

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: P401476

Luminaire Tested: **ENV-SA1D-735-U-SLR**

Issue Date: 5/20/2020

Test Information

Test Method: LM-79-08
Report Number: P401476
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: ENV-SA1D-735-U-SLR
Description: ENTRI LED LUMINAIRE
(1) 70 CRI, 3500K, 800mA LIGHTSQUARE WITH 16 LEDS AND SPILL LIGHT ELIMINATOR RIGHT OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4690 lumens
Efficiency: N/A
Efficacy: 108.8 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): 43.1
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

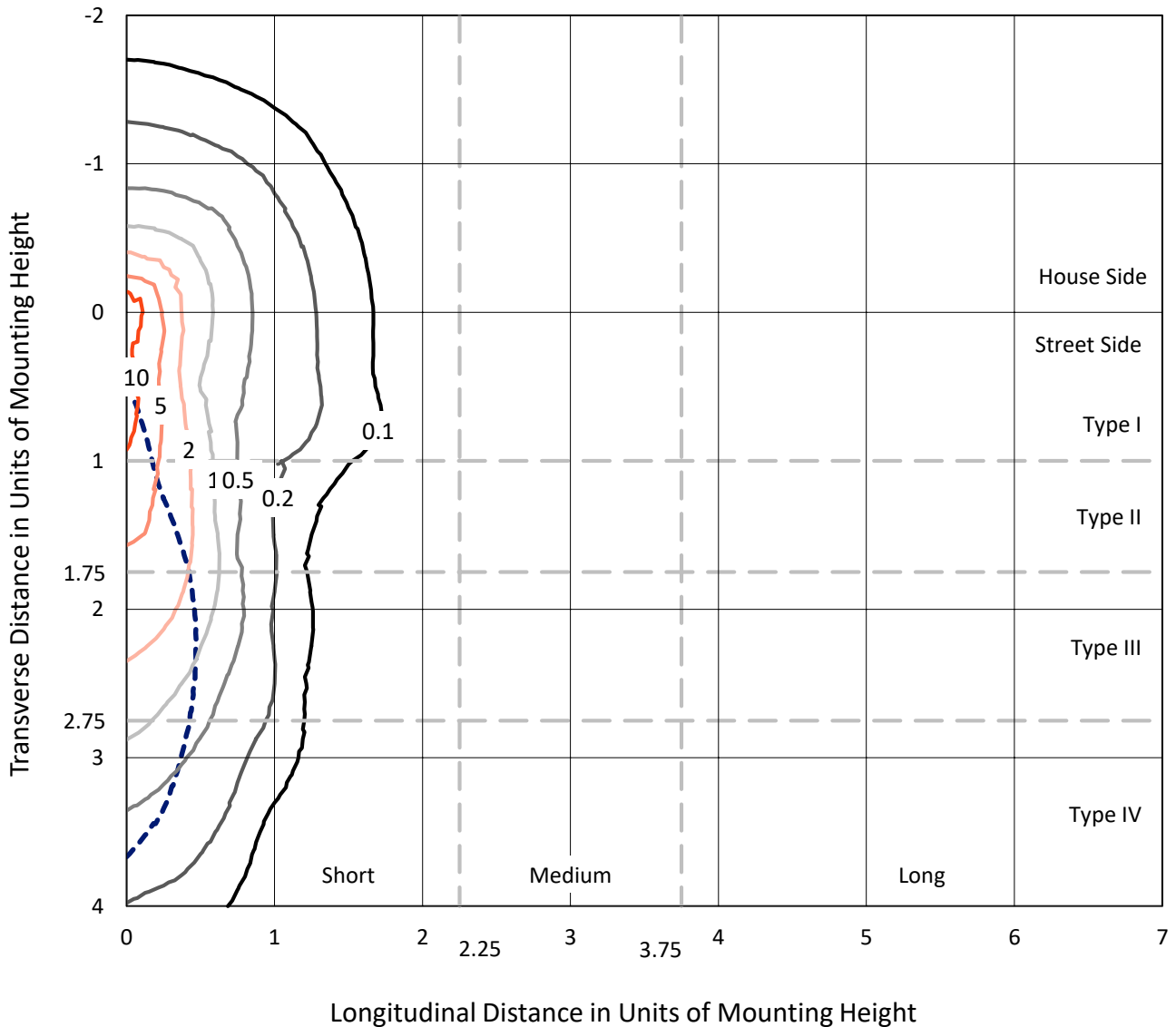


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

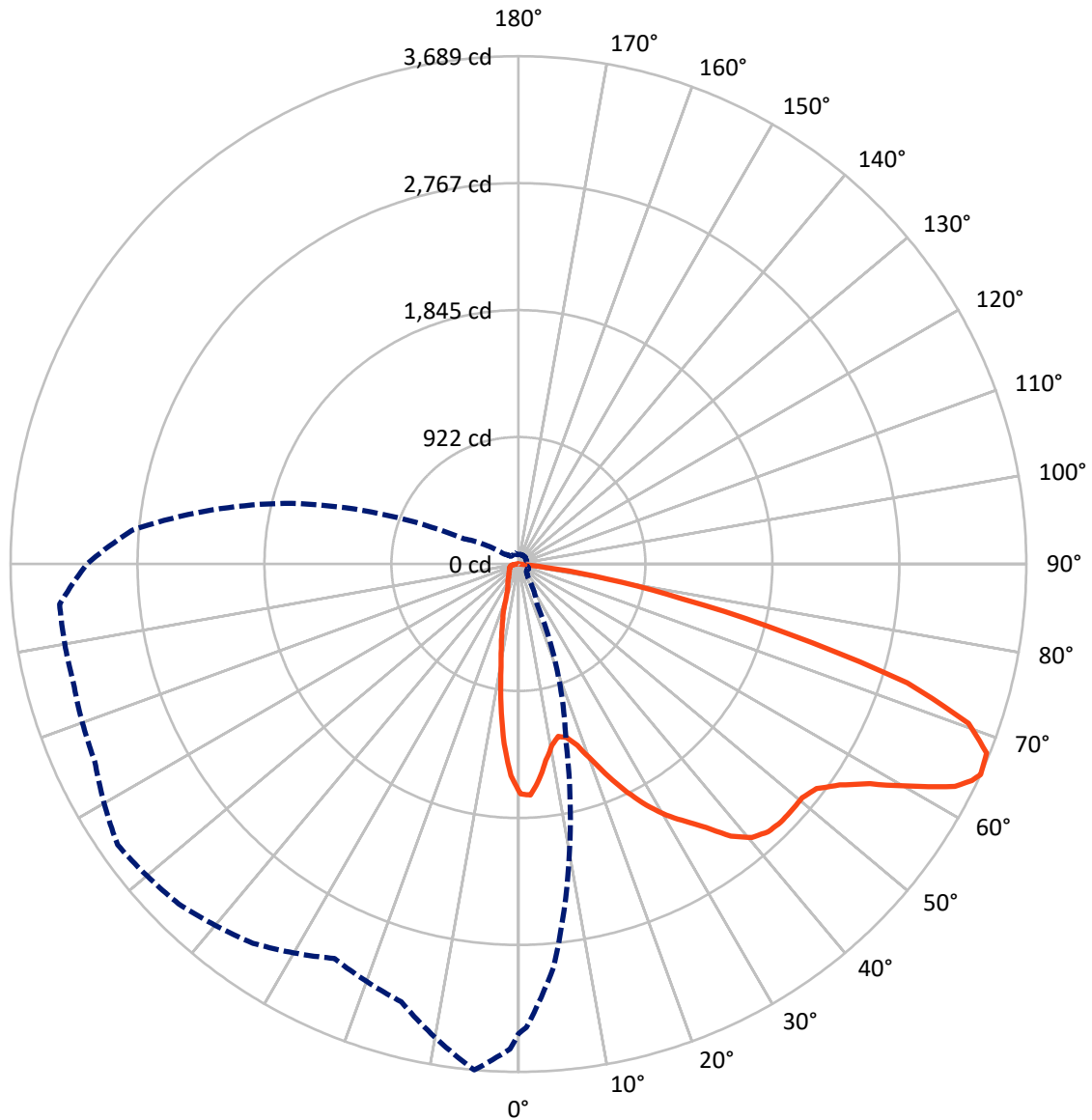


Based on 10 foot mounting height. Maximum calculated value = 16.7 fc
 Type IV - Short - Non-Cutoff

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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	962.3	0.0	962.3
	% Fixture	20.5	0.0	20.5
Street Side	Lumens	3727.7	0.0	3727.7
	% Fixture	79.5	0.0	79.5
Total	Lumens	4690.0	0.0	4690.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	127.3	2.7
10°-20°	253.6	5.4
20°-30°	351.6	7.5
30°-40°	491.5	10.5
40°-50°	668.8	14.3
50°-60°	914.6	19.5
60°-70°	1118.3	23.8
70°-80°	675.1	14.4
80°-90°	89.0	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°	4690.0	100.0
0°-180°	4690.0	100.0



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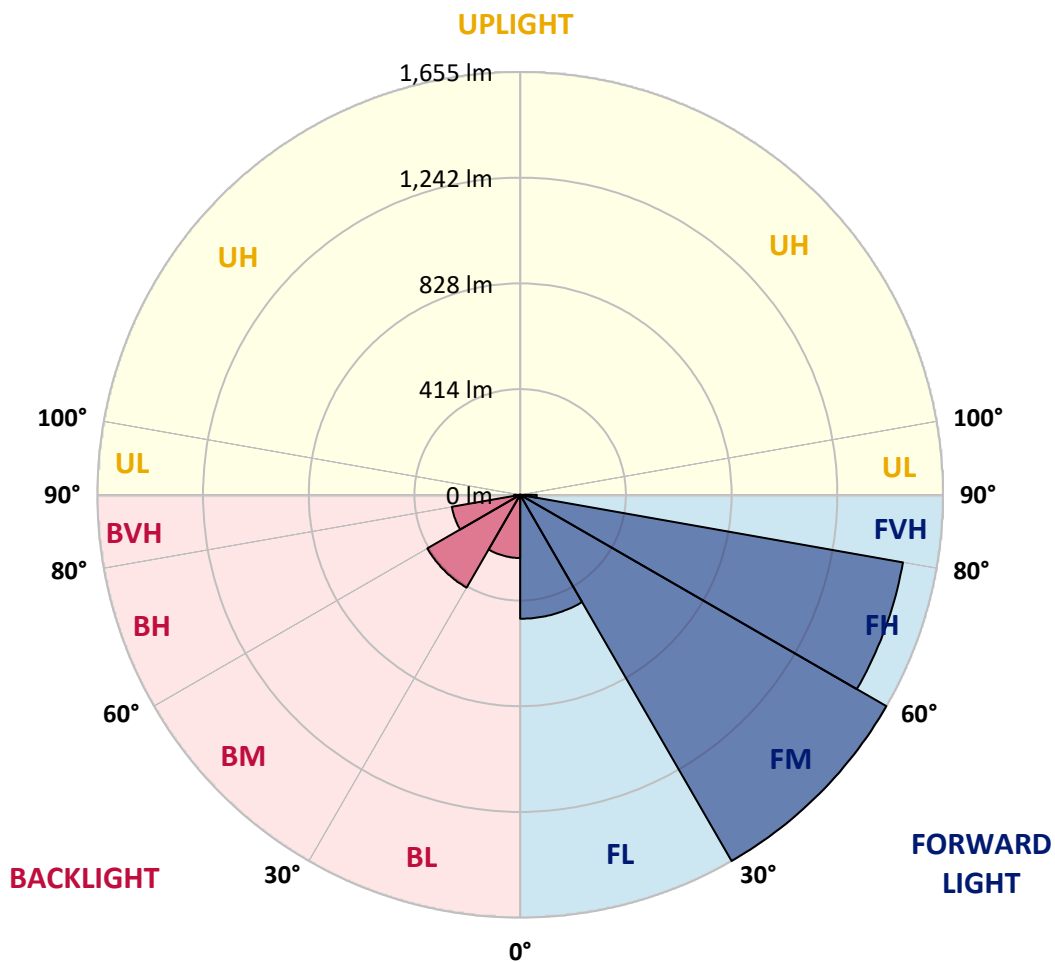
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	485.3	10.3			
FM	(30°-60°)	1655.5	35.3			
FH	(60°-80°)	1521.9	32.4			G1/1800
FVH	(80°-90°)	65.1	1.4			G1/100
BL	(0°-30°)	247.3	5.3	B1/500		
BM	(30°-60°)	419.5	8.9	B1/1000		
BH	(60°-80°)	271.6	5.8	B1/500		G1/500
BVH	(80°-90°)	24.0	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°	1668.9	1668.9	1668.9	1668.9	1668.9	1668.9	1668.9	1668.9	1668.9	1668.9	1668.9
2.5°	1665.0	1660.3	1648.6	1617.2	1583.5	1543.5	1536.4	1493.3	1498.0	1485.4	1488.6
5°	1520.7	1514.4	1482.3	1419.5	1334.1	1284.6	1246.2	1223.5	1204.7	1195.2	1207.0
7.5°	1380.3	1371.7	1333.3	1222.7	1127.8	1049.4	986.6	948.2	910.5	880.7	866.6
10°	1266.6	1263.5	1212.5	1087.8	968.6	872.9	832.1	791.3	759.2	716.8	682.3
12.5°	1209.4	1199.9	1139.6	994.5	878.4	819.6	781.1	729.4	685.5	633.7	589.0
15°	1211.7	1200.7	1125.4	973.3	847.0	775.7	716.8	654.9	590.6	538.0	492.5
17.5°	1279.2	1271.3	1179.6	992.9	820.4	721.5	629.8	549.8	479.2	413.3	372.5
20°	1392.9	1381.1	1254.1	1016.4	786.6	659.6	534.9	425.1	349.0	291.0	258.8
22.5°	1541.1	1519.1	1359.9	1045.4	752.9	589.0	432.1	309.8	242.3	213.3	204.7
25°	1699.5	1682.3	1487.8	1082.3	716.8	512.1	320.0	225.1	201.6	189.8	183.5
27.5°	1845.4	1817.2	1625.0	1123.1	669.0	435.3	243.1	193.7	178.0	172.5	168.6
30°	1949.7	1925.4	1719.9	1170.1	627.4	355.3	207.8	175.7	163.1	154.5	152.9
32.5°	2049.3	2014.8	1788.9	1192.1	592.9	312.1	192.1	163.1	151.4	142.7	139.6
35°	2167.0	2132.5	1868.2	1195.2	567.0	294.1	177.2	153.7	141.2	133.3	129.4
37.5°	2305.8	2258.7	1957.6	1197.6	541.2	287.0	164.7	145.9	133.3	124.7	121.6
40°	2437.5	2401.5	2049.3	1193.7	523.9	276.9	156.9	137.2	125.5	117.6	113.7
42.5°	2537.1	2498.7	2127.7	1181.9	513.7	259.6	160.0	131.0	120.0	111.4	106.7
45°	2588.1	2553.6	2199.1	1170.9	508.2	244.7	156.9	128.6	116.1	105.9	101.2
47.5°	2626.5	2592.8	2272.1	1166.2	498.8	233.7	144.3	137.2	112.2	100.4	95.7
50°	2688.5	2659.5	2370.9	1192.9	483.9	226.7	132.5	146.7	110.6	95.7	90.2
52.5°	2799.9	2781.1	2534.0	1254.8	468.2	214.9	120.8	140.4	112.2	92.5	86.3
55°	3007.7	2995.9	2758.3	1336.4	453.3	200.0	108.2	127.1	111.4	87.1	82.3
57.5°	3232.0	3228.9	3030.5	1407.8	431.4	174.9	100.4	107.4	105.9	82.3	76.9
60°	3382.6	3372.4	3155.9	1447.8	403.1	144.3	94.1	91.0	108.2	77.6	71.4
62.5°	3434.4	3400.6	3118.3	1432.9	360.8	124.7	87.1	83.1	100.4	72.9	65.9
64°	3431.2	3381.8	3020.3	1376.4	333.3	120.8	83.1	77.6	88.6	69.8	63.5
65°	3413.2	3366.1	2938.7	1332.5	318.4	120.8	80.8	75.3	80.8	68.2	62.0
67.5°	3297.9	3235.9	2660.3	1128.6	280.0	122.3	75.3	69.0	67.4	62.7	58.0
70°	3035.2	2954.4	2278.3	887.8	259.6	123.1	69.0	62.7	60.4	57.3	53.3
72.5°	2437.5	2329.3	1813.3	634.5	238.4	120.8	62.7	57.3	54.9	51.8	47.8
75°	1634.4	1516.0	1336.4	418.0	195.3	108.2	54.1	49.4	48.6	45.5	42.4
77.5°	921.5	872.1	789.0	229.8	134.9	74.5	43.1	40.0	40.8	39.2	36.1
80°	481.5	458.8	421.9	111.4	65.1	36.1	27.4	27.4	31.4	31.4	29.8
82.5°	170.2	171.0	165.5	25.1	13.3	11.0	9.4	13.3	18.0	22.0	22.0
85°	0.8	0.8	0.0	0.0	0.0	0.0	0.0	0.0	1.6	3.1	5.5
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°	1668.9	1668.9	1668.9	1668.9	1668.9	1668.9	1668.9	1668.9	1668.9	1668.9	1668.9
2.5°	1461.9	1466.6	1479.1	1476.8	1489.3	1483.9	1500.3	1509.0	1513.7	1538.0	1549.7
5°	1197.6	1199.2	1243.9	1253.3	1276.8	1264.3	1293.3	1282.3	1305.8	1309.0	1348.2
7.5°	880.0	883.1	905.1	956.8	1007.8	1029.0	1037.6	1050.9	1040.0	1036.0	1041.5
10°	669.0	671.3	673.7	710.6	755.3	800.0	800.0	800.7	781.1	761.5	757.6
12.5°	571.7	556.8	533.3	534.1	565.5	586.6	603.1	585.9	582.7	592.1	602.3
15°	470.6	455.7	440.0	421.2	421.9	436.8	445.5	444.7	460.4	467.4	488.6
17.5°	365.5	344.3	345.1	334.1	319.2	328.6	331.0	345.1	365.5	374.9	378.8
20°	245.5	245.5	251.8	265.1	258.0	264.3	265.1	276.1	285.5	280.0	285.5
22.5°	203.1	202.3	204.7	213.3	220.4	225.9	227.4	226.7	217.2	213.3	221.2
25°	184.3	183.5	184.3	189.0	196.9	203.9	200.8	196.1	185.1	184.3	185.9
27.5°	168.6	169.4	171.0	174.1	178.8	187.4	184.3	174.9	169.4	167.8	167.8
30°	155.3	155.3	158.4	161.6	167.1	174.9	169.4	161.6	156.1	154.5	153.7
32.5°	142.0	144.3	146.7	149.8	154.5	162.3	157.6	150.6	145.1	142.0	139.6
35°	128.6	130.2	134.9	139.6	143.5	149.8	146.7	140.4	134.9	127.8	124.7
37.5°	120.8	120.8	123.1	130.2	133.3	138.0	136.5	131.0	122.3	116.9	116.1
40°	113.7	113.7	114.5	118.4	123.9	129.4	126.3	117.6	112.2	109.8	109.0
42.5°	106.7	106.7	107.4	107.4	114.5	123.9	116.1	107.4	105.1	103.5	102.7
45°	100.4	100.4	100.4	99.6	103.5	115.3	106.7	99.6	98.0	98.0	97.3
47.5°	95.7	94.9	94.1	92.5	94.9	104.3	97.3	93.3	92.5	93.3	92.5
50°	89.4	88.6	87.8	87.1	88.6	92.5	91.0	87.1	87.8	87.8	88.6
52.5°	83.9	83.1	82.3	81.6	83.1	86.3	86.3	83.1	83.1	83.9	84.7
55°	80.8	79.2	78.4	78.4	79.2	83.1	82.3	80.0	80.0	81.6	82.3
57.5°	76.1	74.5	74.5	73.7	75.3	80.0	79.2	76.9	76.9	77.6	79.2
60°	71.4	70.6	69.8	71.4	72.2	76.9	76.1	74.5	73.7	76.1	76.1
62.5°	65.9	65.9	65.9	67.4	68.2	73.7	72.9	72.2	72.2	72.9	72.2
64°	62.7	62.7	63.5	64.3	65.9	70.6	70.6	70.6	70.6	70.6	69.8
65°	61.2	61.2	62.7	63.5	64.3	69.8	69.0	69.8	70.6	69.8	68.2
67.5°	57.3	57.3	59.6	59.6	60.4	66.7	65.9	67.4	69.0	67.4	65.9
70°	52.5	53.3	55.7	54.9	56.5	63.5	61.2	64.3	67.4	65.1	63.5
72.5°	47.8	48.6	51.8	50.2	51.0	59.6	56.5	59.6	64.3	62.7	61.2
75°	43.1	43.9	46.3	45.5	47.1	54.9	51.8	54.9	59.6	59.6	58.8
77.5°	36.9	38.4	40.0	39.2	42.4	49.4	46.3	48.6	52.5	55.7	54.1
80°	29.8	32.2	32.9	33.7	36.9	42.4	40.0	40.8	44.7	47.1	47.8
82.5°	20.4	24.3	25.9	26.7	31.4	32.9	33.7	32.9	35.3	38.4	36.1
85°	6.3	7.8	14.9	18.8	23.5	23.5	27.4	25.9	27.4	24.3	20.4
87.5°	0.0	0.0	0.0	5.5	14.1	14.1	19.6	18.0	18.8	14.1	12.5
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°	1668.9	1668.9	1668.9	1668.9	1668.9	1668.9	1668.9	1668.9	1668.9	1668.9	1668.9
2.5°	1552.1	1565.4	1595.2	1629.7	1648.6	1689.3	1714.4	1741.1	1767.8	1773.3	1781.9
5°	1356.0	1371.7	1405.4	1451.7	1498.0	1552.1	1614.8	1681.5	1755.2	1786.6	1817.2
7.5°	1056.4	1059.6	1107.4	1191.3	1232.1	1309.0	1398.4	1501.1	1614.8	1673.7	1736.4
10°	780.4	812.5	848.6	918.4	1021.1	1109.8	1220.3	1340.3	1458.8	1544.2	1609.3
12.5°	613.3	654.1	713.7	790.6	868.2	952.1	1080.0	1208.6	1354.4	1431.3	1511.3
15°	505.1	556.8	634.5	715.3	787.4	861.9	975.6	1133.3	1319.9	1398.4	1469.7
17.5°	400.0	457.2	540.4	625.1	711.3	802.3	934.1	1129.4	1356.8	1447.8	1521.5
20°	306.7	351.4	421.2	506.6	607.8	732.5	901.1	1159.2	1465.8	1579.5	1628.2
22.5°	227.4	253.3	308.2	397.6	516.8	670.6	868.2	1201.5	1600.7	1734.0	1770.9
25°	188.2	195.3	220.4	298.0	421.2	600.8	843.1	1256.4	1735.6	1885.4	1912.1
27.5°	169.4	173.3	185.1	214.1	329.4	543.5	810.2	1319.9	1877.6	2035.2	2032.8
30°	152.9	153.7	160.8	181.2	267.4	492.5	771.7	1390.5	2003.8	2142.6	2135.6
32.5°	138.0	138.0	147.4	163.1	228.2	446.3	725.5	1441.5	2113.6	2230.5	2207.7
35°	124.7	127.1	135.7	151.4	202.3	394.5	682.3	1460.3	2207.7	2336.4	2272.1
37.5°	115.3	118.4	127.1	142.0	180.4	356.1	647.0	1482.3	2323.8	2464.2	2344.2
40°	109.0	111.4	119.2	131.8	163.1	323.9	608.6	1497.2	2439.1	2600.7	2420.3
42.5°	102.7	105.1	112.9	124.7	155.3	286.3	571.7	1505.8	2559.1	2719.1	2483.8
45°	97.3	100.4	108.2	119.2	156.1	252.5	541.2	1502.7	2631.3	2804.6	2533.2
47.5°	93.3	96.5	105.1	119.2	151.4	232.9	515.3	1491.7	2684.6	2860.3	2556.0
50°	89.4	92.5	102.7	131.8	143.5	227.4	495.7	1490.1	2740.3	2871.2	2556.0
52.5°	85.5	91.0	103.5	132.5	131.8	225.1	480.0	1531.7	2817.1	2890.1	2578.7
55°	83.1	87.8	106.7	122.3	115.3	217.2	470.6	1588.9	2946.5	2993.6	2693.2
57.5°	80.0	83.9	105.1	114.5	102.7	199.2	462.7	1643.8	3116.7	3185.7	2921.4
60°	76.1	80.8	102.0	98.0	93.3	169.4	458.0	1689.3	3180.2	3309.7	3166.9
62.5°	72.2	77.6	111.4	85.5	86.3	141.2	449.4	1733.3	3046.1	3279.9	3324.6
64°	69.8	75.3	103.5	80.0	82.3	128.6	440.8	1735.6	2927.7	3209.3	3354.4
65°	68.2	72.9	96.5	76.9	79.2	125.5	432.9	1702.7	2816.3	3134.0	3345.7
67.5°	65.9	69.0	74.5	71.4	73.7	120.0	379.6	1557.6	2579.5	2940.3	3211.6
70°	62.7	65.1	65.9	65.1	69.0	116.1	320.8	1351.3	2320.7	2737.1	3003.0
72.5°	59.6	59.6	59.6	58.8	63.5	110.6	288.6	1091.7	2005.4	2470.5	2743.4
75°	57.3	54.9	54.1	52.5	58.0	107.4	260.4	819.6	1549.7	2057.9	2298.7
77.5°	52.5	50.2	47.8	46.3	51.8	95.7	217.2	578.8	1142.7	1497.2	1774.0
80°	45.5	43.9	40.8	38.4	43.1	75.3	164.7	357.6	836.0	1010.9	1163.9
82.5°	36.9	36.1	32.9	29.8	31.4	54.1	112.2	182.0	557.6	549.0	650.2
85°	22.7	28.2	24.3	19.6	21.2	31.4	45.5	58.0	171.0	102.7	159.2
87.5°	13.3	18.0	14.9	10.2	7.8	14.1	12.5	11.8	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°	1668.9	1668.9	1668.9	1668.9	1668.9	1668.9	1668.9	1668.9	1668.9	1668.9
2.5°	1802.3	1812.5	1818.0	1797.6	1775.6	1756.0	1718.4	1680.7	1661.1	1665.0
5°	1876.0	1893.2	1898.0	1868.2	1806.2	1742.7	1650.9	1571.7	1523.9	1520.7
7.5°	1847.8	1904.2	1913.6	1881.5	1792.9	1674.4	1549.7	1439.2	1391.3	1380.3
10°	1747.4	1833.6	1861.9	1850.9	1764.6	1628.9	1477.6	1337.2	1289.4	1266.6
12.5°	1644.6	1734.8	1752.1	1763.1	1710.5	1596.0	1429.7	1285.4	1228.2	1209.4
15°	1577.2	1639.1	1643.8	1654.0	1643.1	1580.3	1451.7	1306.6	1237.6	1211.7
17.5°	1567.8	1545.8	1530.9	1552.1	1565.4	1581.1	1509.0	1385.8	1312.1	1279.2
20°	1569.3	1501.1	1458.8	1457.2	1514.4	1601.5	1625.0	1519.1	1423.5	1392.9
22.5°	1626.6	1477.6	1407.0	1398.4	1468.2	1636.0	1743.5	1677.6	1581.9	1541.1
25°	1712.1	1463.5	1370.1	1372.5	1442.3	1658.7	1844.6	1836.0	1752.1	1699.5
27.5°	1794.4	1487.0	1365.4	1371.7	1450.9	1673.7	1928.5	1985.0	1890.9	1845.4
30°	1860.3	1539.5	1379.5	1385.0	1477.6	1694.0	1970.1	2117.6	2003.8	1949.7
32.5°	1917.6	1588.9	1400.7	1404.6	1519.9	1723.1	2009.3	2228.9	2113.6	2049.3
35°	1969.3	1631.3	1432.9	1446.2	1574.0	1764.6	2049.3	2349.7	2247.7	2167.0
37.5°	2014.8	1683.1	1496.4	1518.4	1653.3	1825.0	2101.1	2508.9	2397.5	2305.8
40°	2040.7	1729.3	1590.5	1623.5	1756.0	1903.4	2167.0	2612.4	2541.1	2437.5
42.5°	2060.3	1792.9	1741.9	1801.5	1915.2	1977.2	2198.3	2658.7	2625.8	2537.1
45°	2070.5	1918.3	1969.3	2025.0	2094.8	2057.9	2181.1	2674.4	2664.2	2588.1
47.5°	2116.8	2107.4	2232.8	2309.7	2305.8	2179.5	2148.1	2672.8	2689.3	2626.5
50°	2210.9	2327.7	2503.4	2578.7	2549.7	2293.2	2141.9	2670.5	2739.5	2688.5
52.5°	2323.0	2548.1	2796.0	2827.3	2766.2	2408.5	2188.9	2711.3	2833.6	2799.9
55°	2470.5	2755.2	3025.7	3035.9	2949.7	2520.7	2289.3	2831.2	3009.3	3007.7
57.5°	2676.0	2941.0	3218.7	3206.1	3084.6	2676.0	2450.9	3010.8	3204.6	3232.0
60°	2899.5	3137.1	3374.8	3367.7	3238.3	2854.8	2672.8	3276.7	3375.5	3382.6
62.5°	3113.6	3319.1	3525.3	3491.6	3345.7	3039.9	2980.3	3559.1	3486.9	3434.4
64°	3253.2	3380.2	3563.8	3510.4	3371.6	3128.5	3157.5	3650.8	3518.3	3431.2
65°	3345.7	3395.1	3555.1	3490.8	3363.0	3161.4	3291.6	3689.2	3523.8	3413.2
67.5°	3512.0	3309.7	3321.4	3270.4	3155.9	3130.8	3511.2	3668.1	3463.4	3297.9
70°	3465.7	2965.4	2803.8	2771.6	2634.4	2775.6	3483.8	3468.9	3236.7	3035.2
72.5°	3070.5	2381.1	2148.9	2119.9	1929.3	2103.4	3006.1	2954.4	2604.6	2437.5
75°	2530.1	1804.6	1534.8	1559.1	1414.1	1574.8	2391.3	2024.2	1734.0	1634.4
77.5°	1963.8	1275.2	1060.3	1031.3	1002.3	1019.6	1643.8	1215.6	1013.3	921.5
80°	1251.7	801.5	795.3	727.0	703.5	592.9	844.7	647.0	509.0	481.5
82.5°	665.1	461.9	524.7	420.4	338.0	243.1	286.3	192.1	162.3	170.2
85°	182.0	95.7	26.7	0.0	0.0	0.0	0.0	0.8	0.8	0.8
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	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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