

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: P401224

Luminaire Tested: **ENT-SA1B-830-U-SLR**

Issue Date: 5/20/2020

Test Information

Test Method: LM-79-08
Report Number: P401224
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-SA1B-830-U-SLR
Description: ENTRI LED LUMINAIRE
(1) 80 CRI, 3000K, 450mA LIGHTSQUARE WITH 16 LEDS AND SPILL LIGHT ELIMINATOR RIGHT OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2409 lumens
Efficiency: N/A
Efficacy: 94.8 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): 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

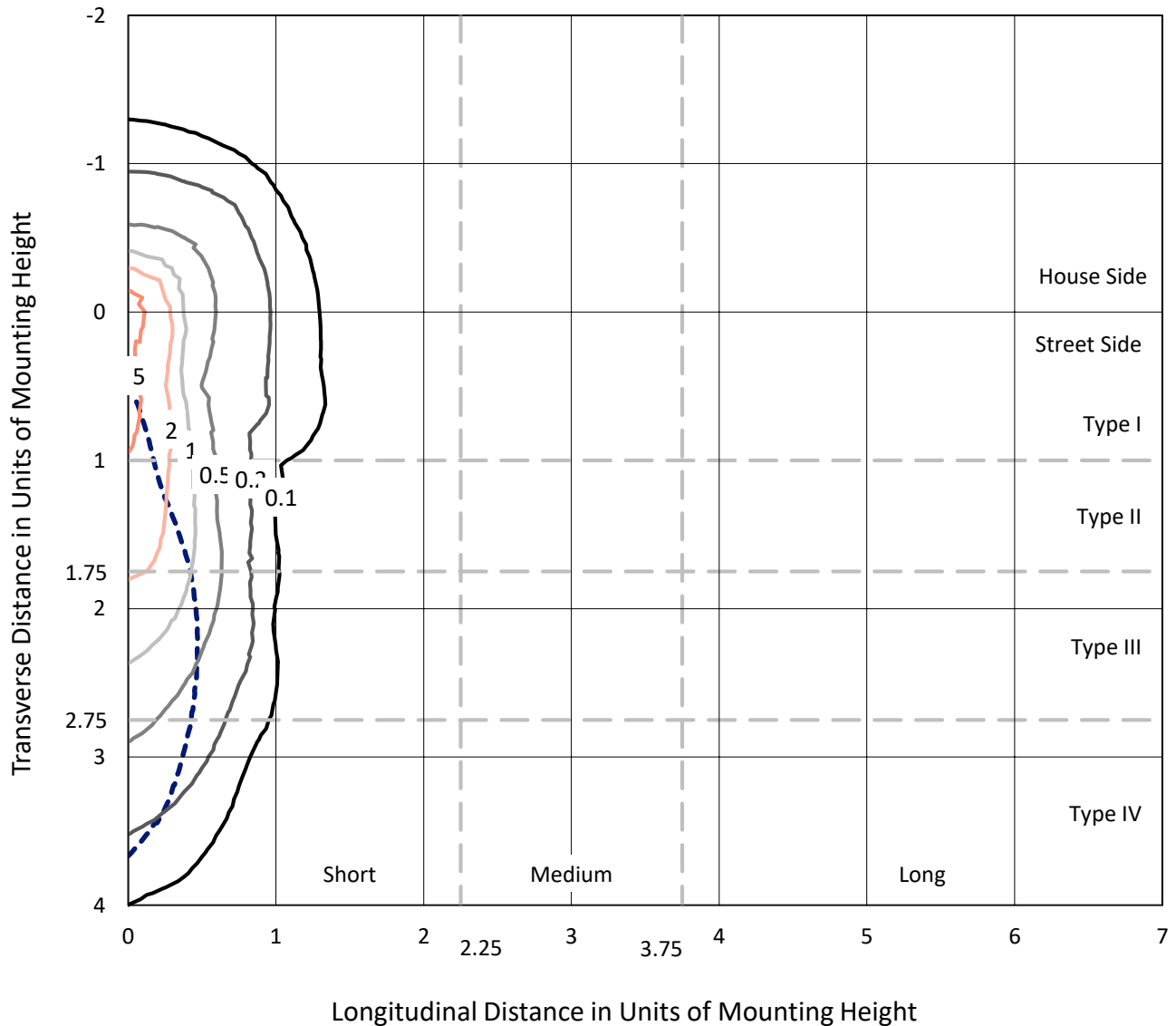


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

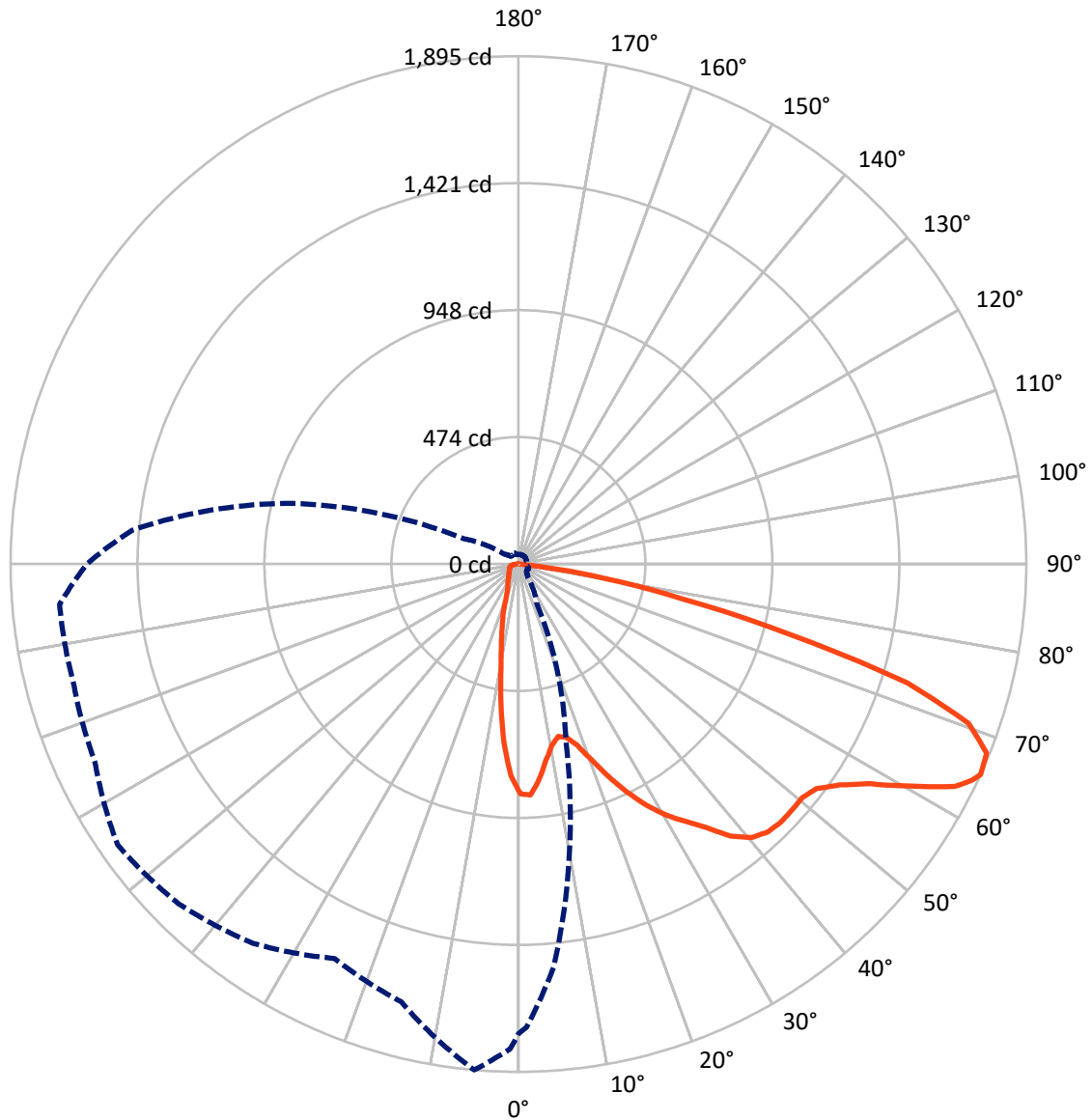


Based on 10 foot mounting height. Maximum calculated value = 8.6 fc
 Type IV - Short - Non-Cutoff

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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	494.3	0.0	494.3
	% Fixture	20.5	0.0	20.5
Street Side	Lumens	1914.7	0.0	1914.7
	% Fixture	79.5	0.0	79.5
Total	Lumens	2409.0	0.0	2409.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	65.4	2.7
10°-20°	130.3	5.4
20°-30°	180.6	7.5
30°-40°	252.5	10.5
40°-50°	343.5	14.3
50°-60°	469.8	19.5
60°-70°	574.4	23.8
70°-80°	346.8	14.4
80°-90°	45.7	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°	2409.0	100.0
0°-180°	2409.0	100.0



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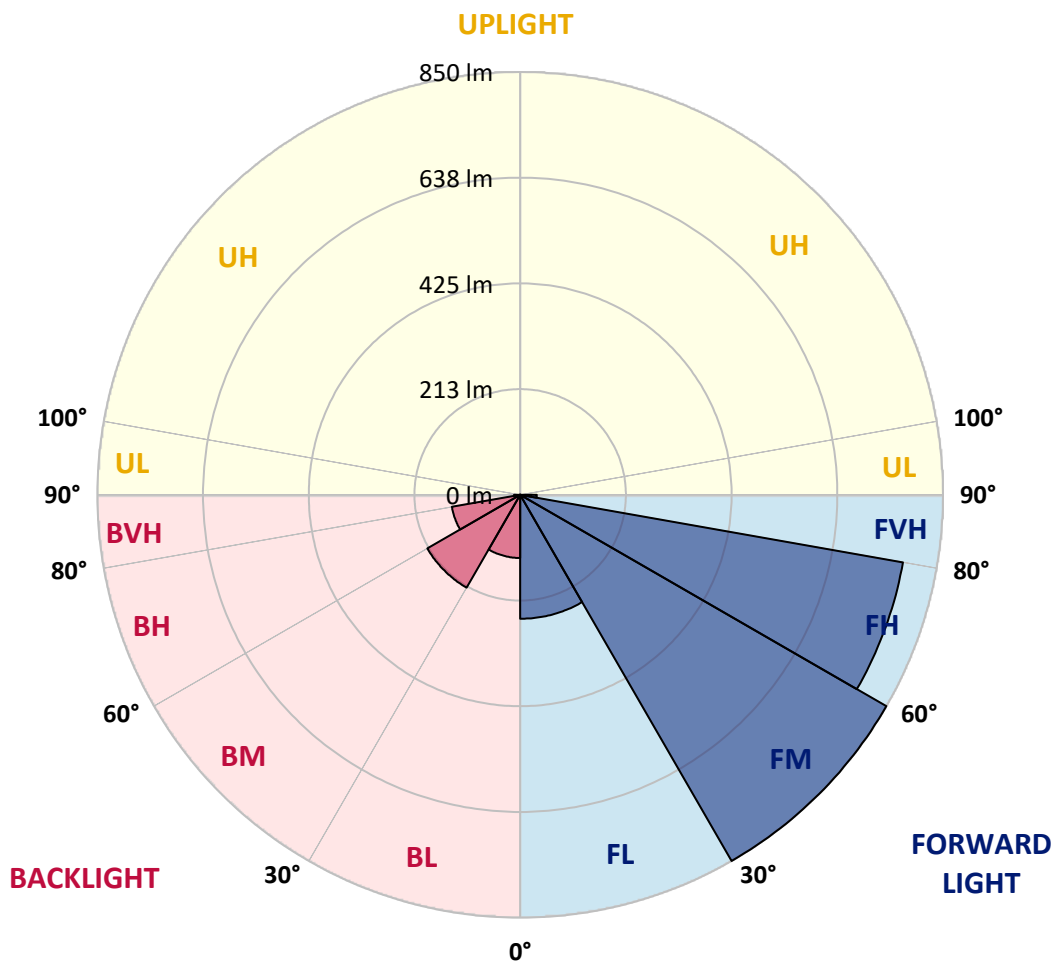
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	249.3	10.3			
FM	(30°-60°)	850.3	35.3			
FH	(60°-80°)	781.7	32.4			G1/1800
FVH	(80°-90°)	33.4	1.4			G1/100
BL	(0°-30°)	127.0	5.3	B1/500		
BM	(30°-60°)	215.5	8.9	B0/220		
BH	(60°-80°)	139.5	5.8	B1/500		G1/500
BVH	(80°-90°)	12.3	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°	857.2	857.2	857.2	857.2	857.2	857.2	857.2	857.2	857.2	857.2	857.2
2.5°	855.2	852.8	846.8	830.7	813.3	792.8	789.2	767.0	769.4	763.0	764.6
5°	781.1	777.9	761.4	729.1	685.2	659.9	640.1	628.4	618.8	613.9	620.0
7.5°	709.0	704.6	684.8	628.0	579.3	539.0	506.8	487.0	467.7	452.4	445.1
10°	650.6	649.0	622.8	558.7	497.5	448.4	427.4	406.5	390.0	368.2	350.5
12.5°	621.2	616.3	585.3	510.8	451.2	421.0	401.2	374.6	352.1	325.5	302.5
15°	622.4	616.8	578.1	499.9	435.1	398.4	368.2	336.4	303.3	276.3	253.0
17.5°	657.0	653.0	605.9	510.0	421.4	370.6	323.5	282.4	246.1	212.3	191.3
20°	715.4	709.4	644.1	522.1	404.1	338.8	274.7	218.3	179.3	149.5	132.9
22.5°	791.6	780.3	698.5	537.0	386.7	302.5	222.0	159.1	124.5	109.6	105.1
25°	873.0	864.1	764.2	555.9	368.2	263.1	164.4	115.6	103.5	97.5	94.3
27.5°	947.9	933.4	834.7	576.9	343.6	223.6	124.9	99.5	91.4	88.6	86.6
30°	1001.5	989.0	883.4	601.0	322.3	182.5	106.8	90.2	83.8	79.4	78.6
32.5°	1052.6	1034.9	918.9	612.3	304.5	160.3	98.7	83.8	77.7	73.3	71.7
35°	1113.1	1095.3	959.6	613.9	291.3	151.1	91.0	79.0	72.5	68.5	66.5
37.5°	1184.4	1160.2	1005.5	615.1	278.0	147.4	84.6	74.9	68.5	64.1	62.4
40°	1252.0	1233.5	1052.6	613.1	269.1	142.2	80.6	70.5	64.5	60.4	58.4
42.5°	1303.2	1283.5	1092.9	607.1	263.9	133.3	82.2	67.3	61.6	57.2	54.8
45°	1329.4	1311.7	1129.6	601.4	261.0	125.7	80.6	66.1	59.6	54.4	52.0
47.5°	1349.1	1331.8	1167.0	599.0	256.2	120.0	74.1	70.5	57.6	51.6	49.1
50°	1380.9	1366.0	1217.8	612.7	248.6	116.4	68.1	75.3	56.8	49.1	46.3
52.5°	1438.1	1428.5	1301.6	644.5	240.5	110.4	62.0	72.1	57.6	47.5	44.3
55°	1544.9	1538.9	1416.8	686.4	232.8	102.7	55.6	65.3	57.2	44.7	42.3
57.5°	1660.1	1658.5	1556.6	723.1	221.6	89.8	51.6	55.2	54.4	42.3	39.5
60°	1737.5	1732.2	1621.0	743.6	207.1	74.1	48.3	46.7	55.6	39.9	36.7
62.5°	1764.0	1746.7	1601.7	736.0	185.3	64.1	44.7	42.7	51.6	37.5	33.8
64°	1762.4	1737.1	1551.3	707.0	171.2	62.0	42.7	39.9	45.5	35.9	32.6
65°	1753.2	1729.0	1509.4	684.4	163.6	62.0	41.5	38.7	41.5	35.0	31.8
67.5°	1693.9	1662.1	1366.4	579.7	143.8	62.8	38.7	35.5	34.6	32.2	29.8
70°	1559.0	1517.5	1170.3	456.0	133.3	63.2	35.5	32.2	31.0	29.4	27.4
72.5°	1252.0	1196.4	931.4	325.9	122.5	62.0	32.2	29.4	28.2	26.6	24.6
75°	839.5	778.7	686.4	214.7	100.3	55.6	27.8	25.4	25.0	23.4	21.8
77.5°	473.3	448.0	405.3	118.0	69.3	38.3	22.2	20.5	20.9	20.1	18.5
80°	247.3	235.7	216.7	57.2	33.4	18.5	14.1	14.1	16.1	16.1	15.3
82.5°	87.4	87.8	85.0	12.9	6.8	5.6	4.8	6.8	9.3	11.3	11.3
85°	0.4	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.8	1.6	2.8
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°	857.2	857.2	857.2	857.2	857.2	857.2	857.2	857.2	857.2	857.2	857.2
2.5°	750.9	753.3	759.8	758.6	765.0	762.2	770.6	775.1	777.5	790.0	796.0
5°	615.1	615.9	638.9	643.7	655.8	649.4	664.3	658.6	670.7	672.3	692.5
7.5°	452.0	453.6	464.9	491.5	517.7	528.5	533.0	539.8	534.2	532.2	535.0
10°	343.6	344.8	346.0	365.0	387.9	410.9	410.9	411.3	401.2	391.2	389.1
12.5°	293.7	286.0	273.9	274.3	290.4	301.3	309.8	300.9	299.3	304.1	309.4
15°	241.7	234.1	226.0	216.3	216.7	224.4	228.8	228.4	236.5	240.1	251.0
17.5°	187.7	176.8	177.3	171.6	164.0	168.8	170.0	177.3	187.7	192.6	194.6
20°	126.1	126.1	129.3	136.2	132.5	135.8	136.2	141.8	146.6	143.8	146.6
22.5°	104.3	103.9	105.1	109.6	113.2	116.0	116.8	116.4	111.6	109.6	113.6
25°	94.7	94.3	94.7	97.1	101.1	104.7	103.1	100.7	95.1	94.7	95.5
27.5°	86.6	87.0	87.8	89.4	91.8	96.3	94.7	89.8	87.0	86.2	86.2
30°	79.8	79.8	81.4	83.0	85.8	89.8	87.0	83.0	80.2	79.4	79.0
32.5°	72.9	74.1	75.3	76.9	79.4	83.4	81.0	77.3	74.5	72.9	71.7
35°	66.1	66.9	69.3	71.7	73.7	76.9	75.3	72.1	69.3	65.7	64.1
37.5°	62.0	62.0	63.2	66.9	68.5	70.9	70.1	67.3	62.8	60.0	59.6
40°	58.4	58.4	58.8	60.8	63.6	66.5	64.9	60.4	57.6	56.4	56.0
42.5°	54.8	54.8	55.2	55.2	58.8	63.6	59.6	55.2	54.0	53.2	52.8
45°	51.6	51.6	51.6	51.2	53.2	59.2	54.8	51.2	50.4	50.4	50.0
47.5°	49.1	48.7	48.3	47.5	48.7	53.6	50.0	47.9	47.5	47.9	47.5
50°	45.9	45.5	45.1	44.7	45.5	47.5	46.7	44.7	45.1	45.1	45.5
52.5°	43.1	42.7	42.3	41.9	42.7	44.3	44.3	42.7	42.7	43.1	43.5
55°	41.5	40.7	40.3	40.3	40.7	42.7	42.3	41.1	41.1	41.9	42.3
57.5°	39.1	38.3	38.3	37.9	38.7	41.1	40.7	39.5	39.5	39.9	40.7
60°	36.7	36.3	35.9	36.7	37.1	39.5	39.1	38.3	37.9	39.1	39.1
62.5°	33.8	33.8	33.8	34.6	35.0	37.9	37.5	37.1	37.1	37.5	37.1
64°	32.2	32.2	32.6	33.0	33.8	36.3	36.3	36.3	36.3	36.3	35.9
65°	31.4	31.4	32.2	32.6	33.0	35.9	35.5	35.9	36.3	35.9	35.0
67.5°	29.4	29.4	30.6	30.6	31.0	34.2	33.8	34.6	35.5	34.6	33.8
70°	27.0	27.4	28.6	28.2	29.0	32.6	31.4	33.0	34.6	33.4	32.6
72.5°	24.6	25.0	26.6	25.8	26.2	30.6	29.0	30.6	33.0	32.2	31.4
75°	22.2	22.6	23.8	23.4	24.2	28.2	26.6	28.2	30.6	30.6	30.2
77.5°	18.9	19.7	20.5	20.1	21.8	25.4	23.8	25.0	27.0	28.6	27.8
80°	15.3	16.5	16.9	17.3	18.9	21.8	20.5	20.9	23.0	24.2	24.6
82.5°	10.5	12.5	13.3	13.7	16.1	16.9	17.3	16.9	18.1	19.7	18.5
85°	3.2	4.0	7.7	9.7	12.1	12.1	14.1	13.3	14.1	12.5	10.5
87.5°	0.0	0.0	0.0	2.8	7.3	7.3	10.1	9.3	9.7	7.3	6.4
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°	857.2	857.2	857.2	857.2	857.2	857.2	857.2	857.2	857.2	857.2	857.2
2.5°	797.2	804.1	819.4	837.1	846.8	867.7	880.6	894.3	908.0	910.8	915.3
5°	696.5	704.6	721.9	745.7	769.4	797.2	829.5	863.7	901.6	917.7	933.4
7.5°	542.6	544.2	568.8	611.9	632.9	672.3	718.3	771.0	829.5	859.7	891.9
10°	400.8	417.3	435.9	471.7	524.5	570.0	626.8	688.5	749.3	793.2	826.6
12.5°	315.0	336.0	366.6	406.1	445.9	489.0	554.7	620.8	695.7	735.2	776.3
15°	259.4	286.0	325.9	367.4	404.5	442.7	501.1	582.1	678.0	718.3	754.9
17.5°	205.4	234.9	277.6	321.1	365.4	412.1	479.8	580.1	696.9	743.6	781.5
20°	157.5	180.5	216.3	260.2	312.2	376.3	462.9	595.4	752.9	811.3	836.3
22.5°	116.8	130.1	158.3	204.2	265.5	344.4	445.9	617.2	822.2	890.7	909.6
25°	96.7	100.3	113.2	153.1	216.3	308.6	433.1	645.4	891.5	968.4	982.1
27.5°	87.0	89.0	95.1	110.0	169.2	279.2	416.1	678.0	964.4	1045.4	1044.2
30°	78.6	79.0	82.6	93.1	137.4	253.0	396.4	714.2	1029.3	1100.6	1096.9
32.5°	70.9	70.9	75.7	83.8	117.2	229.2	372.6	740.4	1085.7	1145.7	1134.0
35°	64.1	65.3	69.7	77.7	103.9	202.6	350.5	750.1	1134.0	1200.1	1167.0
37.5°	59.2	60.8	65.3	72.9	92.7	182.9	332.3	761.4	1193.6	1265.7	1204.1
40°	56.0	57.2	61.2	67.7	83.8	166.4	312.6	769.0	1252.8	1335.8	1243.2
42.5°	52.8	54.0	58.0	64.1	79.8	147.0	293.7	773.5	1314.5	1396.7	1275.8
45°	50.0	51.6	55.6	61.2	80.2	129.7	278.0	771.8	1351.5	1440.6	1301.2
47.5°	47.9	49.5	54.0	61.2	77.7	119.6	264.7	766.2	1378.9	1469.2	1312.9
50°	45.9	47.5	52.8	67.7	73.7	116.8	254.6	765.4	1407.5	1474.8	1312.9
52.5°	43.9	46.7	53.2	68.1	67.7	115.6	246.5	786.7	1447.0	1484.5	1324.5
55°	42.7	45.1	54.8	62.8	59.2	111.6	241.7	816.2	1513.5	1537.6	1383.4
57.5°	41.1	43.1	54.0	58.8	52.8	102.3	237.7	844.4	1600.9	1636.3	1500.6
60°	39.1	41.5	52.4	50.4	47.9	87.0	235.3	867.7	1633.5	1700.0	1626.7
62.5°	37.1	39.9	57.2	43.9	44.3	72.5	230.8	890.3	1564.6	1684.7	1707.6
64°	35.9	38.7	53.2	41.1	42.3	66.1	226.4	891.5	1503.8	1648.4	1723.0
65°	35.0	37.5	49.5	39.5	40.7	64.5	222.4	874.6	1446.6	1609.8	1718.5
67.5°	33.8	35.5	38.3	36.7	37.9	61.6	195.0	800.0	1324.9	1510.3	1649.6
70°	32.2	33.4	33.8	33.4	35.5	59.6	164.8	694.1	1192.0	1405.9	1542.5
72.5°	30.6	30.6	30.6	30.2	32.6	56.8	148.2	560.8	1030.1	1269.0	1409.1
75°	29.4	28.2	27.8	27.0	29.8	55.2	133.7	421.0	796.0	1057.1	1180.7
77.5°	27.0	25.8	24.6	23.8	26.6	49.1	111.6	297.3	586.9	769.0	911.2
80°	23.4	22.6	20.9	19.7	22.2	38.7	84.6	183.7	429.4	519.3	597.8
82.5°	18.9	18.5	16.9	15.3	16.1	27.8	57.6	93.5	286.4	282.0	334.0
85°	11.7	14.5	12.5	10.1	10.9	16.1	23.4	29.8	87.8	52.8	81.8
87.5°	6.8	9.3	7.7	5.2	4.0	7.3	6.4	6.0	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°	857.2	857.2	857.2	857.2	857.2	857.2	857.2	857.2	857.2	857.2
2.5°	925.7	931.0	933.8	923.3	912.0	902.0	882.6	863.3	853.2	855.2
5°	963.6	972.5	974.9	959.6	927.7	895.1	848.0	807.3	782.7	781.1
7.5°	949.1	978.1	982.9	966.4	920.9	860.1	796.0	739.2	714.6	709.0
10°	897.5	941.8	956.3	950.7	906.4	836.7	759.0	686.8	662.3	650.6
12.5°	844.8	891.1	899.9	905.6	878.6	819.8	734.4	660.3	630.8	621.2
15°	810.1	841.9	844.4	849.6	844.0	811.7	745.7	671.1	635.7	622.4
17.5°	805.3	794.0	786.3	797.2	804.1	812.1	775.1	711.8	674.0	657.0
20°	806.1	771.0	749.3	748.5	777.9	822.6	834.7	780.3	731.2	715.4
22.5°	835.5	759.0	722.7	718.3	754.1	840.3	895.5	861.7	812.5	791.6
25°	879.4	751.7	703.8	705.0	740.8	852.0	947.5	943.1	899.9	873.0
27.5°	921.7	763.8	701.3	704.6	745.3	859.7	990.6	1019.6	971.3	947.9
30°	955.5	790.8	708.6	711.4	759.0	870.1	1011.9	1087.7	1029.3	1001.5
32.5°	984.9	816.2	719.5	721.5	780.7	885.0	1032.1	1144.9	1085.7	1052.6
35°	1011.5	837.9	736.0	742.8	808.5	906.4	1052.6	1206.9	1154.5	1113.1
37.5°	1034.9	864.5	768.6	779.9	849.2	937.4	1079.2	1288.7	1231.5	1184.4
40°	1048.2	888.3	817.0	833.9	902.0	977.7	1113.1	1341.9	1305.2	1252.0
42.5°	1058.3	920.9	894.7	925.3	983.7	1015.6	1129.2	1365.6	1348.7	1303.2
45°	1063.5	985.4	1011.5	1040.1	1076.0	1057.1	1120.3	1373.7	1368.5	1329.4
47.5°	1087.3	1082.4	1146.9	1186.4	1184.4	1119.5	1103.4	1372.9	1381.3	1349.1
50°	1135.6	1195.6	1285.9	1324.5	1309.6	1177.9	1100.2	1371.7	1407.1	1380.9
52.5°	1193.2	1308.8	1436.1	1452.2	1420.8	1237.1	1124.3	1392.6	1455.5	1438.1
55°	1269.0	1415.2	1554.2	1559.4	1515.1	1294.7	1175.9	1454.3	1545.7	1544.9
57.5°	1374.5	1510.7	1653.3	1646.8	1584.4	1374.5	1258.9	1546.5	1646.0	1660.1
60°	1489.3	1611.4	1733.4	1729.8	1663.3	1466.3	1372.9	1683.1	1733.8	1737.5
62.5°	1599.3	1704.8	1810.8	1793.5	1718.5	1561.4	1530.8	1828.1	1791.0	1764.0
64°	1671.0	1736.2	1830.5	1803.1	1731.8	1606.9	1621.8	1875.2	1807.1	1762.4
65°	1718.5	1743.9	1826.1	1793.0	1727.4	1623.9	1690.7	1895.0	1810.0	1753.2
67.5°	1803.9	1700.0	1706.0	1679.8	1621.0	1608.1	1803.5	1884.1	1778.9	1693.9
70°	1780.2	1523.1	1440.2	1423.6	1353.1	1425.7	1789.4	1781.8	1662.5	1559.0
72.5°	1577.1	1223.0	1103.8	1088.9	991.0	1080.4	1544.1	1517.5	1337.8	1252.0
75°	1299.6	926.9	788.4	800.8	726.3	808.9	1228.3	1039.7	890.7	839.5
77.5°	1008.7	655.0	544.6	529.7	514.8	523.7	844.4	624.4	520.5	473.3
80°	642.9	411.7	408.5	373.4	361.3	304.5	433.9	332.3	261.4	247.3
82.5°	341.6	237.3	269.5	215.9	173.6	124.9	147.0	98.7	83.4	87.4
85°	93.5	49.1	13.7	0.0	0.0	0.0	0.0	0.4	0.4	0.4
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	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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