

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: P401077

Luminaire Tested: **ENV-SA1B-727-U-SLL-HSS**

Issue Date: 5/20/2020

Test Information

Test Method: LM-79-08
Report Number: P401077
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: ENV-SA1B-727-U-SLL-HSS
Description: ENTRI LED LUMINAIRE
(1) 70 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: 2156 lumens
Efficiency: N/A
Efficacy: 84.9 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

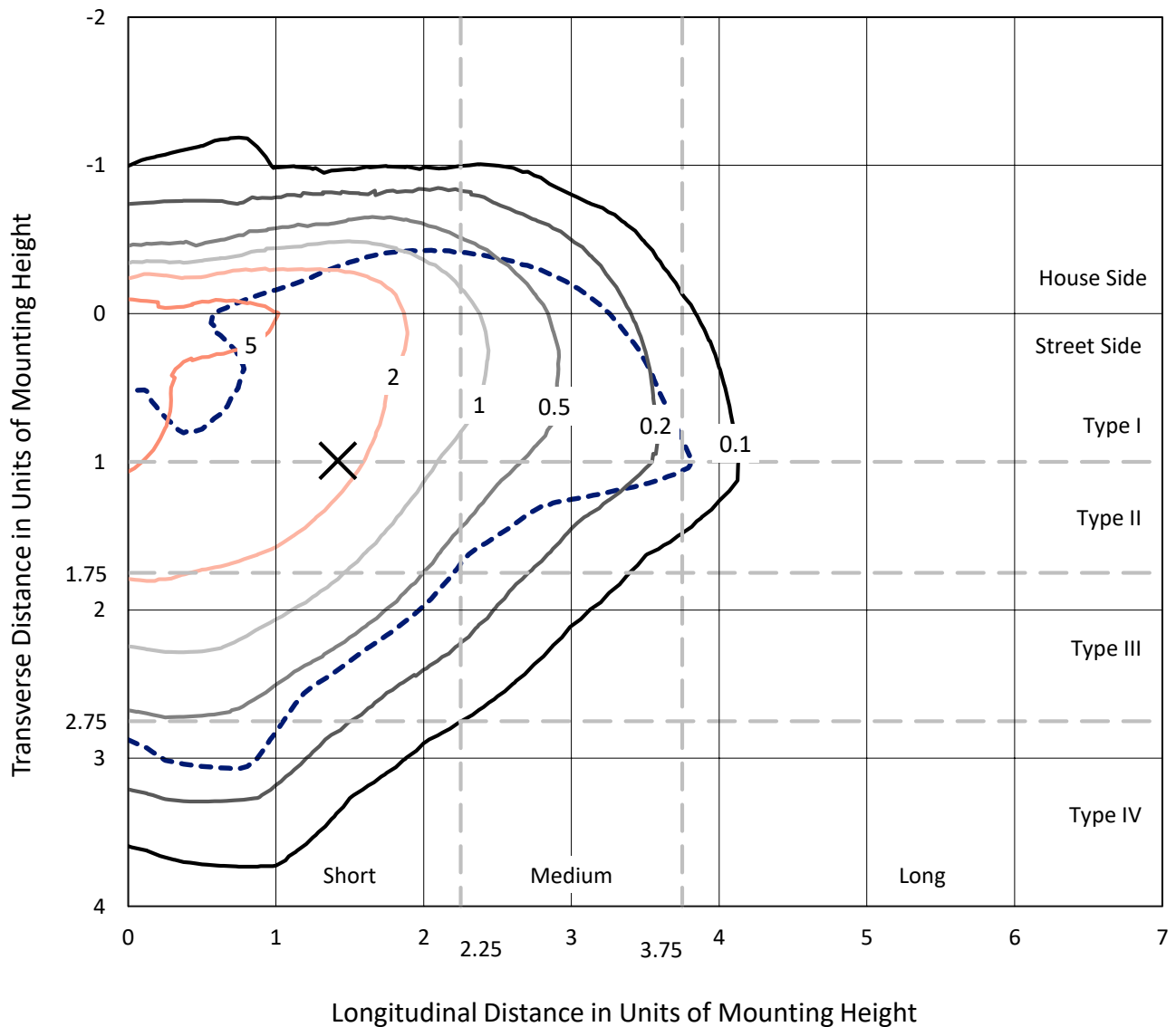


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Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd
 - - - 1/2 Max cd

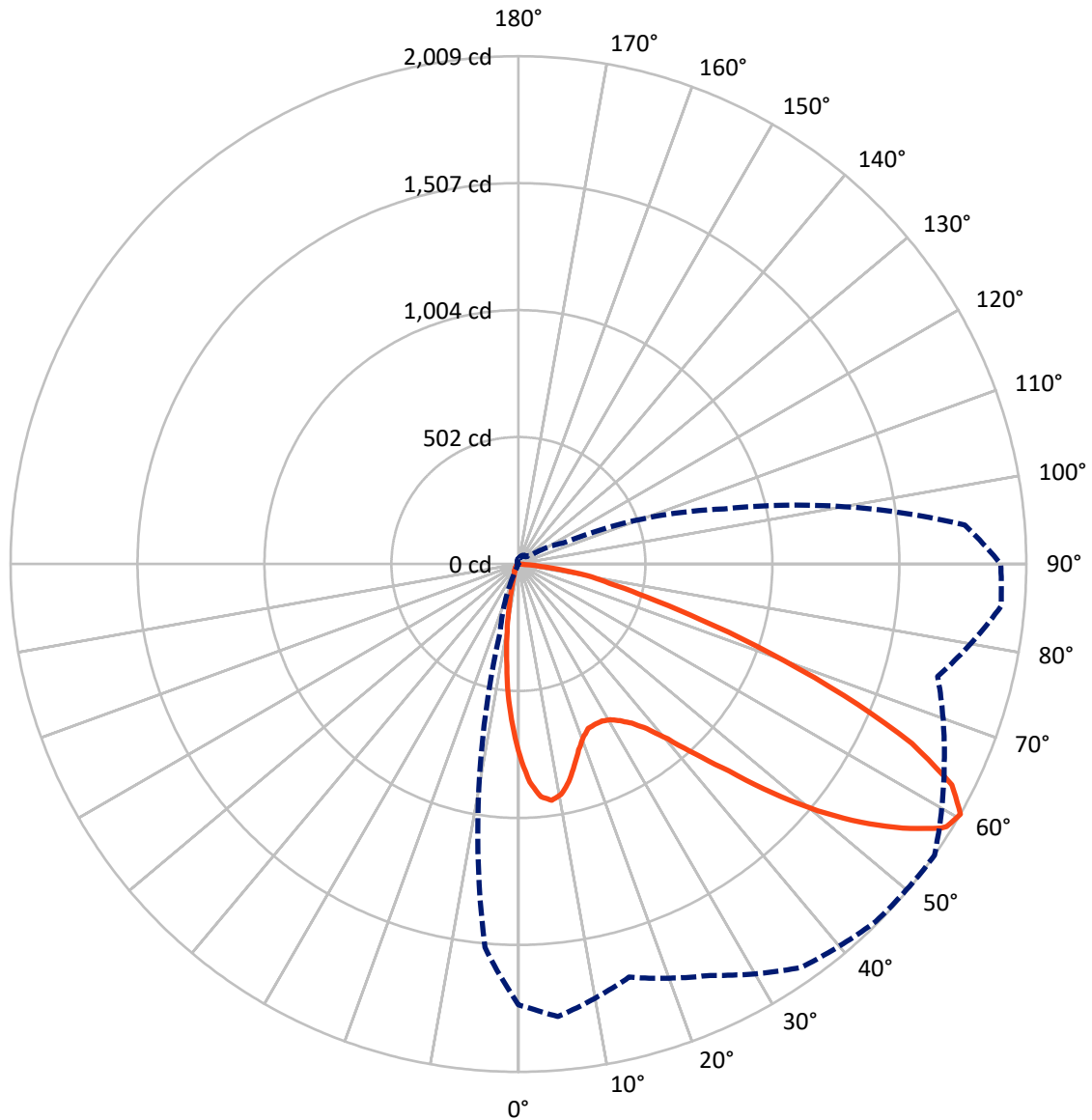


Based on 10 foot mounting height. Maximum calculated value = 9 fc
 Type III - Short - Semi-Cutoff

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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	381.8	0.0	381.8
	% Fixture	17.7	0.0	17.7
Street Side	Lumens	1774.2	0.0	1774.2
	% Fixture	82.3	0.0	82.3
Total	Lumens	2156.0	0.0	2156.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	57.3	2.7
10°-20°	109.0	5.1
20°-30°	155.5	7.2
30°-40°	228.0	10.6
40°-50°	336.2	15.6
50°-60°	498.0	23.1
60°-70°	530.7	24.6
70°-80°	220.1	10.2
80°-90°	21.2	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°	2156.0	100.0
0°-180°	2156.0	100.0



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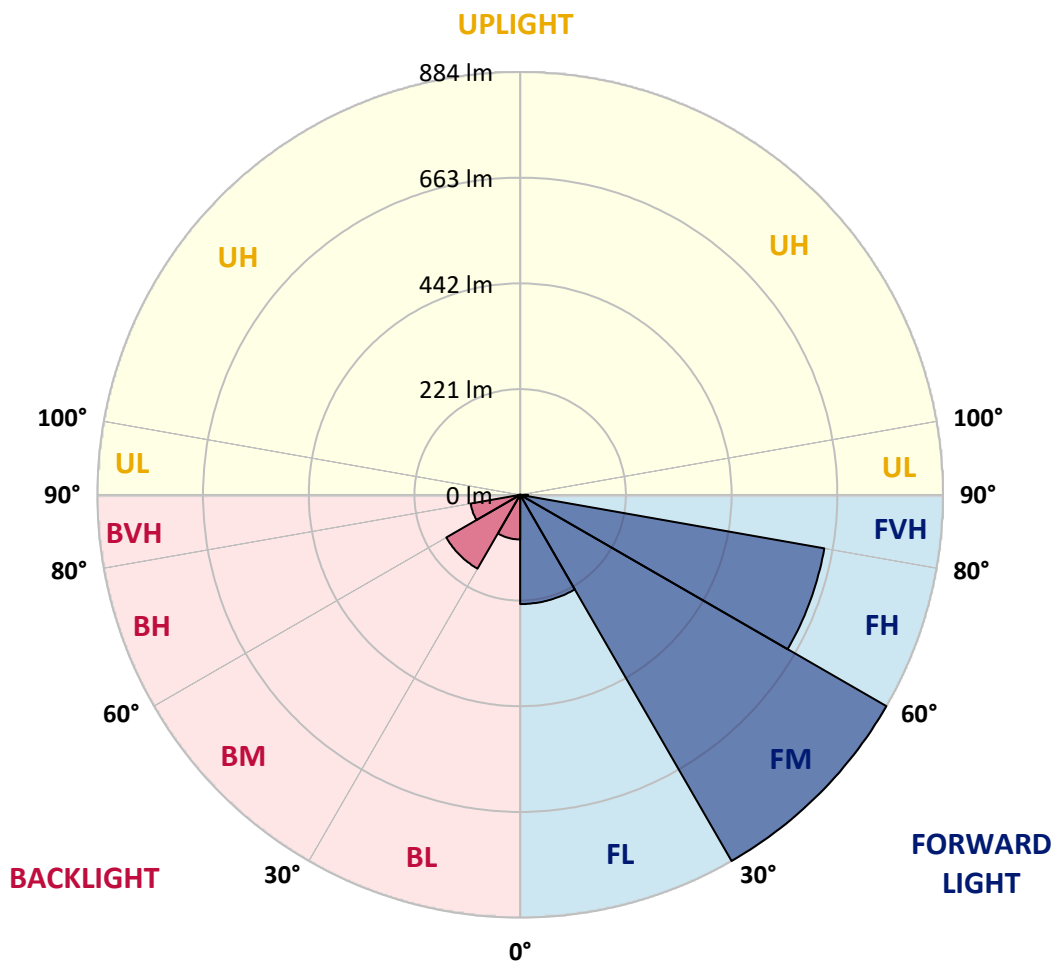
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	228.4	10.6			
FM	(30°-60°)	884.0	41.0			
FH	(60°-80°)	645.6	29.9			G0/660
FVH	(80°-90°)	16.2	0.8			G1/100
BL	(0°-30°)	93.3	4.3	B0/110		
BM	(30°-60°)	178.3	8.3	B0/220		
BH	(60°-80°)	105.2	4.9	B0/110		G0/110
BVH	(80°-90°)	5.0	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°	761.4	761.4	761.4	761.4	761.4	761.4	761.4	761.4	761.4	761.4	761.4
2.5°	795.2	794.0	805.4	829.1	843.7	852.7	854.3	863.7	854.3	849.4	831.9
5°	772.0	771.6	793.6	845.4	887.8	919.6	935.0	924.4	908.1	875.9	836.8
7.5°	707.6	707.6	749.2	818.5	889.4	944.4	963.2	943.6	904.9	840.1	770.0
10°	655.0	659.9	699.9	782.6	861.3	921.6	942.4	927.3	876.8	792.8	710.5
12.5°	623.6	626.5	670.9	754.1	827.4	876.3	889.0	884.5	847.8	756.5	669.3
15°	626.5	630.6	681.5	749.6	797.3	816.8	821.3	827.0	811.9	741.8	655.8
17.5°	671.3	674.2	725.5	769.6	767.5	761.4	763.0	772.4	790.3	754.1	683.1
20°	743.1	750.4	802.2	803.0	752.0	723.5	716.2	731.6	780.2	786.3	741.4
22.5°	835.2	838.0	890.6	859.2	753.7	697.4	688.8	706.4	783.4	838.4	822.1
25°	942.0	952.2	980.7	932.2	777.3	693.7	688.0	702.7	795.2	893.9	905.3
27.5°	1014.1	1022.3	1049.6	981.9	798.5	695.8	685.2	703.1	809.5	946.0	994.1
30°	1078.5	1084.2	1094.4	1008.0	822.5	706.0	688.8	714.5	817.2	957.1	1051.6
32.5°	1139.2	1146.2	1140.1	1039.4	849.0	725.1	695.8	738.6	834.0	979.1	1101.7
35°	1217.5	1217.9	1197.1	1070.8	879.2	748.0	716.2	772.8	866.6	1013.3	1155.6
37.5°	1310.4	1311.3	1258.7	1103.0	913.4	786.3	764.3	825.8	913.8	1052.8	1232.6
40°	1391.6	1394.8	1325.1	1140.1	955.4	860.9	858.8	909.8	974.6	1105.4	1315.3
42.5°	1462.1	1471.4	1386.3	1171.0	1014.9	975.4	980.3	1026.8	1048.4	1149.4	1366.7
45°	1533.4	1533.0	1436.4	1202.0	1114.4	1122.9	1169.4	1167.4	1131.9	1173.1	1407.0
47.5°	1577.8	1575.8	1467.0	1252.6	1248.5	1330.4	1379.7	1352.8	1224.4	1198.4	1457.6
50°	1594.9	1594.1	1491.0	1317.0	1385.0	1518.3	1588.8	1535.0	1337.8	1240.7	1517.9
52.5°	1643.5	1639.4	1546.4	1390.3	1508.5	1699.3	1757.6	1697.7	1450.7	1317.0	1588.0
55°	1719.3	1720.5	1641.8	1476.3	1607.6	1826.9	1898.2	1844.8	1566.0	1421.7	1684.2
57.5°	1770.2	1773.9	1747.4	1572.1	1713.6	1916.1	1985.4	1970.4	1719.7	1546.9	1797.1
58°	1775.1	1778.0	1764.1	1590.5	1729.5	1926.3	1997.3	1986.7	1753.5	1586.8	1824.0
60°	1743.7	1752.3	1796.7	1691.6	1795.1	1947.9	1999.3	2008.7	1858.3	1716.4	1916.1
62.5°	1658.5	1661.4	1742.1	1804.9	1839.9	1894.5	1899.4	1923.9	1901.5	1868.4	1998.5
65°	1554.2	1554.2	1641.4	1810.2	1723.8	1714.8	1686.3	1710.7	1775.5	1963.8	1992.8
67.5°	1372.8	1374.0	1485.3	1612.5	1429.1	1398.1	1379.7	1388.7	1526.9	1884.3	1881.9
70°	1109.5	1108.7	1223.2	1305.6	1060.6	1034.1	1056.1	1053.2	1240.3	1674.4	1643.0
72.5°	784.6	791.6	909.4	1008.4	720.2	620.8	717.8	755.3	933.0	1411.5	1271.3
75°	441.8	451.2	547.4	700.7	454.5	419.8	469.6	523.0	674.6	1123.8	853.9
77.5°	221.7	225.4	280.4	337.1	275.5	320.0	317.1	368.1	462.6	758.1	488.3
80°	128.0	135.3	154.1	174.0	154.1	203.0	235.6	277.2	284.9	392.1	272.3
82.5°	51.4	57.5	72.1	81.9	64.0	60.3	41.2	129.6	171.6	189.5	104.3
85°	0.0	0.0	0.4	0.8	1.2	1.2	2.0	22.8	42.0	9.4	17.1
87.5°	0.0	0.0	0.4	0.4	0.8	1.2	1.6	2.9	3.7	4.5	15.5
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°	761.4	761.4	761.4	761.4	761.4	761.4	761.4	761.4	761.4	761.4	761.4
2.5°	825.4	820.9	805.8	783.0	768.7	746.7	737.8	717.0	706.4	688.8	688.8
5°	817.2	798.9	761.0	711.7	676.6	639.9	628.1	603.7	586.1	565.3	556.8
7.5°	743.1	717.4	658.3	600.8	545.0	507.9	471.2	446.3	422.7	405.6	408.0
10°	675.0	638.3	573.5	500.5	442.7	403.9	370.9	342.0	317.5	293.5	289.8
12.5°	630.6	588.6	511.1	432.9	389.7	361.1	330.6	298.8	268.6	242.1	231.5
15°	611.8	566.2	479.7	406.0	366.4	329.8	294.3	255.2	220.5	188.7	180.2
17.5°	632.2	577.6	476.9	388.0	333.0	287.0	237.6	194.8	154.1	131.2	124.3
20°	687.6	616.7	486.3	370.1	295.9	236.4	176.1	127.6	104.8	90.9	86.4
22.5°	767.9	681.5	502.2	352.6	258.4	176.1	121.5	92.1	78.7	71.3	69.3
25°	855.2	765.1	531.5	337.9	220.9	130.8	90.1	75.4	67.3	62.0	59.9
27.5°	953.4	847.8	567.4	326.9	186.3	104.8	77.4	66.4	59.9	56.2	54.6
30°	1014.9	907.3	594.7	307.3	162.6	95.4	73.8	62.8	55.8	53.0	51.8
32.5°	1071.6	954.2	620.8	284.9	144.7	84.4	71.7	66.0	57.9	52.2	49.7
35°	1134.0	1002.3	633.4	271.5	132.9	73.4	59.1	51.4	46.9	46.1	44.8
37.5°	1226.9	1059.4	641.6	264.1	125.5	66.8	55.0	46.5	41.2	36.3	34.2
40°	1314.9	1118.5	645.6	257.2	121.9	62.8	52.6	44.0	38.3	33.8	31.8
42.5°	1383.8	1172.3	648.1	252.3	115.4	60.3	50.5	42.4	36.3	31.8	29.8
45°	1440.1	1234.6	646.0	250.7	110.1	62.0	49.7	41.2	34.6	30.2	28.1
47.5°	1495.1	1302.3	653.8	248.6	104.8	59.5	50.1	40.8	33.4	28.9	26.9
50°	1567.2	1384.2	681.9	242.9	101.1	55.8	54.2	41.2	33.0	28.1	26.5
52.5°	1660.6	1497.5	732.9	236.8	96.6	52.6	56.7	41.2	32.2	27.3	25.3
55°	1773.9	1624.7	789.1	227.8	88.9	48.5	54.2	41.2	31.4	26.9	24.5
57.5°	1866.4	1738.0	833.5	217.3	74.6	43.6	49.7	39.5	29.3	25.3	23.2
58°	1874.6	1751.1	839.7	214.4	73.0	42.8	48.5	39.1	28.5	24.9	22.8
60°	1907.6	1772.3	842.1	198.9	60.7	40.8	42.0	37.9	26.9	23.2	21.6
62.5°	1896.2	1702.1	790.3	171.6	54.2	37.1	35.1	38.7	24.9	21.2	19.6
65°	1839.5	1564.4	692.5	153.7	54.6	33.0	30.2	33.8	22.8	19.2	17.5
67.5°	1704.6	1355.3	562.5	143.9	57.1	29.3	26.1	25.3	20.4	17.1	15.9
70°	1453.9	1110.7	426.4	135.3	60.3	26.1	24.0	22.4	18.7	15.9	14.3
72.5°	1070.8	822.5	310.2	126.8	58.7	23.2	22.4	20.4	17.1	14.3	13.5
75°	668.1	477.7	212.4	103.5	52.6	20.4	20.8	19.2	15.5	13.5	12.2
77.5°	390.1	335.5	104.8	77.0	36.3	17.9	18.3	17.5	15.9	12.6	11.8
80°	233.6	208.7	44.8	33.0	20.0	15.9	15.5	16.3	15.1	11.8	11.0
82.5°	101.1	90.5	21.6	18.3	16.3	13.9	13.5	13.9	13.0	9.8	9.4
85°	5.7	15.1	10.2	13.5	12.2	10.2	10.2	10.6	9.4	7.7	7.7
87.5°	5.3	11.4	6.5	8.2	9.0	7.7	8.2	8.2	7.7	6.9	6.5
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°	761.4	761.4	761.4	761.4	761.4	761.4	761.4	761.4	761.4	761.4	761.4
2.5°	679.5	675.0	661.5	656.6	635.5	640.8	642.4	640.3	641.2	642.8	648.9
5°	562.9	555.6	538.0	526.6	520.5	516.4	497.3	497.7	500.5	489.5	503.8
7.5°	399.9	408.0	409.6	399.0	392.5	378.7	361.1	351.4	334.6	344.0	346.1
10°	286.1	282.1	289.8	286.1	275.9	270.6	251.9	250.3	248.6	247.4	259.2
12.5°	218.1	205.8	196.9	198.9	191.2	178.1	174.9	175.3	176.9	176.9	180.2
15°	172.8	154.1	139.8	131.2	132.5	119.4	115.8	103.5	101.9	98.2	99.0
17.5°	121.1	113.3	104.8	95.0	90.9	79.1	64.8	58.3	53.4	54.2	56.7
20°	83.6	80.3	77.9	73.0	68.9	55.0	46.1	43.2	42.8	43.6	44.4
22.5°	67.3	64.0	61.5	59.9	54.6	44.4	39.5	37.5	37.5	37.5	37.9
25°	57.9	54.6	51.4	51.4	46.5	38.7	35.1	33.4	33.0	32.6	33.4
27.5°	53.8	49.3	46.1	44.0	40.4	34.2	31.0	29.3	28.9	28.9	29.3
30°	49.7	45.2	42.0	39.1	35.1	30.6	27.3	26.1	25.3	25.3	25.7
32.5°	47.3	42.8	38.7	35.1	30.6	26.9	24.0	22.4	21.6	22.0	22.4
35°	42.0	38.3	34.6	31.0	26.9	23.6	20.8	19.2	18.7	18.7	19.2
37.5°	33.0	30.2	29.3	27.3	23.6	20.4	17.5	15.9	15.5	15.5	15.9
40°	29.8	26.1	24.5	23.6	21.6	17.5	14.3	12.6	12.6	12.2	13.0
42.5°	27.3	23.6	20.8	20.0	18.7	15.1	11.4	10.2	9.8	9.8	10.2
45°	25.7	21.6	17.9	15.9	15.9	12.2	9.4	7.7	7.3	7.3	7.7
47.5°	24.9	20.4	15.9	13.0	12.6	10.2	7.3	5.7	5.3	5.3	5.3
50°	24.0	18.7	14.3	11.0	9.8	8.6	5.7	4.5	4.1	4.1	4.1
52.5°	22.8	17.9	13.0	9.8	7.7	6.5	4.5	3.3	2.9	2.4	2.9
55°	22.0	16.7	12.6	9.0	6.5	4.9	3.3	2.4	2.0	2.0	2.0
57.5°	20.8	15.5	11.4	8.6	6.1	3.7	2.4	1.6	1.2	1.2	1.6
58°	20.4	15.5	11.0	8.2	5.7	3.7	2.4	1.6	1.2	1.2	1.6
60°	19.2	14.3	10.6	7.3	5.3	3.3	2.0	1.2	0.8	0.8	1.2
62.5°	17.9	13.0	9.4	6.5	4.5	2.9	1.6	0.8	0.4	0.4	0.4
65°	15.9	11.8	8.2	6.1	3.7	2.0	1.2	0.4	0.0	0.0	0.0
67.5°	14.3	11.0	7.3	5.3	3.3	1.6	0.8	0.0	0.0	0.0	0.0
70°	13.0	10.2	6.5	4.5	2.9	1.2	0.4	0.0	0.0	0.0	0.0
72.5°	12.2	9.4	6.1	4.1	2.0	1.2	0.4	0.0	0.0	0.0	0.0
75°	11.8	9.0	6.1	3.7	2.0	1.2	0.8	0.4	0.0	0.0	0.4
77.5°	11.4	9.0	6.1	3.7	2.4	1.2	1.2	0.8	0.8	0.4	1.2
80°	10.6	8.2	5.3	3.3	2.0	1.6	1.2	0.8	0.0	0.0	0.0
82.5°	9.0	6.5	4.5	3.3	2.0	1.2	0.4	0.0	0.0	0.0	0.0
85°	7.3	5.3	3.7	2.0	1.2	0.4	0.0	0.0	0.0	0.0	0.0
87.5°	6.5	4.1	2.9	1.6	0.8	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°	761.4	761.4	761.4	761.4	761.4	761.4	761.4	761.4	761.4	761.4
2.5°	654.2	673.0	680.7	706.8	718.2	741.8	762.2	779.7	788.3	795.2
5°	507.5	525.4	544.6	583.3	616.7	652.6	697.4	743.9	757.3	772.0
7.5°	354.2	380.7	412.9	447.5	495.2	549.4	613.8	671.3	700.3	707.6
10°	275.1	306.5	340.8	375.0	414.5	472.4	537.2	611.4	642.4	655.0
12.5°	206.7	248.6	289.4	329.8	364.0	414.1	484.6	573.1	607.3	623.6
15°	124.3	171.6	221.7	275.9	323.6	382.3	461.8	564.9	608.1	626.5
17.5°	62.0	84.8	130.8	212.4	282.9	355.8	461.4	594.3	647.7	671.3
20°	46.1	52.2	69.7	132.5	235.2	333.8	466.3	644.4	723.1	743.1
22.5°	39.5	44.0	50.1	77.4	176.1	313.4	483.4	710.9	808.7	835.2
25°	34.6	38.3	43.2	53.4	120.7	289.4	515.6	804.6	905.7	942.0
27.5°	30.6	33.8	37.9	44.8	80.7	244.2	534.0	883.3	984.0	1014.1
30°	26.9	29.3	33.4	38.3	59.5	188.7	551.1	952.6	1054.9	1078.5
32.5°	23.6	25.7	28.9	32.6	45.2	143.1	551.9	1012.1	1116.8	1139.2
35°	20.0	22.4	24.9	28.1	35.9	111.7	535.2	1071.2	1190.2	1217.5
37.5°	16.7	18.7	21.6	24.5	32.6	86.4	500.5	1140.5	1279.5	1310.4
40°	14.3	16.3	18.7	22.0	28.9	62.8	445.1	1203.2	1363.0	1391.6
42.5°	11.4	13.5	16.3	21.6	24.0	45.2	389.3	1263.6	1435.6	1462.1
45°	9.0	11.4	15.1	20.8	20.0	31.8	341.2	1317.0	1497.9	1533.4
47.5°	6.5	9.4	15.1	18.7	16.3	22.8	316.7	1368.3	1553.8	1577.8
50°	4.9	7.7	16.3	15.9	13.9	19.6	320.4	1425.4	1579.5	1594.9
52.5°	3.7	6.5	12.6	11.4	11.8	17.1	334.6	1500.8	1632.4	1643.5
55°	3.3	4.9	7.7	8.6	10.6	16.3	331.0	1572.1	1700.1	1719.3
57.5°	2.9	4.1	6.1	6.9	9.4	15.5	310.2	1603.5	1743.7	1770.2
58°	2.4	4.1	5.7	6.9	9.4	15.1	304.9	1594.9	1741.7	1775.1
60°	2.0	3.7	5.3	6.1	8.2	13.5	279.2	1522.4	1696.8	1743.7
62.5°	1.6	2.4	4.1	4.5	6.5	11.0	229.9	1405.0	1600.7	1658.5
65°	0.8	1.6	2.4	3.3	4.5	8.2	163.4	1266.0	1497.5	1554.2
67.5°	0.0	0.8	1.6	2.0	2.9	6.1	94.2	1074.4	1328.0	1372.8
70°	0.0	0.4	0.8	1.2	1.6	4.1	49.7	788.7	1028.8	1109.5
72.5°	0.4	0.4	0.4	0.0	0.8	3.3	22.0	467.9	701.5	784.6
75°	0.4	0.4	0.0	0.0	0.0	1.6	9.4	246.6	402.3	441.8
77.5°	1.6	0.8	0.0	0.0	0.0	0.4	4.5	132.9	208.7	221.7
80°	0.4	0.0	0.0	0.0	0.0	0.0	1.6	44.4	125.1	128.0
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	53.8	51.4
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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