

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: P400960

Luminaire Tested: **ENT-SA1A-740-U-SLL**

Issue Date: 5/20/2020

Test Information

Test Method: LM-79-08
Report Number: P400960
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-740-U-SLL
Description: ENTRI LED LUMINAIRE
(1) 70 CRI, 4000K, 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: 2417 lumens
Efficiency: N/A
Efficacy: 120.2 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

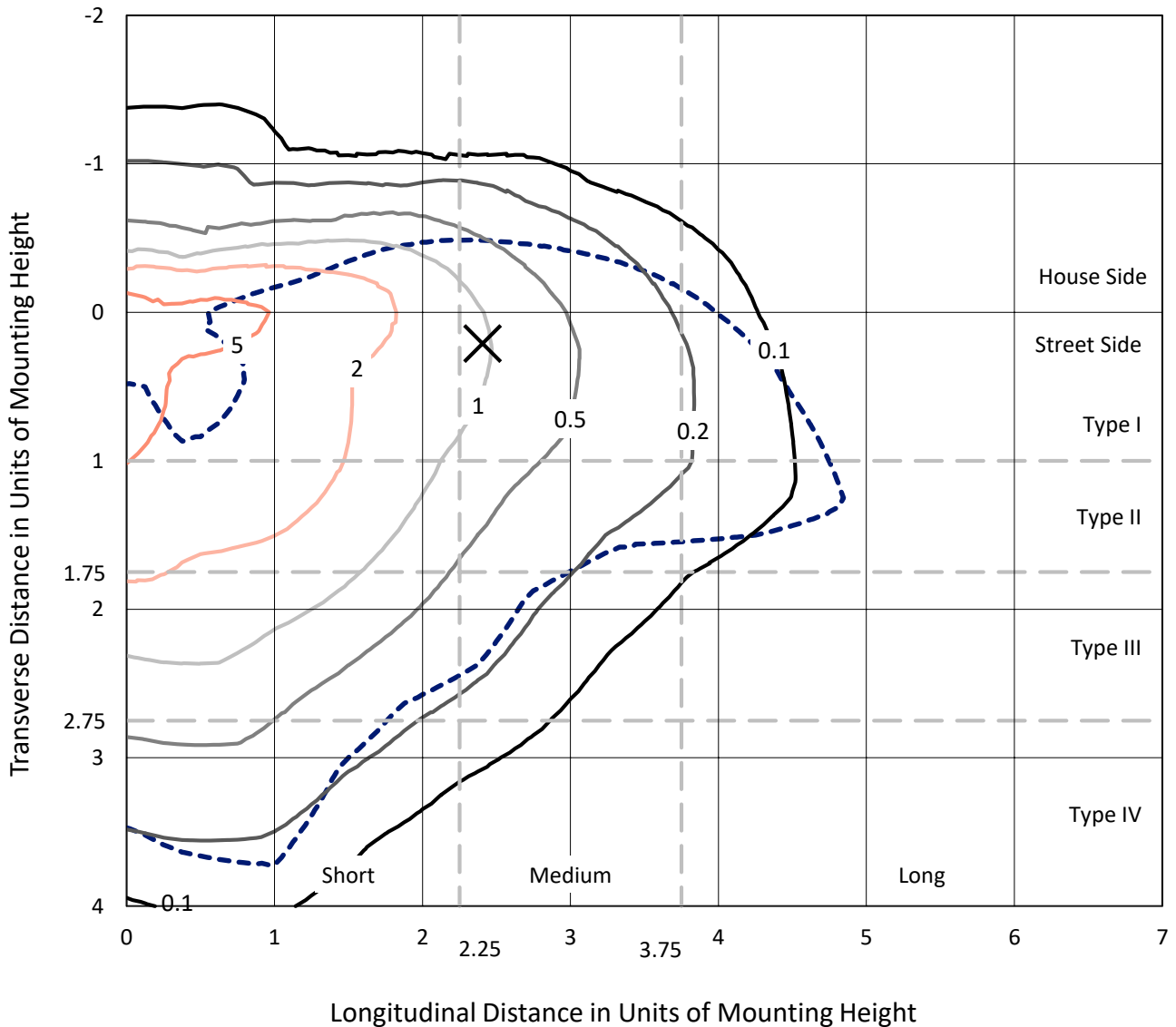
Input Watts (W): 20.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

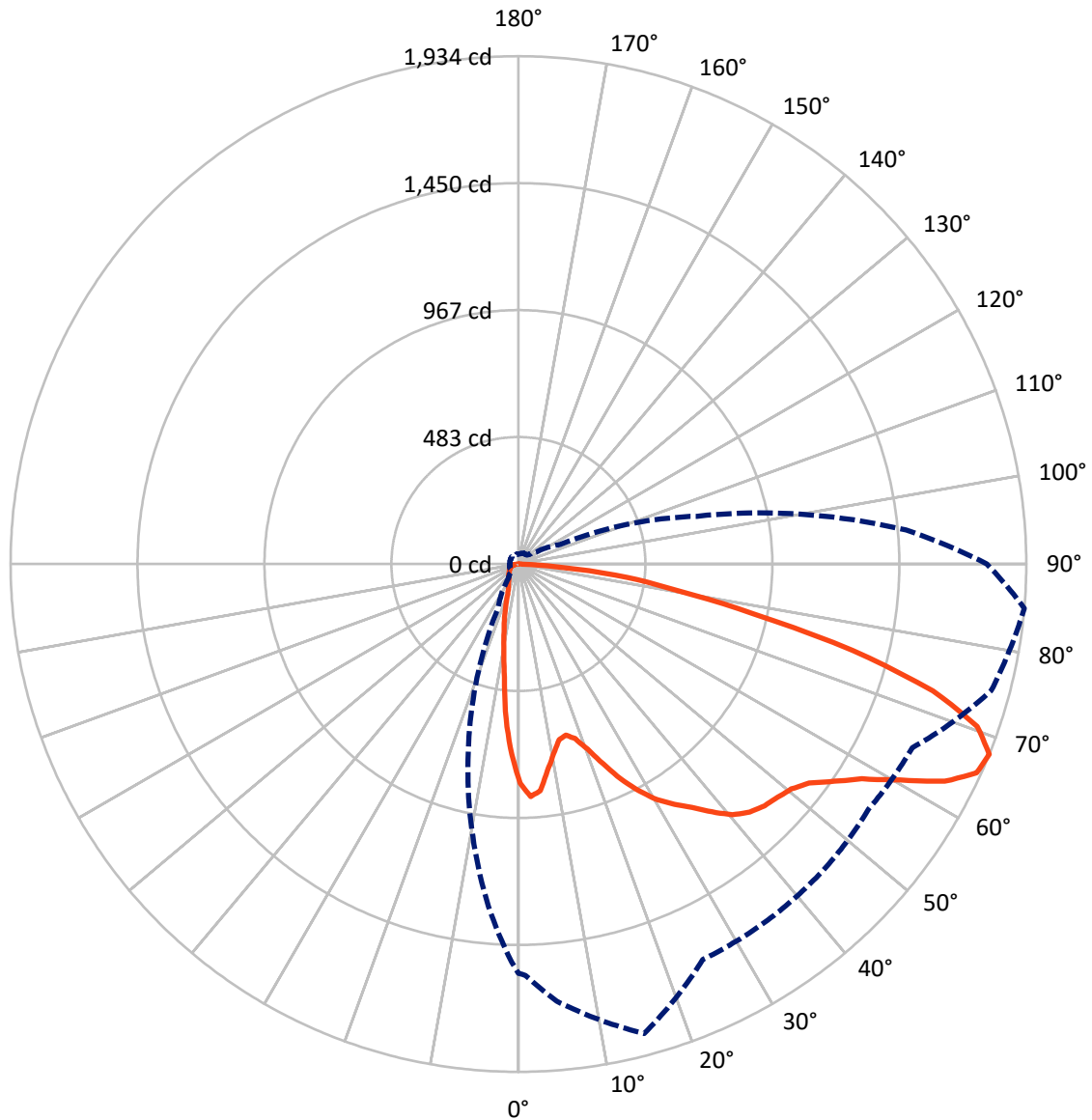
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 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	487.0	0.0	487.0
	% Fixture	20.1	0.0	20.1
Street Side	Lumens	1930.0	0.0	1930.0
	% Fixture	79.9	0.0	79.9
Total	Lumens	2417.0	0.0	2417.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	63.5	2.6
10°-20°	125.2	5.2
20°-30°	174.9	7.2
30°-40°	246.6	10.2
40°-50°	341.7	14.1
50°-60°	480.2	19.9
60°-70°	587.0	24.3
70°-80°	345.0	14.3
80°-90°	52.8	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°	2417.0	100.0
0°-180°	2417.0	100.0



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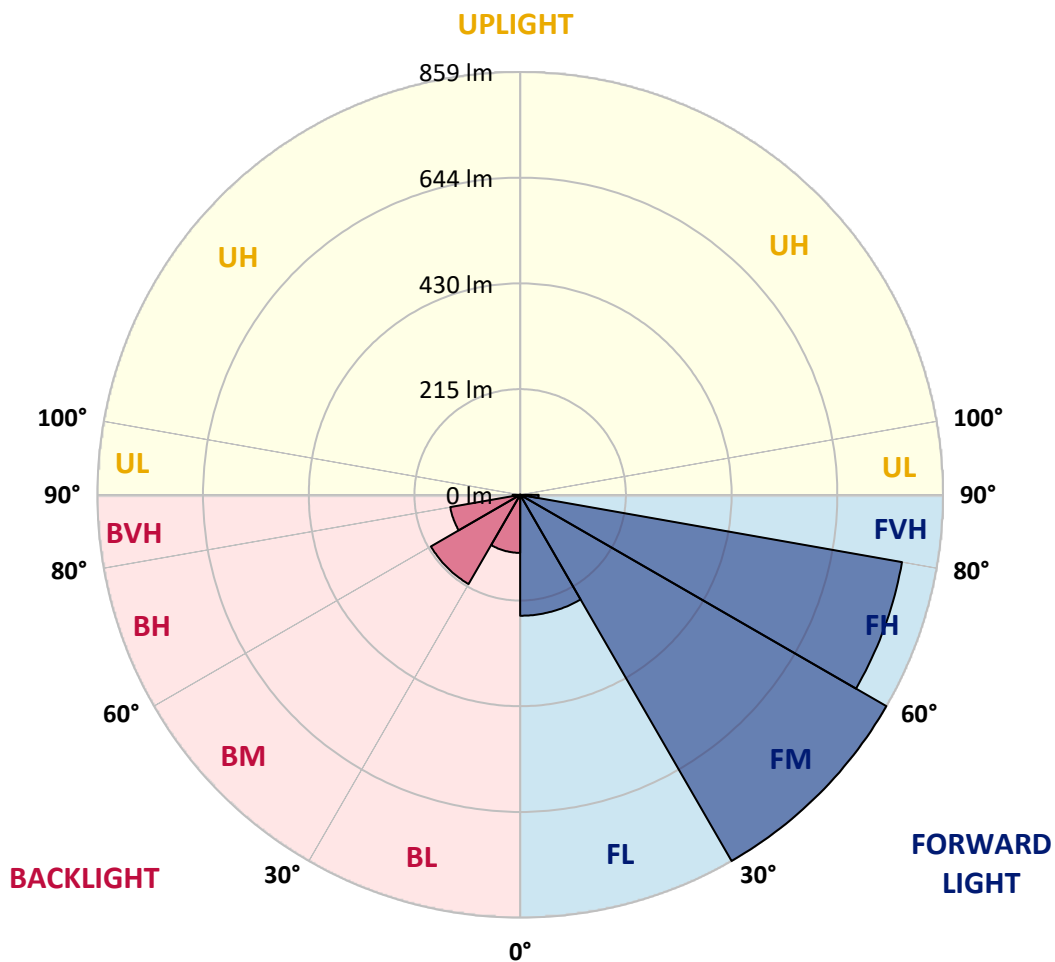
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	245.7	10.2			
FM	(30°-60°)	859.1	35.5			
FH	(60°-80°)	787.8	32.6			G1/1800
FVH	(80°-90°)	37.4	1.5			G1/100
BL	(0°-30°)	117.9	4.9	B1/500		
BM	(30°-60°)	209.4	8.7	B0/220		
BH	(60°-80°)	144.3	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°	835.0	835.0	835.0	835.0	835.0	835.0	835.0	835.0	835.0	835.0	835.0
2.5°	858.0	854.1	867.3	886.7	899.9	909.2	912.4	912.0	909.2	901.9	886.3
5°	819.9	816.4	843.2	886.3	924.0	951.2	959.0	948.1	934.5	905.7	867.7
7.5°	747.6	753.0	787.2	847.9	908.5	951.6	962.1	945.0	917.0	858.3	794.2
10°	692.8	695.5	734.0	807.1	871.6	915.8	934.1	919.0	882.4	808.2	734.0
12.5°	659.0	661.7	699.0	766.6	835.4	870.0	875.4	875.1	844.7	772.9	687.0
15°	663.7	667.2	704.5	760.4	799.3	814.4	814.8	819.1	810.2	755.4	675.7
17.5°	708.7	708.7	744.5	778.3	769.4	758.5	766.6	774.4	790.0	765.9	698.6
20°	779.9	783.0	816.0	810.2	755.8	728.6	718.8	732.4	780.6	797.3	752.7
22.5°	856.8	864.9	899.5	856.8	753.4	700.6	689.7	704.5	781.8	847.1	826.9
25°	941.9	952.0	975.3	911.2	760.4	685.0	677.7	691.6	784.9	892.9	906.9
27.5°	1019.6	1020.4	1043.3	957.0	778.7	686.6	674.2	692.4	793.5	929.1	977.6
30°	1074.8	1074.8	1084.9	980.4	801.2	696.3	677.3	704.1	805.5	948.9	1041.7
32.5°	1125.3	1128.0	1123.0	1004.8	822.6	710.3	684.7	727.4	824.5	965.2	1091.1
35°	1189.4	1189.0	1166.5	1024.3	842.4	725.5	702.9	756.9	852.1	989.3	1138.1
37.5°	1268.7	1264.8	1217.0	1041.7	866.5	751.5	737.5	797.3	889.0	1017.7	1197.6
40°	1340.6	1334.3	1263.2	1058.1	885.5	802.0	793.8	847.5	935.7	1053.0	1255.5
42.5°	1396.5	1387.2	1302.5	1069.7	914.3	881.3	888.3	937.6	982.7	1084.5	1291.6
45°	1443.5	1433.8	1332.0	1075.6	983.8	994.3	1007.9	1049.1	1032.8	1093.0	1313.7
47.5°	1477.3	1461.4	1344.8	1092.6	1077.9	1126.5	1168.4	1171.1	1103.5	1092.6	1327.3
50°	1497.1	1479.7	1356.9	1135.0	1187.1	1276.4	1321.1	1300.1	1177.0	1099.6	1346.8
52.5°	1537.2	1518.9	1407.0	1203.8	1299.0	1428.4	1452.5	1418.7	1253.1	1135.8	1385.6
55°	1637.8	1629.6	1504.1	1296.3	1408.9	1551.2	1562.0	1528.2	1332.8	1198.3	1459.8
57.5°	1751.7	1733.8	1635.5	1412.4	1514.2	1647.1	1664.6	1618.0	1416.3	1286.2	1542.6
60°	1783.5	1780.0	1746.6	1548.0	1623.0	1749.7	1750.9	1691.4	1513.9	1390.7	1668.9
62.5°	1736.9	1748.2	1792.8	1673.6	1714.4	1818.5	1808.8	1747.0	1616.0	1557.0	1822.4
65°	1655.7	1671.6	1761.4	1792.1	1735.3	1804.9	1784.3	1745.0	1680.5	1736.1	1917.6
67.5°	1558.1	1566.7	1671.2	1851.1	1661.9	1655.3	1645.6	1627.7	1654.9	1863.6	1933.9
70°	1456.7	1464.1	1560.5	1769.9	1441.6	1365.8	1357.6	1342.1	1448.2	1862.0	1853.8
72.5°	1227.9	1223.2	1312.2	1477.3	1100.8	997.8	1067.0	1033.2	1171.5	1672.8	1651.4
75°	762.8	788.4	899.9	1035.9	754.2	683.5	779.1	770.5	951.2	1440.4	1314.9
77.5°	464.7	469.8	532.7	645.8	454.2	473.7	500.9	553.7	705.2	1167.6	916.6
80°	243.2	226.1	272.4	354.4	269.7	317.8	367.2	425.5	447.6	761.2	612.8
82.5°	70.3	69.9	92.1	148.4	127.8	156.2	185.3	267.3	293.4	452.7	419.7
85°	0.4	0.4	0.4	0.8	1.2	1.9	8.2	68.8	90.9	209.8	172.5
87.5°	0.0	0.0	0.4	0.8	0.8	1.6	2.3	3.1	3.9	4.7	17.1
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°	835.0	835.0	835.0	835.0	835.0	835.0	835.0	835.0	835.0	835.0	835.0
2.5°	881.3	875.4	863.0	846.3	834.6	814.4	810.2	797.3	784.5	774.0	774.4
5°	849.4	829.6	799.3	764.3	730.9	701.0	695.1	677.7	672.6	667.6	653.6
7.5°	765.9	742.5	700.2	648.5	606.6	578.2	547.9	529.6	513.3	494.6	499.3
10°	701.7	668.3	610.0	549.4	497.0	458.9	425.5	408.4	384.7	367.6	365.3
12.5°	652.4	616.3	546.3	475.2	425.9	403.7	382.3	355.5	329.1	306.6	294.9
15°	636.1	595.3	514.1	443.4	404.5	377.7	347.8	317.1	284.8	260.7	251.4
17.5°	655.1	606.9	513.7	429.8	381.2	341.9	304.6	270.1	232.0	207.9	200.5
20°	707.6	647.4	524.6	416.9	352.8	299.6	247.1	209.8	171.0	153.9	146.1
22.5°	780.6	702.1	541.3	401.4	321.3	247.9	188.8	141.8	122.8	114.2	112.3
25°	855.6	771.7	565.0	388.2	286.8	197.4	135.6	113.5	104.5	100.6	100.6
27.5°	938.0	841.2	590.6	372.2	251.0	146.9	110.4	99.9	95.2	92.9	92.5
30°	1004.8	898.0	619.8	353.6	218.8	120.5	97.9	90.9	86.7	85.5	85.5
32.5°	1053.0	940.3	650.5	334.9	189.2	108.8	90.9	84.7	80.0	79.3	79.3
35°	1109.4	980.7	664.4	324.5	171.4	101.4	85.9	79.7	75.4	73.4	73.4
37.5°	1177.0	1028.9	672.2	314.3	163.6	94.4	82.4	75.4	71.1	68.8	68.8
40°	1262.8	1083.7	680.4	304.2	158.9	88.6	78.5	71.5	68.0	65.3	65.3
42.5°	1324.2	1134.2	686.6	295.7	150.8	85.9	75.4	68.8	64.5	62.2	61.8
45°	1356.5	1181.2	689.3	290.6	141.4	88.2	73.1	66.4	61.4	59.1	58.7
47.5°	1378.2	1220.1	692.8	286.8	134.1	83.9	72.7	64.1	59.1	56.0	56.0
50°	1412.8	1271.4	701.7	279.4	129.8	78.5	78.5	62.9	56.3	53.6	53.2
52.5°	1474.6	1344.8	725.8	271.2	125.1	73.1	80.8	63.3	54.4	51.3	50.5
55°	1567.9	1461.8	765.9	259.6	118.5	66.4	75.4	63.7	52.5	49.7	48.6
57.5°	1689.1	1603.2	812.5	250.2	107.2	61.0	68.8	61.8	50.1	47.8	47.0
60°	1770.7	1697.6	842.0	238.2	91.3	57.5	59.1	59.8	47.8	45.1	44.7
62.5°	1814.6	1699.2	842.4	221.5	76.5	54.4	52.8	61.0	45.9	42.4	42.0
65°	1817.7	1616.4	800.1	200.1	71.5	50.9	48.6	54.0	43.9	40.4	40.0
67.5°	1783.9	1481.6	703.3	175.6	73.4	48.2	45.1	45.5	41.6	38.5	38.1
70°	1662.7	1307.1	564.2	156.2	73.8	44.7	42.4	41.2	39.2	36.5	35.7
72.5°	1434.6	1092.3	427.4	150.0	75.0	42.0	39.2	38.1	36.5	34.2	33.4
75°	1082.5	852.1	321.0	139.9	75.8	38.9	35.7	35.0	33.4	31.1	30.7
77.5°	748.0	631.8	223.0	118.1	67.6	35.4	32.3	31.5	30.3	28.0	27.6
80°	505.1	433.3	136.8	88.6	51.3	31.1	28.0	28.0	26.8	24.5	24.5
82.5°	351.7	323.7	78.9	57.9	37.3	25.6	24.5	24.5	23.3	21.0	20.6
85°	146.9	195.8	35.4	31.5	26.0	20.2	20.2	20.6	19.4	17.5	17.1
87.5°	5.1	21.0	14.0	14.8	15.5	14.0	15.5	15.5	15.2	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°	835.0	835.0	835.0	835.0	835.0	835.0	835.0	835.0	835.0	835.0	835.0
2.5°	763.1	758.1	742.5	740.6	728.9	728.2	733.2	724.7	725.5	735.9	734.4
5°	656.7	645.0	644.6	631.8	617.4	613.9	601.5	596.8	594.9	590.6	606.2
7.5°	513.7	508.2	512.9	511.4	498.1	490.8	464.3	444.1	434.0	438.3	439.5
10°	365.3	373.4	385.8	397.9	388.6	364.1	352.8	336.5	334.6	333.4	341.2
12.5°	289.5	280.2	286.0	290.3	281.3	270.8	266.2	259.2	263.1	272.0	277.0
15°	240.5	224.2	216.8	211.8	214.1	207.9	210.2	207.9	210.6	213.3	222.6
17.5°	190.0	184.2	170.2	163.6	164.0	161.3	162.0	161.6	160.1	166.3	173.7
20°	143.0	141.4	138.3	133.7	134.4	132.5	131.3	124.7	122.0	124.0	130.2
22.5°	111.5	113.5	115.4	115.0	117.0	111.9	107.2	101.4	100.6	101.0	102.6
25°	99.9	100.6	102.2	104.1	105.3	100.6	94.0	90.5	90.1	90.9	90.9
27.5°	92.9	92.1	94.0	96.4	97.9	92.1	86.7	83.5	82.8	82.0	81.6
30°	85.5	85.5	87.0	89.4	90.5	85.5	80.8	77.7	75.8	74.6	74.2
32.5°	80.0	80.4	81.2	82.8	84.7	79.7	75.8	73.1	69.6	68.4	67.6
35°	73.8	75.4	76.5	76.9	78.5	75.0	71.1	66.8	63.7	62.6	62.6
37.5°	68.8	69.9	71.9	71.5	72.7	70.3	66.1	61.4	59.8	59.5	59.1
40°	64.9	64.9	66.4	68.0	69.6	65.3	60.2	57.9	56.7	56.0	56.3
42.5°	61.4	61.0	61.0	63.7	66.4	60.2	56.0	54.4	54.0	53.2	53.6
45°	58.3	57.9	56.7	57.9	61.8	55.2	52.5	51.3	50.9	50.9	50.9
47.5°	55.6	54.8	53.2	53.6	56.3	51.3	49.0	48.6	48.2	48.2	48.6
50°	52.5	51.7	50.5	50.1	50.9	48.6	46.6	45.9	45.9	45.9	46.6
52.5°	49.7	49.3	47.8	47.4	47.8	46.2	44.3	43.9	43.9	43.9	45.1
55°	47.8	47.0	46.2	45.5	46.2	44.3	42.7	42.0	42.0	42.7	43.5
57.5°	45.9	45.1	44.7	43.9	44.7	42.7	41.2	40.4	40.8	41.2	41.2
60°	43.9	43.1	42.7	42.0	43.1	41.2	39.6	39.2	39.2	38.9	38.9
62.5°	42.0	41.6	40.8	40.0	41.6	39.2	38.1	37.3	36.9	36.9	36.9
65°	39.6	39.2	38.9	38.5	39.2	37.3	36.1	35.7	35.0	34.6	35.0
67.5°	37.7	37.7	36.9	36.1	37.3	35.0	34.2	33.8	32.6	32.3	32.6
70°	35.4	35.4	34.6	34.2	35.7	32.6	31.9	31.5	30.7	30.3	30.3
72.5°	33.0	33.0	32.3	31.9	33.8	30.3	29.5	29.1	28.0	27.6	27.6
75°	30.7	30.3	29.9	29.5	31.9	28.0	26.8	26.0	24.9	24.5	24.1
77.5°	28.0	27.6	26.8	27.2	28.8	24.9	23.3	22.9	21.8	21.4	21.0
80°	24.5	24.1	23.7	24.5	24.5	21.8	19.8	19.0	17.9	17.1	16.7
82.5°	21.0	20.6	20.6	21.4	20.2	19.0	16.7	15.2	13.2	12.0	11.7
85°	17.1	17.9	17.1	17.9	15.2	15.2	11.7	8.9	6.2	5.1	4.7
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°	835.0	835.0	835.0	835.0	835.0	835.0	835.0	835.0	835.0	835.0
2.5°	746.0	746.8	763.5	780.2	790.3	815.6	828.0	842.0	849.4	858.0
5°	598.8	613.5	627.1	660.6	677.7	717.7	746.8	793.5	808.2	819.9
7.5°	452.3	474.4	491.1	532.7	565.0	614.7	665.6	721.2	737.1	747.6
10°	359.4	379.6	411.1	443.7	479.9	540.1	595.3	652.8	680.8	692.8
12.5°	301.9	334.2	371.1	401.4	430.1	474.4	544.4	617.0	646.2	659.0
15°	249.1	285.2	322.9	360.2	395.9	446.1	519.5	613.9	650.8	663.7
17.5°	197.8	227.3	265.4	310.5	362.5	426.3	524.2	647.0	692.0	708.7
20°	140.7	169.4	208.3	263.8	325.6	405.7	535.1	696.7	760.8	779.9
22.5°	106.1	122.0	157.8	212.5	292.6	389.3	552.2	764.7	839.7	856.8
25°	93.3	98.7	117.0	169.8	259.6	374.6	574.7	832.3	923.2	941.9
27.5°	82.8	85.9	95.2	136.4	235.1	359.4	601.5	905.4	995.1	1019.6
30°	74.6	78.5	86.3	114.2	211.4	337.7	626.0	971.0	1056.1	1074.8
32.5°	68.4	72.7	79.7	103.4	191.2	321.3	640.0	1020.0	1108.2	1125.3
35°	64.1	68.0	75.0	93.6	173.3	310.1	644.2	1068.6	1171.9	1189.4
37.5°	60.2	64.1	70.3	83.9	160.9	295.3	650.8	1126.5	1245.7	1268.7
40°	57.5	60.6	66.4	77.3	143.8	279.4	658.6	1194.1	1317.6	1340.6
42.5°	54.8	58.3	63.3	77.7	126.7	265.8	663.7	1246.1	1374.7	1396.5
45°	52.5	56.3	62.2	76.2	113.8	253.3	661.3	1289.7	1426.8	1443.5
47.5°	50.1	54.8	65.3	73.1	110.0	242.1	663.3	1331.6	1464.1	1477.3
50°	48.6	54.4	69.9	68.4	110.7	237.0	681.9	1381.7	1492.1	1497.1
52.5°	47.4	55.6	66.1	61.8	110.7	234.7	717.7	1462.6	1540.7	1537.2
55°	45.5	55.2	61.8	56.0	106.1	235.9	751.5	1569.4	1657.2	1637.8
57.5°	43.9	52.8	55.6	51.7	95.2	236.2	801.6	1659.6	1748.9	1751.7
60°	42.0	56.7	48.2	48.2	81.6	234.3	845.9	1658.0	1765.6	1783.5
62.5°	40.0	55.6	43.1	44.7	72.3	226.9	872.7	1561.3	1703.9	1736.9
65°	37.7	43.9	39.6	41.6	68.4	208.7	834.6	1441.2	1620.3	1655.7
67.5°	35.0	36.1	36.1	38.5	66.8	181.1	738.7	1308.7	1515.4	1558.1
70°	31.9	32.3	33.0	36.5	62.2	155.8	601.5	1167.6	1402.7	1456.7
72.5°	28.8	29.1	29.1	33.0	58.3	134.4	425.9	925.2	1171.1	1227.9
75°	25.3	25.6	25.3	28.8	50.9	100.6	253.0	585.2	698.6	762.8
77.5°	21.4	21.4	20.6	22.5	35.0	63.7	138.3	355.5	425.1	464.7
80°	17.5	15.9	13.2	13.6	19.0	36.5	61.8	204.0	233.1	243.2
82.5°	11.7	8.9	5.4	5.1	6.2	10.1	14.4	80.8	74.2	70.3
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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