

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: P401222

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

Issue Date: 5/20/2020

Test Information

Test Method: LM-79-08
Report Number: P401222
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-SA1B-830-U-SLL
Description: ENTRI LED LUMINAIRE
(1) 80 CRI, 3000K, 450mA LIGHTSQUARE WITH 16 LEDS AND SPILL LIGHT ELIMINATOR LEFT 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 III - Medium - Non-Cutoff
BUG Rating: B1 - U0 - G1

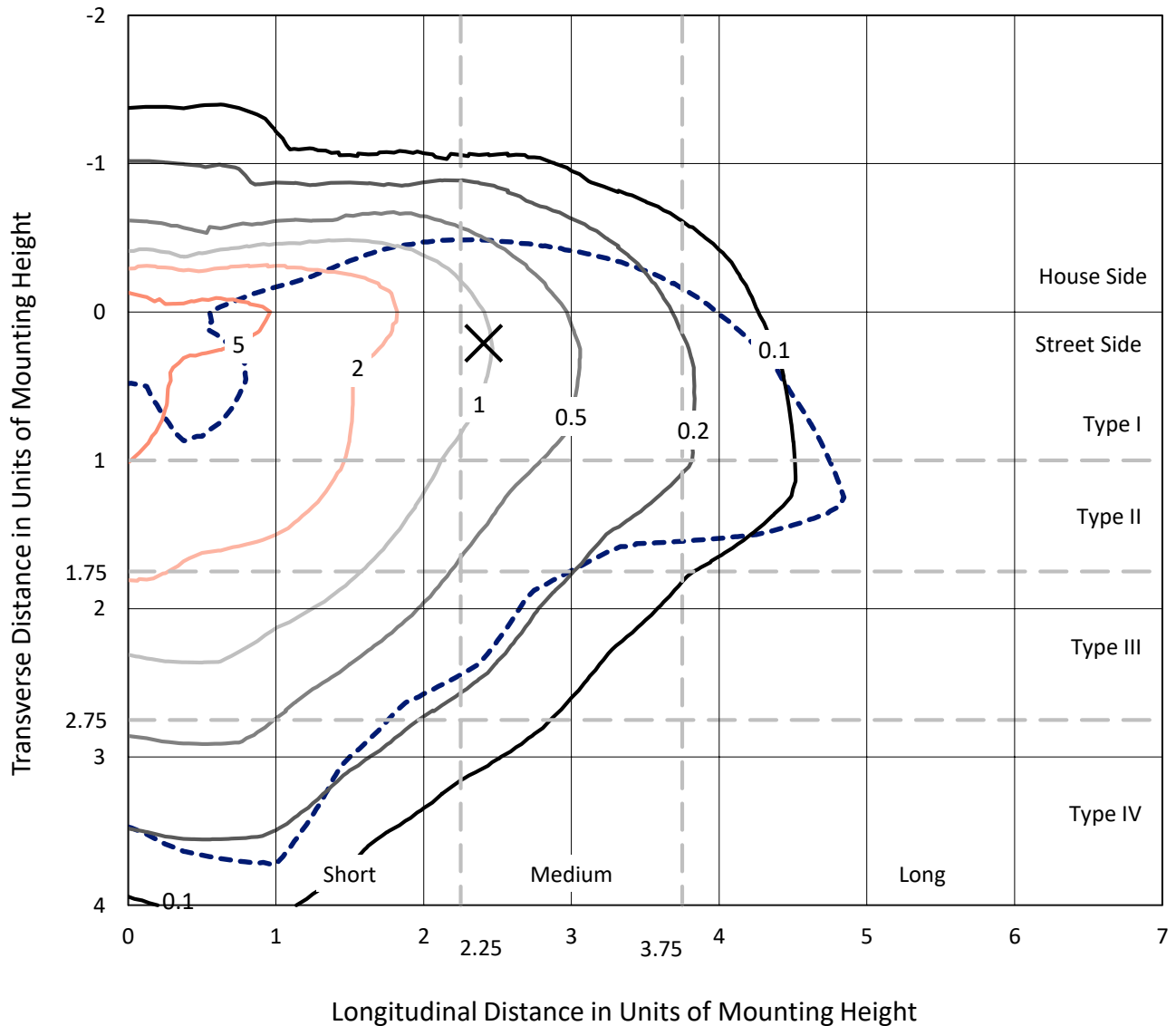
Input Watts (W): 25.4
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

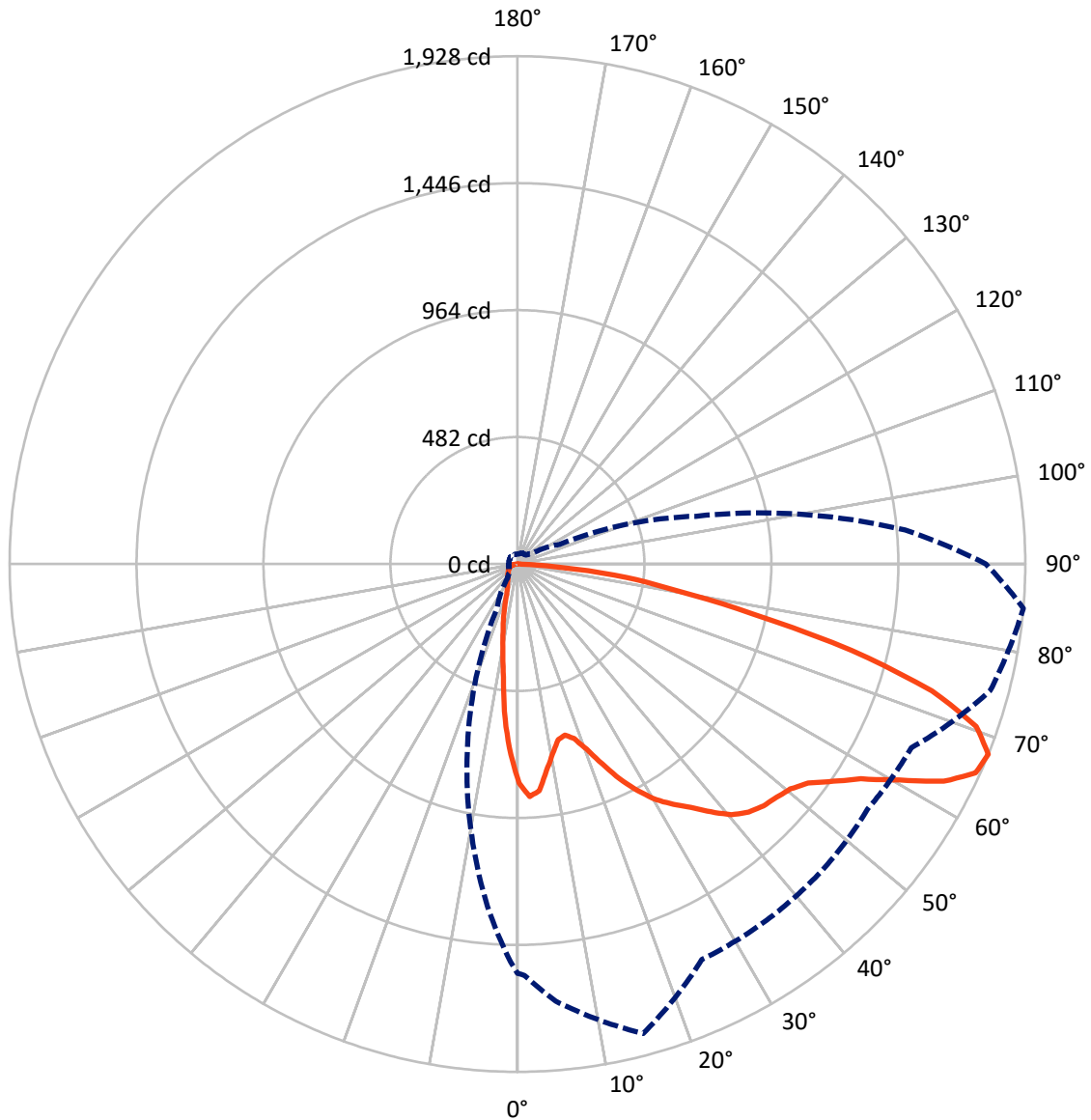


Based on 10 foot mounting height. Maximum calculated value = 8.9 fc
 Type III - Medium - Non-Cutoff

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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	485.4	0.0	485.4
	% Fixture	20.1	0.0	20.1
Street Side	Lumens	1923.6	0.0	1923.6
	% Fixture	79.9	0.0	79.9
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°	63.3	2.6
10°-20°	124.8	5.2
20°-30°	174.4	7.2
30°-40°	245.8	10.2
40°-50°	340.6	14.1
50°-60°	478.6	19.9
60°-70°	585.1	24.3
70°-80°	343.9	14.3
80°-90°	52.7	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°	2409.0	100.0
0°-180°	2409.0	100.0



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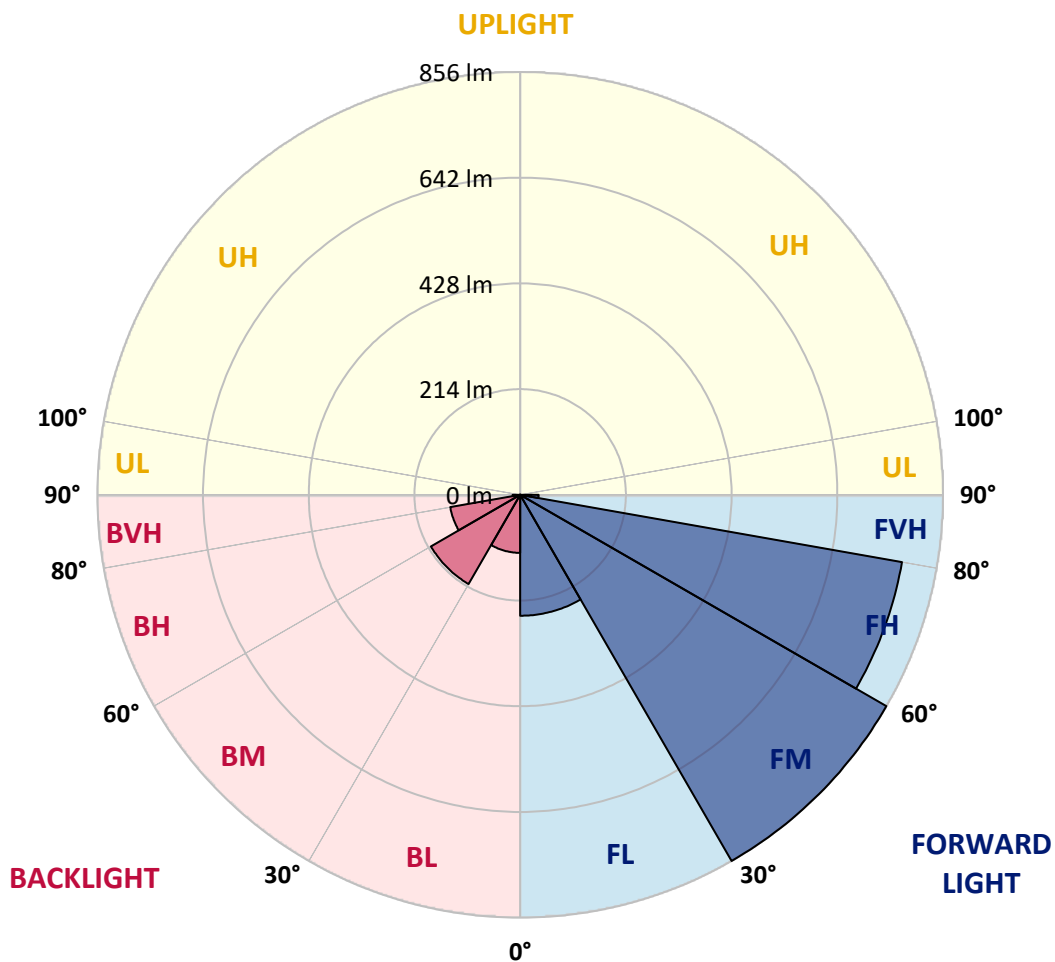
CATALOG NUMBER: ENT-SA1B-830-U-SLL

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	244.9	10.2			
FM	(30°-60°)	856.3	35.5			
FH	(60°-80°)	785.2	32.6			G1/1800
FVH	(80°-90°)	37.3	1.5			G1/100
BL	(0°-30°)	117.6	4.9	B1/500		
BM	(30°-60°)	208.7	8.7	B0/220		
BH	(60°-80°)	143.8	6.0	B1/500		G1/500
BVH	(80°-90°)	15.4	0.6			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G1

Type III Medium





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CANDELA DISTRIBUTION (FULL):

	0°	1°	5°	15°	25°	35°	45°	55°	65°	75°	85°
0°	832.3	832.3	832.3	832.3	832.3	832.3	832.3	832.3	832.3	832.3	832.3
2.5°	855.1	851.2	864.4	883.8	896.9	906.2	909.3	908.9	906.2	898.9	883.4
5°	817.2	813.7	840.4	883.4	921.0	948.1	955.8	945.0	931.4	902.7	864.8
7.5°	745.1	750.5	784.6	845.0	905.5	948.4	958.9	941.9	914.0	855.5	791.6
10°	690.5	693.2	731.6	804.4	868.7	912.8	931.0	915.9	879.5	805.5	731.6
12.5°	656.8	659.5	696.7	764.1	832.7	867.1	872.5	872.2	841.9	770.3	684.7
15°	661.5	665.0	702.1	757.9	796.6	811.7	812.1	816.4	807.5	752.9	673.5
17.5°	706.4	706.4	742.0	775.7	766.8	756.0	764.1	771.8	787.3	763.3	696.3
20°	777.3	780.4	813.3	807.5	753.3	726.1	716.5	730.0	778.0	794.7	750.2
22.5°	854.0	862.1	896.6	854.0	750.9	698.3	687.4	702.1	779.2	844.3	824.1
25°	938.8	948.8	972.1	908.2	757.9	682.8	675.4	689.4	782.3	890.0	903.9
27.5°	1016.2	1017.0	1039.8	953.9	776.1	684.3	671.9	690.1	790.8	926.0	974.4
30°	1071.2	1071.2	1081.3	977.1	798.6	694.0	675.0	701.8	802.8	945.7	1038.3
32.5°	1121.6	1124.3	1119.2	1001.5	819.9	707.9	682.4	725.0	821.8	962.0	1087.5
35°	1185.5	1185.1	1162.6	1020.9	839.6	723.1	700.6	754.4	849.3	986.0	1134.3
37.5°	1264.5	1260.6	1213.0	1038.3	863.6	749.0	735.1	794.7	886.1	1014.3	1193.6
40°	1336.1	1329.9	1259.0	1054.6	882.6	799.3	791.2	844.7	932.6	1049.5	1251.3
42.5°	1391.9	1382.6	1298.2	1066.2	911.3	878.4	885.3	934.5	979.4	1080.9	1287.3
45°	1438.7	1429.1	1327.6	1072.0	980.6	991.0	1004.6	1045.7	1029.4	1089.4	1309.4
47.5°	1472.4	1456.6	1340.4	1089.0	1074.3	1122.7	1164.6	1167.3	1099.9	1089.0	1322.9
50°	1492.2	1474.8	1352.4	1131.2	1183.1	1272.2	1316.8	1295.8	1173.1	1096.0	1342.3
52.5°	1532.1	1513.9	1402.3	1199.8	1294.7	1423.6	1447.7	1414.0	1249.0	1132.0	1381.0
55°	1632.4	1624.3	1499.2	1292.0	1404.3	1546.0	1556.9	1523.2	1328.4	1194.4	1455.0
57.5°	1745.9	1728.0	1630.1	1407.8	1509.2	1641.7	1659.1	1612.6	1411.6	1281.9	1537.5
60°	1777.6	1774.1	1740.8	1542.9	1617.7	1743.9	1745.1	1685.8	1508.8	1386.1	1663.4
62.5°	1731.1	1742.4	1786.9	1668.0	1708.7	1812.5	1802.8	1741.2	1610.7	1551.8	1816.3
65°	1650.2	1666.1	1755.5	1786.1	1729.6	1798.9	1778.4	1739.3	1675.0	1730.4	1911.2
67.5°	1553.0	1561.5	1665.7	1845.0	1656.4	1649.8	1640.1	1622.3	1649.4	1857.4	1927.5
70°	1451.9	1459.3	1555.3	1764.1	1436.8	1361.3	1353.2	1337.7	1443.4	1855.8	1847.7
72.5°	1223.8	1219.2	1307.8	1472.4	1097.2	994.5	1063.5	1029.8	1167.6	1667.2	1645.9
75°	760.2	785.8	896.9	1032.5	751.7	681.2	776.5	768.0	948.1	1435.6	1310.6
77.5°	463.2	468.2	531.0	643.7	452.7	472.1	499.2	551.9	702.9	1163.8	913.6
80°	242.4	225.4	271.5	353.2	268.8	316.8	366.0	424.1	446.1	758.7	610.7
82.5°	70.1	69.7	91.8	147.9	127.4	155.7	184.7	266.4	292.4	451.2	418.3
85°	0.4	0.4	0.4	0.8	1.2	1.9	8.1	68.5	90.6	209.1	172.0
87.5°	0.0	0.0	0.4	0.8	0.8	1.5	2.3	3.1	3.9	4.6	17.0
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°	832.3	832.3	832.3	832.3	832.3	832.3	832.3	832.3	832.3	832.3	832.3
2.5°	878.4	872.5	860.1	843.5	831.9	811.7	807.5	794.7	781.9	771.5	771.8
5°	846.6	826.8	796.6	761.8	728.5	698.7	692.8	675.4	670.4	665.3	651.4
7.5°	763.3	740.1	697.9	646.4	604.5	576.3	546.1	527.9	511.6	493.0	497.7
10°	699.4	666.1	608.0	547.6	495.3	457.4	424.1	407.0	383.4	366.4	364.0
12.5°	650.2	614.2	544.5	473.6	424.5	402.4	381.1	354.4	328.0	305.6	293.9
15°	634.0	593.3	512.4	441.9	403.2	376.4	346.6	316.0	283.9	259.9	250.6
17.5°	653.0	604.9	512.0	428.3	379.9	340.8	303.6	269.2	231.2	207.2	199.8
20°	705.2	645.2	522.8	415.6	351.6	298.6	246.3	209.1	170.4	153.4	145.6
22.5°	778.0	699.8	539.5	400.1	320.3	247.1	188.2	141.4	122.4	113.9	111.9
25°	852.8	769.1	563.1	386.9	285.8	196.7	135.2	113.1	104.2	100.3	100.3
27.5°	934.9	838.5	588.7	371.0	250.2	146.4	110.0	99.5	94.9	92.6	92.2
30°	1001.5	895.0	617.7	352.4	218.0	120.1	97.6	90.6	86.4	85.2	85.2
32.5°	1049.5	937.2	648.3	333.8	188.6	108.4	90.6	84.4	79.8	79.0	79.0
35°	1105.7	977.5	662.2	323.4	170.8	101.1	85.6	79.4	75.1	73.2	73.2
37.5°	1173.1	1025.5	670.0	313.3	163.0	94.1	82.1	75.1	70.9	68.5	68.5
40°	1258.7	1080.1	678.1	303.2	158.4	88.3	78.2	71.3	67.8	65.1	65.1
42.5°	1319.8	1130.5	684.3	294.7	150.3	85.6	75.1	68.5	64.3	62.0	61.6
45°	1352.0	1177.3	687.0	289.7	141.0	87.9	72.8	66.2	61.2	58.9	58.5
47.5°	1373.7	1216.1	690.5	285.8	133.6	83.7	72.4	63.9	58.9	55.8	55.8
50°	1408.1	1267.2	699.4	278.5	129.4	78.2	78.2	62.7	56.2	53.4	53.1
52.5°	1469.7	1340.4	723.4	270.3	124.7	72.8	80.6	63.1	54.2	51.1	50.3
55°	1562.7	1456.9	763.3	258.7	118.1	66.2	75.1	63.5	52.3	49.6	48.4
57.5°	1683.5	1597.9	809.8	249.4	106.9	60.8	68.5	61.6	50.0	47.6	46.9
60°	1764.8	1692.0	839.2	237.4	91.0	57.3	58.9	59.6	47.6	44.9	44.5
62.5°	1808.6	1693.6	839.6	220.7	76.3	54.2	52.7	60.8	45.7	42.2	41.8
65°	1811.7	1611.1	797.4	199.4	71.3	50.7	48.4	53.8	43.8	40.3	39.9
67.5°	1778.0	1476.7	701.0	175.1	73.2	48.0	44.9	45.3	41.4	38.3	38.0
70°	1657.2	1302.8	562.3	155.7	73.6	44.5	42.2	41.1	39.1	36.4	35.6
72.5°	1429.8	1088.6	426.0	149.5	74.7	41.8	39.1	38.0	36.4	34.1	33.3
75°	1079.0	849.3	319.9	139.4	75.5	38.7	35.6	34.9	33.3	31.0	30.6
77.5°	745.5	629.7	222.3	117.7	67.4	35.2	32.1	31.4	30.2	27.9	27.5
80°	503.5	431.8	136.3	88.3	51.1	31.0	27.9	27.9	26.7	24.4	24.4
82.5°	350.5	322.6	78.6	57.7	37.2	25.6	24.4	24.4	23.2	20.9	20.5
85°	146.4	195.2	35.2	31.4	25.9	20.1	20.1	20.5	19.4	17.4	17.0
87.5°	5.0	20.9	13.9	14.7	15.5	13.9	15.5	15.5	15.1	13.6	13.2
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°	832.3	832.3	832.3	832.3	832.3	832.3	832.3	832.3	832.3	832.3	832.3
2.5°	760.6	755.6	740.1	738.2	726.5	725.8	730.8	722.3	723.1	733.5	732.0
5°	654.5	642.9	642.5	629.7	615.4	611.9	599.5	594.9	592.9	588.7	604.2
7.5°	512.0	506.6	511.2	509.7	496.5	489.1	462.8	442.7	432.6	436.9	438.0
10°	364.0	372.2	384.6	396.6	387.3	362.9	351.6	335.4	333.4	332.3	340.0
12.5°	288.5	279.2	285.0	289.3	280.4	269.9	265.3	258.3	262.2	271.1	276.1
15°	239.7	223.5	216.1	211.1	213.4	207.2	209.5	207.2	209.9	212.6	221.9
17.5°	189.4	183.6	169.6	163.0	163.4	160.7	161.5	161.1	159.6	165.8	173.1
20°	142.5	141.0	137.9	133.2	134.0	132.1	130.9	124.3	121.6	123.5	129.7
22.5°	111.1	113.1	115.0	114.6	116.6	111.5	106.9	101.1	100.3	100.7	102.2
25°	99.5	100.3	101.9	103.8	105.0	100.3	93.7	90.2	89.8	90.6	90.6
27.5°	92.6	91.8	93.7	96.0	97.6	91.8	86.4	83.3	82.5	81.7	81.3
30°	85.2	85.2	86.8	89.1	90.2	85.2	80.6	77.5	75.5	74.4	74.0
32.5°	79.8	80.2	80.9	82.5	84.4	79.4	75.5	72.8	69.3	68.2	67.4
35°	73.6	75.1	76.3	76.7	78.2	74.7	70.9	66.6	63.5	62.4	62.4
37.5°	68.5	69.7	71.6	71.3	72.4	70.1	65.8	61.2	59.6	59.3	58.9
40°	64.7	64.7	66.2	67.8	69.3	65.1	60.0	57.7	56.5	55.8	56.2
42.5°	61.2	60.8	60.8	63.5	66.2	60.0	55.8	54.2	53.8	53.1	53.4
45°	58.1	57.7	56.5	57.7	61.6	55.0	52.3	51.1	50.7	50.7	50.7
47.5°	55.4	54.6	53.1	53.4	56.2	51.1	48.8	48.4	48.0	48.0	48.4
50°	52.3	51.5	50.3	50.0	50.7	48.4	46.5	45.7	45.7	45.7	46.5
52.5°	49.6	49.2	47.6	47.2	47.6	46.1	44.1	43.8	43.8	43.8	44.9
55°	47.6	46.9	46.1	45.3	46.1	44.1	42.6	41.8	41.8	42.6	43.4
57.5°	45.7	44.9	44.5	43.8	44.5	42.6	41.1	40.3	40.7	41.1	41.1
60°	43.8	43.0	42.6	41.8	43.0	41.1	39.5	39.1	39.1	38.7	38.7
62.5°	41.8	41.4	40.7	39.9	41.4	39.1	38.0	37.2	36.8	36.8	36.8
65°	39.5	39.1	38.7	38.3	39.1	37.2	36.0	35.6	34.9	34.5	34.9
67.5°	37.6	37.6	36.8	36.0	37.2	34.9	34.1	33.7	32.5	32.1	32.5
70°	35.2	35.2	34.5	34.1	35.6	32.5	31.8	31.4	30.6	30.2	30.2
72.5°	32.9	32.9	32.1	31.8	33.7	30.2	29.4	29.0	27.9	27.5	27.5
75°	30.6	30.2	29.8	29.4	31.8	27.9	26.7	25.9	24.8	24.4	24.0
77.5°	27.9	27.5	26.7	27.1	28.7	24.8	23.2	22.8	21.7	21.3	20.9
80°	24.4	24.0	23.6	24.4	24.4	21.7	19.8	19.0	17.8	17.0	16.7
82.5°	20.9	20.5	20.5	21.3	20.1	19.0	16.7	15.1	13.2	12.0	11.6
85°	17.0	17.8	17.0	17.8	15.1	15.1	11.6	8.9	6.2	5.0	4.6
87.5°	13.2	13.6	13.2	13.6	10.5	10.1	5.4	3.1	0.4	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°	832.3	832.3	832.3	832.3	832.3	832.3	832.3	832.3	832.3	832.3
2.5°	743.6	744.4	761.0	777.7	787.7	812.9	825.3	839.2	846.6	855.1
5°	596.8	611.5	625.1	658.4	675.4	715.3	744.4	790.8	805.5	817.2
7.5°	450.8	472.9	489.5	531.0	563.1	612.7	663.4	718.8	734.7	745.1
10°	358.2	378.4	409.7	442.3	478.3	538.3	593.3	650.6	678.5	690.5
12.5°	300.9	333.1	369.9	400.1	428.7	472.9	542.6	615.0	644.0	656.8
15°	248.2	284.3	321.8	359.0	394.6	444.6	517.8	611.9	648.7	661.5
17.5°	197.1	226.6	264.5	309.4	361.3	424.8	522.4	644.8	689.7	706.4
20°	140.2	168.9	207.6	263.0	324.5	404.3	533.3	694.4	758.3	777.3
22.5°	105.7	121.6	157.2	211.8	291.6	388.1	550.3	762.2	836.9	854.0
25°	92.9	98.4	116.6	169.2	258.7	373.3	572.8	829.6	920.2	938.8
27.5°	82.5	85.6	94.9	135.9	234.3	358.2	599.5	902.4	991.8	1016.2
30°	74.4	78.2	86.0	113.9	210.7	336.5	623.9	967.8	1052.6	1071.2
32.5°	68.2	72.4	79.4	103.0	190.5	320.3	637.8	1016.6	1104.5	1121.6
35°	63.9	67.8	74.7	93.3	172.7	309.0	642.1	1065.0	1168.0	1185.5
37.5°	60.0	63.9	70.1	83.7	160.3	294.3	648.7	1122.7	1241.6	1264.5
40°	57.3	60.4	66.2	77.1	143.3	278.5	656.4	1190.1	1313.3	1336.1
42.5°	54.6	58.1	63.1	77.5	126.3	264.9	661.5	1242.0	1370.2	1391.9
45°	52.3	56.2	62.0	75.9	113.5	252.5	659.2	1285.4	1422.1	1438.7
47.5°	50.0	54.6	65.1	72.8	109.6	241.3	661.1	1327.2	1459.3	1472.4
50°	48.4	54.2	69.7	68.2	110.4	236.2	679.7	1377.2	1487.2	1492.2
52.5°	47.2	55.4	65.8	61.6	110.4	233.9	715.3	1457.7	1535.6	1532.1
55°	45.3	55.0	61.6	55.8	105.7	235.1	749.0	1564.2	1651.7	1632.4
57.5°	43.8	52.7	55.4	51.5	94.9	235.5	799.0	1654.1	1743.1	1745.9
60°	41.8	56.5	48.0	48.0	81.3	233.5	843.1	1652.5	1759.8	1777.6
62.5°	39.9	55.4	43.0	44.5	72.0	226.2	869.8	1556.1	1698.2	1731.1
65°	37.6	43.8	39.5	41.4	68.2	208.0	831.9	1436.4	1615.0	1650.2
67.5°	34.9	36.0	36.0	38.3	66.6	180.5	736.2	1304.4	1510.4	1553.0
70°	31.8	32.1	32.9	36.4	62.0	155.3	599.5	1163.8	1398.1	1451.9
72.5°	28.7	29.0	29.0	32.9	58.1	134.0	424.5	922.1	1167.3	1223.8
75°	25.2	25.6	25.2	28.7	50.7	100.3	252.1	583.2	696.3	760.2
77.5°	21.3	21.3	20.5	22.5	34.9	63.5	137.9	354.4	423.7	463.2
80°	17.4	15.9	13.2	13.6	19.0	36.4	61.6	203.3	232.4	242.4
82.5°	11.6	8.9	5.4	5.0	6.2	10.1	14.3	80.6	74.0	70.1
85°	2.3	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4
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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