLL
Description: ENTRI LED LUMINAIRE
(1) 80 CRI, 2700K, 350mA LIGHTSQUARE WITH 16 LEDS AND SPILL LIGHT ELIMINATOR LEFT OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1777 lumens
Efficiency: N/A
Efficacy: 88.4 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type III - Medium - Non-Cutoff
BUG Rating: B0 - U0 - G1

Input Watts (W): 20.1
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

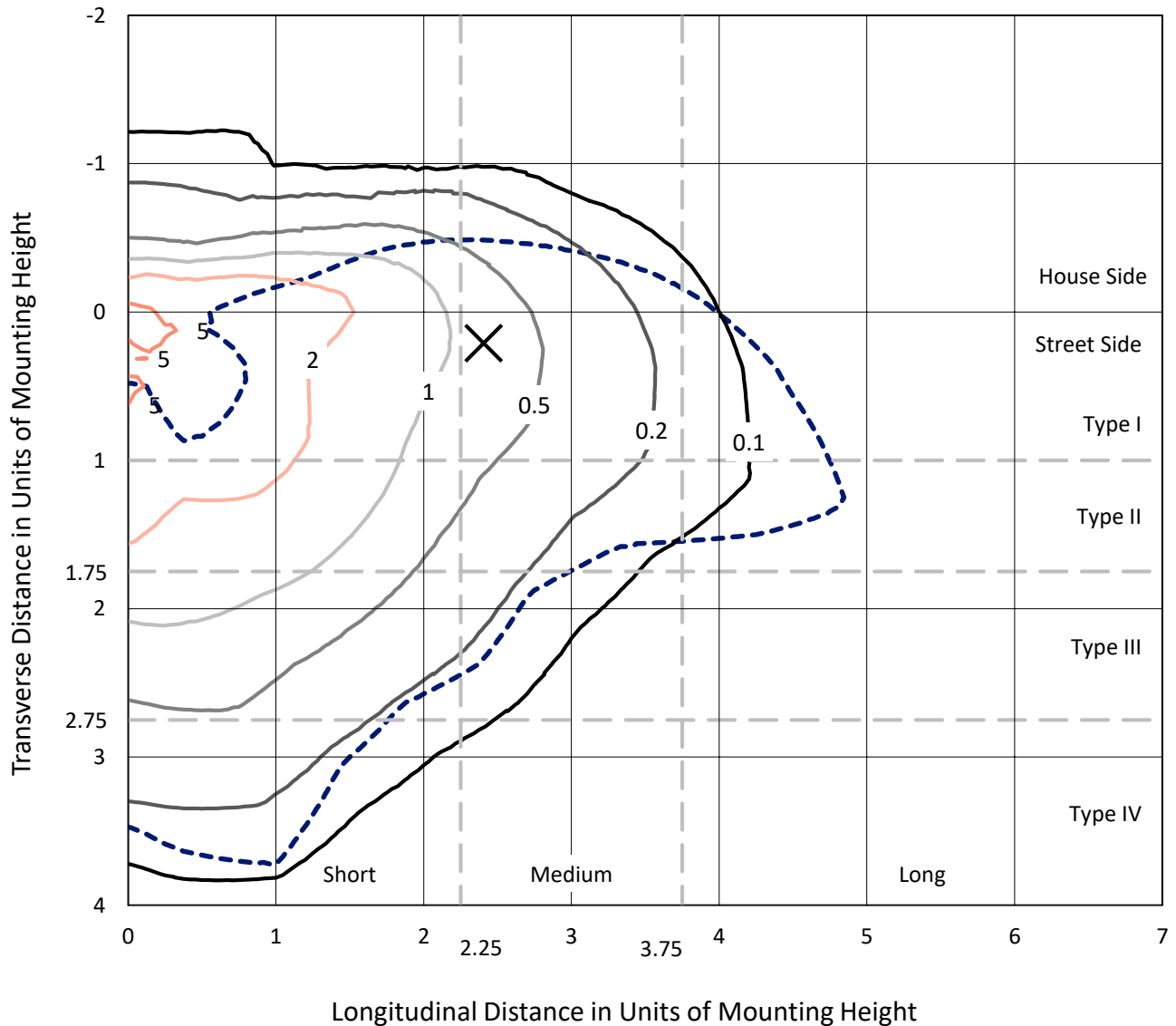


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Iso-Footcandle Lines of Horizontal Illumination

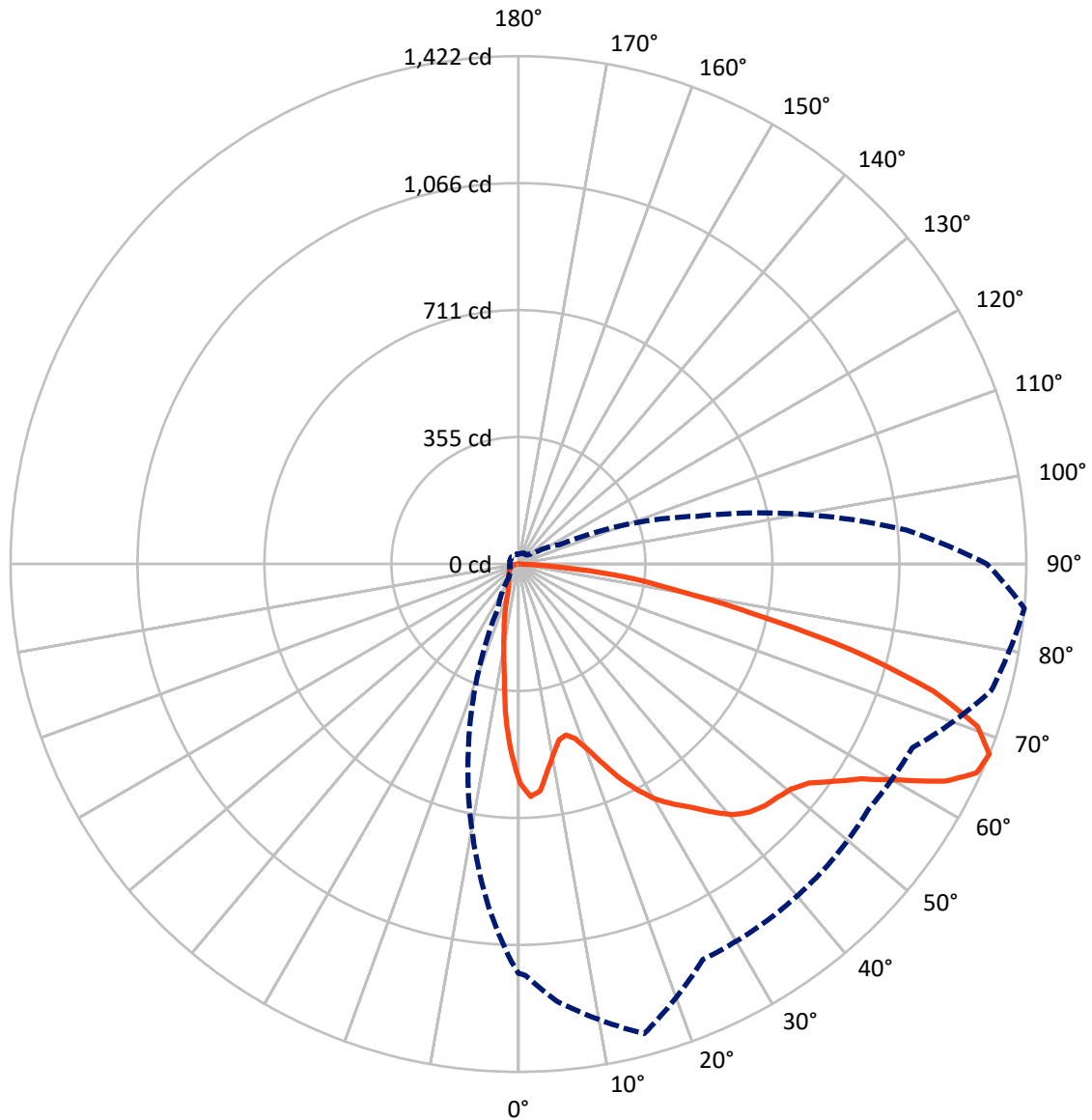
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 6.6 fc
 Type III - Medium - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 85-Deg Lateral - - - Horizontal Cone Through 67.5-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	358.0	0.0	358.0
	% Fixture	20.1	0.0	20.1
Street Side	Lumens	1419.0	0.0	1419.0
	% Fixture	79.9	0.0	79.9
Total	Lumens	1777.0	0.0	1777.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	46.7	2.6
10°-20°	92.1	5.2
20°-30°	128.6	7.2
30°-40°	181.3	10.2
40°-50°	251.2	14.1
50°-60°	353.0	19.9
60°-70°	431.6	24.3
70°-80°	253.6	14.3
80°-90°	38.8	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°	1777.0	100.0
0°-180°	1777.0	100.0



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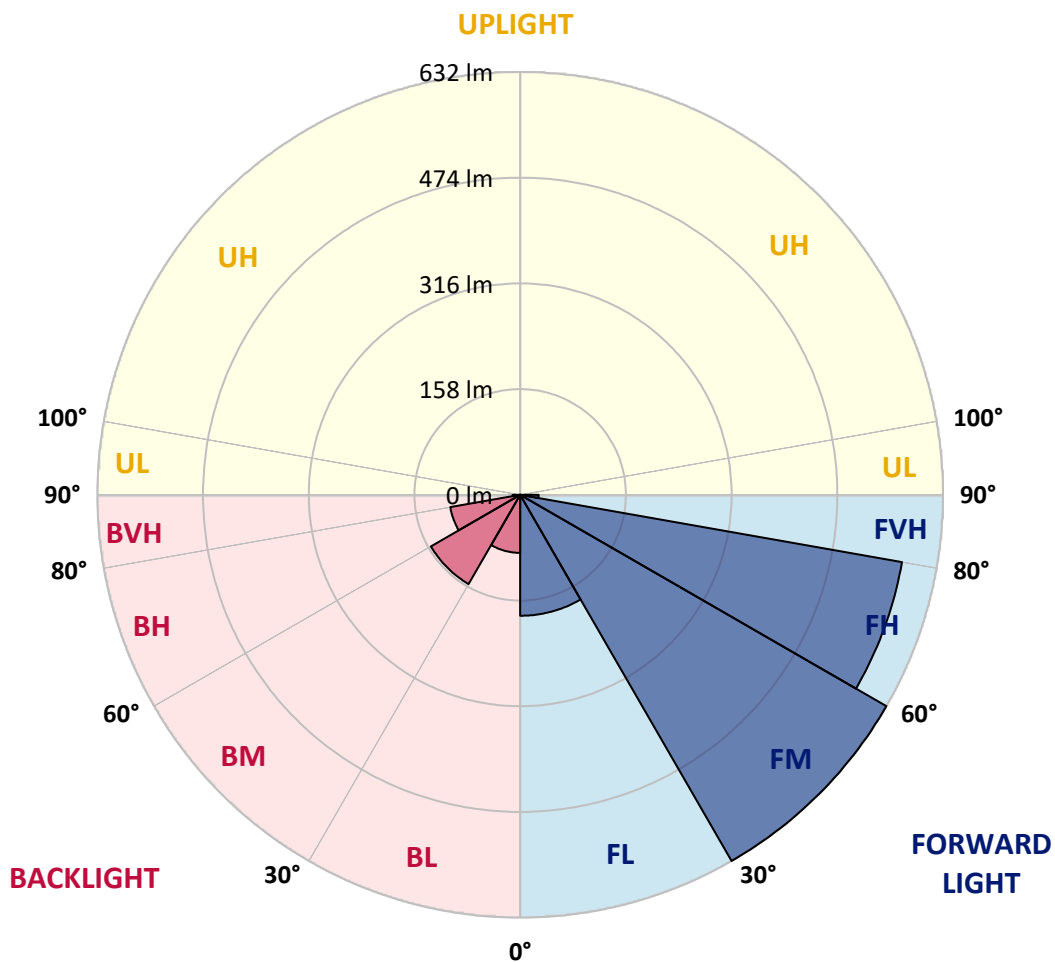
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	180.6	10.2			
FM (30°-60°)	631.7	35.5			
FH (60°-80°)	579.2	32.6			G0/660
FVH (80°-90°)	27.5	1.5			G1/100
BL (0°-30°)	86.7	4.9	B0/110		
BM (30°-60°)	153.9	8.7	B0/220		
BH (60°-80°)	106.1	6.0	B0/110		G0/110
BVH (80°-90°)	11.4	0.6			G1/100
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 Medium





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CANDELA DISTRIBUTION (FULL):

	0°	1°	5°	15°	25°	35°	45°	55°	65°	75°	85°
0°	613.9	613.9	613.9	613.9	613.9	613.9	613.9	613.9	613.9	613.9	613.9
2.5°	630.8	627.9	637.6	651.9	661.6	668.5	670.8	670.5	668.5	663.1	651.6
5°	602.8	600.2	619.9	651.6	679.3	699.3	705.1	697.1	687.1	665.9	637.9
7.5°	549.6	553.6	578.8	623.3	667.9	699.6	707.3	694.8	674.2	631.1	583.9
10°	509.4	511.4	539.6	593.4	640.8	673.3	686.8	675.6	648.8	594.2	539.6
12.5°	484.5	486.5	513.9	563.6	614.2	639.6	643.6	643.3	621.1	568.2	505.1
15°	487.9	490.5	517.9	559.1	587.6	598.8	599.1	602.2	595.6	555.4	496.8
17.5°	521.1	521.1	547.4	572.2	565.6	557.6	563.6	569.4	580.8	563.1	513.6
20°	573.4	575.6	599.9	595.6	555.6	535.6	528.5	538.5	573.9	586.2	553.4
22.5°	629.9	635.9	661.3	629.9	553.9	515.1	507.1	517.9	574.8	622.8	607.9
25°	692.5	699.9	717.0	669.9	559.1	503.6	498.2	508.5	577.1	656.5	666.8
27.5°	749.6	750.2	767.0	703.6	572.5	504.8	495.6	509.1	583.4	683.1	718.8
30°	790.2	790.2	797.6	720.8	589.1	511.9	497.9	517.6	592.2	697.6	765.9
32.5°	827.3	829.3	825.6	738.8	604.8	522.2	503.4	534.8	606.2	709.6	802.2
35°	874.5	874.2	857.6	753.0	619.3	533.4	516.8	556.5	626.5	727.3	836.7
37.5°	932.7	929.9	894.7	765.9	637.1	552.5	542.2	586.2	653.6	748.2	880.5
40°	985.6	981.0	928.7	777.9	651.1	589.6	583.6	623.1	687.9	774.2	923.0
42.5°	1026.7	1019.9	957.6	786.5	672.2	647.9	653.1	689.3	722.5	797.3	949.6
45°	1061.3	1054.1	979.3	790.8	723.3	731.0	741.0	771.3	759.3	803.6	965.9
47.5°	1086.1	1074.4	988.7	803.3	792.5	828.2	859.0	861.0	811.3	803.3	975.9
50°	1100.7	1087.9	997.6	834.5	872.7	938.4	971.3	955.9	865.3	808.5	990.2
52.5°	1130.1	1116.7	1034.4	885.0	955.0	1050.1	1067.9	1043.0	921.3	835.0	1018.7
55°	1204.1	1198.1	1105.9	953.0	1035.9	1140.4	1148.4	1123.6	979.9	881.0	1073.3
57.5°	1287.8	1274.7	1202.4	1038.4	1113.3	1211.0	1223.8	1189.6	1041.3	945.6	1134.1
60°	1311.3	1308.7	1284.1	1138.1	1193.3	1286.4	1287.3	1243.6	1113.0	1022.4	1227.0
62.5°	1277.0	1285.3	1318.1	1230.4	1260.4	1337.0	1329.8	1284.4	1188.1	1144.7	1339.8
65°	1217.3	1229.0	1295.0	1317.5	1275.8	1327.0	1311.8	1283.0	1235.6	1276.4	1409.8
67.5°	1145.6	1151.8	1228.7	1361.0	1221.8	1217.0	1209.8	1196.7	1216.7	1370.1	1421.8
70°	1071.0	1076.4	1147.3	1301.3	1059.9	1004.2	998.2	986.7	1064.7	1369.0	1363.0
72.5°	902.7	899.3	964.7	1086.1	809.3	733.6	784.5	759.6	861.3	1229.8	1214.1
75°	560.8	579.6	661.6	761.6	554.5	502.5	572.8	566.5	699.3	1059.0	966.7
77.5°	341.7	345.4	391.7	474.8	334.0	348.2	368.2	407.1	518.5	858.5	673.9
80°	178.8	166.3	200.3	260.5	198.3	233.7	270.0	312.8	329.1	559.6	450.5
82.5°	51.7	51.4	67.7	109.1	94.0	114.8	136.3	196.5	215.7	332.8	308.5
85°	0.3	0.3	0.3	0.6	0.9	1.4	6.0	50.6	66.8	154.3	126.8
87.5°	0.0	0.0	0.3	0.6	0.6	1.1	1.7	2.3	2.9	3.4	12.6
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°	613.9	613.9	613.9	613.9	613.9	613.9	613.9	613.9	613.9	613.9	613.9
2.5°	647.9	643.6	634.5	622.2	613.6	598.8	595.6	586.2	576.8	569.1	569.4
5°	624.5	609.9	587.6	561.9	537.4	515.4	511.1	498.2	494.5	490.8	480.5
7.5°	563.1	545.9	514.8	476.8	445.9	425.1	402.8	389.4	377.4	363.7	367.1
10°	515.9	491.4	448.5	403.9	365.4	337.4	312.8	300.2	282.8	270.3	268.5
12.5°	479.7	453.1	401.7	349.4	313.1	296.8	281.1	261.4	242.0	225.4	216.8
15°	467.7	437.7	378.0	326.0	297.4	277.7	255.7	233.1	209.4	191.7	184.8
17.5°	481.7	446.2	377.7	316.0	280.2	251.4	224.0	198.5	170.5	152.8	147.4
20°	520.2	475.9	385.7	306.5	259.4	220.3	181.7	154.3	125.7	113.1	107.4
22.5°	573.9	516.2	397.9	295.1	236.3	182.3	138.8	104.3	90.3	84.0	82.6
25°	629.1	567.4	415.4	285.4	210.8	145.1	99.7	83.4	76.8	74.0	74.0
27.5°	689.6	618.5	434.2	273.7	184.5	108.0	81.1	73.4	70.0	68.3	68.0
30°	738.8	660.2	455.7	260.0	160.8	88.6	72.0	66.8	63.7	62.8	62.8
32.5°	774.2	691.3	478.2	246.3	139.1	80.0	66.8	62.3	58.8	58.3	58.3
35°	815.6	721.0	488.5	238.5	126.0	74.6	63.1	58.6	55.4	54.0	54.0
37.5°	865.3	756.5	494.2	231.1	120.3	69.4	60.6	55.4	52.3	50.6	50.6
40°	928.5	796.8	500.2	223.7	116.8	65.1	57.7	52.6	50.0	48.0	48.0
42.5°	973.6	833.9	504.8	217.4	110.8	63.1	55.4	50.6	47.4	45.7	45.4
45°	997.3	868.5	506.8	213.7	104.0	64.8	53.7	48.9	45.1	43.4	43.1
47.5°	1013.3	897.0	509.4	210.8	98.6	61.7	53.4	47.1	43.4	41.1	41.1
50°	1038.7	934.7	515.9	205.4	95.4	57.7	57.7	46.3	41.4	39.4	39.1
52.5°	1084.1	988.7	533.6	199.4	92.0	53.7	59.4	46.6	40.0	37.7	37.1
55°	1152.7	1074.7	563.1	190.8	87.1	48.9	55.4	46.9	38.6	36.6	35.7
57.5°	1241.8	1178.7	597.4	184.0	78.8	44.9	50.6	45.4	36.9	35.1	34.6
60°	1301.8	1248.1	619.1	175.1	67.1	42.3	43.4	44.0	35.1	33.1	32.9
62.5°	1334.1	1249.3	619.3	162.8	56.3	40.0	38.9	44.9	33.7	31.1	30.9
65°	1336.4	1188.4	588.2	147.1	52.6	37.4	35.7	39.7	32.3	29.7	29.4
67.5°	1311.5	1089.3	517.1	129.1	54.0	35.4	33.1	33.4	30.6	28.3	28.0
70°	1222.4	961.0	414.8	114.8	54.3	32.9	31.1	30.3	28.9	26.9	26.3
72.5°	1054.7	803.0	314.2	110.3	55.1	30.9	28.9	28.0	26.9	25.1	24.6
75°	795.9	626.5	236.0	102.8	55.7	28.6	26.3	25.7	24.6	22.9	22.6
77.5°	549.9	464.5	164.0	86.8	49.7	26.0	23.7	23.1	22.3	20.6	20.3
80°	371.4	318.5	100.6	65.1	37.7	22.9	20.6	20.6	19.7	18.0	18.0
82.5°	258.5	238.0	58.0	42.6	27.4	18.9	18.0	18.0	17.1	15.4	15.1
85°	108.0	144.0	26.0	23.1	19.1	14.9	14.9	15.1	14.3	12.9	12.6
87.5°	3.7	15.4	10.3	10.9	11.4	10.3	11.4	11.4	11.1	10.0	9.7
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°	613.9	613.9	613.9	613.9	613.9	613.9	613.9	613.9	613.9	613.9	613.9
2.5°	561.1	557.4	545.9	544.5	535.9	535.4	539.1	532.8	533.4	541.1	539.9
5°	482.8	474.2	473.9	464.5	453.9	451.4	442.2	438.8	437.4	434.2	445.7
7.5°	377.7	373.7	377.1	376.0	366.2	360.8	341.4	326.5	319.1	322.2	323.1
10°	268.5	274.5	283.7	292.5	285.7	267.7	259.4	247.4	246.0	245.1	250.8
12.5°	212.8	206.0	210.3	213.4	206.8	199.1	195.7	190.5	193.4	200.0	203.7
15°	176.8	164.8	159.4	155.7	157.4	152.8	154.6	152.8	154.8	156.8	163.7
17.5°	139.7	135.4	125.1	120.3	120.6	118.6	119.1	118.8	117.7	122.3	127.7
20°	105.1	104.0	101.7	98.3	98.8	97.4	96.6	91.7	89.7	91.1	95.7
22.5°	82.0	83.4	84.8	84.6	86.0	82.3	78.8	74.6	74.0	74.3	75.4
25°	73.4	74.0	75.1	76.6	77.4	74.0	69.1	66.6	66.3	66.8	66.8
27.5°	68.3	67.7	69.1	70.8	72.0	67.7	63.7	61.4	60.8	60.3	60.0
30°	62.8	62.8	64.0	65.7	66.6	62.8	59.4	57.1	55.7	54.8	54.6
32.5°	58.8	59.1	59.7	60.8	62.3	58.6	55.7	53.7	51.1	50.3	49.7
35°	54.3	55.4	56.3	56.6	57.7	55.1	52.3	49.1	46.9	46.0	46.0
37.5°	50.6	51.4	52.9	52.6	53.4	51.7	48.6	45.1	44.0	43.7	43.4
40°	47.7	47.7	48.9	50.0	51.1	48.0	44.3	42.6	41.7	41.1	41.4
42.5°	45.1	44.9	44.9	46.9	48.9	44.3	41.1	40.0	39.7	39.1	39.4
45°	42.9	42.6	41.7	42.6	45.4	40.6	38.6	37.7	37.4	37.4	37.4
47.5°	40.9	40.3	39.1	39.4	41.4	37.7	36.0	35.7	35.4	35.4	35.7
50°	38.6	38.0	37.1	36.9	37.4	35.7	34.3	33.7	33.7	33.7	34.3
52.5°	36.6	36.3	35.1	34.9	35.1	34.0	32.6	32.3	32.3	32.3	33.1
55°	35.1	34.6	34.0	33.4	34.0	32.6	31.4	30.9	30.9	31.4	32.0
57.5°	33.7	33.1	32.9	32.3	32.9	31.4	30.3	29.7	30.0	30.3	30.3
60°	32.3	31.7	31.4	30.9	31.7	30.3	29.1	28.9	28.9	28.6	28.6
62.5°	30.9	30.6	30.0	29.4	30.6	28.9	28.0	27.4	27.1	27.1	27.1
65°	29.1	28.9	28.6	28.3	28.9	27.4	26.6	26.3	25.7	25.4	25.7
67.5°	27.7	27.7	27.1	26.6	27.4	25.7	25.1	24.9	24.0	23.7	24.0
70°	26.0	26.0	25.4	25.1	26.3	24.0	23.4	23.1	22.6	22.3	22.3
72.5°	24.3	24.3	23.7	23.4	24.9	22.3	21.7	21.4	20.6	20.3	20.3
75°	22.6	22.3	22.0	21.7	23.4	20.6	19.7	19.1	18.3	18.0	17.7
77.5°	20.6	20.3	19.7	20.0	21.1	18.3	17.1	16.9	16.0	15.7	15.4
80°	18.0	17.7	17.4	18.0	18.0	16.0	14.6	14.0	13.1	12.6	12.3
82.5°	15.4	15.1	15.1	15.7	14.9	14.0	12.3	11.1	9.7	8.9	8.6
85°	12.6	13.1	12.6	13.1	11.1	11.1	8.6	6.6	4.6	3.7	3.4
87.5°	9.7	10.0	9.7	10.0	7.7	7.4	4.0	2.3	0.3	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°	613.9	613.9	613.9	613.9	613.9	613.9	613.9	613.9	613.9	613.9
2.5°	548.5	549.1	561.4	573.6	581.1	599.6	608.8	619.1	624.5	630.8
5°	440.2	451.1	461.1	485.7	498.2	527.6	549.1	583.4	594.2	602.8
7.5°	332.5	348.8	361.1	391.7	415.4	451.9	489.4	530.2	541.9	549.6
10°	264.3	279.1	302.2	326.2	352.8	397.1	437.7	479.9	500.5	509.4
12.5°	222.0	245.7	272.8	295.1	316.2	348.8	400.2	453.7	475.1	484.5
15°	183.1	209.7	237.4	264.8	291.1	328.0	382.0	451.4	478.5	487.9
17.5°	145.4	167.1	195.1	228.3	266.5	313.4	385.4	475.7	508.8	521.1
20°	103.4	124.6	153.1	194.0	239.4	298.2	393.4	512.2	559.4	573.4
22.5°	78.0	89.7	116.0	156.3	215.1	286.2	405.9	562.2	617.3	629.9
25°	68.6	72.6	86.0	124.8	190.8	275.4	422.5	611.9	678.8	692.5
27.5°	60.8	63.1	70.0	100.3	172.8	264.3	442.2	665.6	731.6	749.6
30°	54.8	57.7	63.4	84.0	155.4	248.3	460.2	713.9	776.5	790.2
32.5°	50.3	53.4	58.6	76.0	140.6	236.3	470.5	749.9	814.8	827.3
35°	47.1	50.0	55.1	68.8	127.4	228.0	473.7	785.6	861.6	874.5
37.5°	44.3	47.1	51.7	61.7	118.3	217.1	478.5	828.2	915.9	932.7
40°	42.3	44.6	48.9	56.8	105.7	205.4	484.2	877.9	968.7	985.6
42.5°	40.3	42.9	46.6	57.1	93.1	195.4	487.9	916.2	1010.7	1026.7
45°	38.6	41.4	45.7	56.0	83.7	186.3	486.2	948.2	1049.0	1061.3
47.5°	36.9	40.3	48.0	53.7	80.8	178.0	487.7	979.0	1076.4	1086.1
50°	35.7	40.0	51.4	50.3	81.4	174.3	501.4	1015.9	1097.0	1100.7
52.5°	34.9	40.9	48.6	45.4	81.4	172.5	527.6	1075.3	1132.7	1130.1
55°	33.4	40.6	45.4	41.1	78.0	173.4	552.5	1153.8	1218.4	1204.1
57.5°	32.3	38.9	40.9	38.0	70.0	173.7	589.4	1220.1	1285.8	1287.8
60°	30.9	41.7	35.4	35.4	60.0	172.3	621.9	1219.0	1298.1	1311.3
62.5°	29.4	40.9	31.7	32.9	53.1	166.8	641.6	1147.9	1252.7	1277.0
65°	27.7	32.3	29.1	30.6	50.3	153.4	613.6	1059.6	1191.3	1217.3
67.5°	25.7	26.6	26.6	28.3	49.1	133.1	543.1	962.2	1114.1	1145.6
70°	23.4	23.7	24.3	26.9	45.7	114.6	442.2	858.5	1031.3	1071.0
72.5°	21.1	21.4	21.4	24.3	42.9	98.8	313.1	680.2	861.0	902.7
75°	18.6	18.9	18.6	21.1	37.4	74.0	186.0	430.2	513.6	560.8
77.5°	15.7	15.7	15.1	16.6	25.7	46.9	101.7	261.4	312.5	341.7
80°	12.9	11.7	9.7	10.0	14.0	26.9	45.4	150.0	171.4	178.8
82.5°	8.6	6.6	4.0	3.7	4.6	7.4	10.6	59.4	54.6	51.7
85°	1.7	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3
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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