

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: P401746

Luminaire Tested: **ENT-SA1E-827-U-SLR**

Issue Date: 5/20/2020

Test Information

Test Method: LM-79-08
Report Number: P401746
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-SA1E-827-U-SLR
Description: ENTRI LED LUMINAIRE
(1) 80 CRI, 2700K, 1050mA LIGHTSQUARE WITH 16 LEDS AND SPILL LIGHT ELIMINATOR RIGHT OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4572 lumens
Efficiency: N/A
Efficacy: 79.9 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): 57.2
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

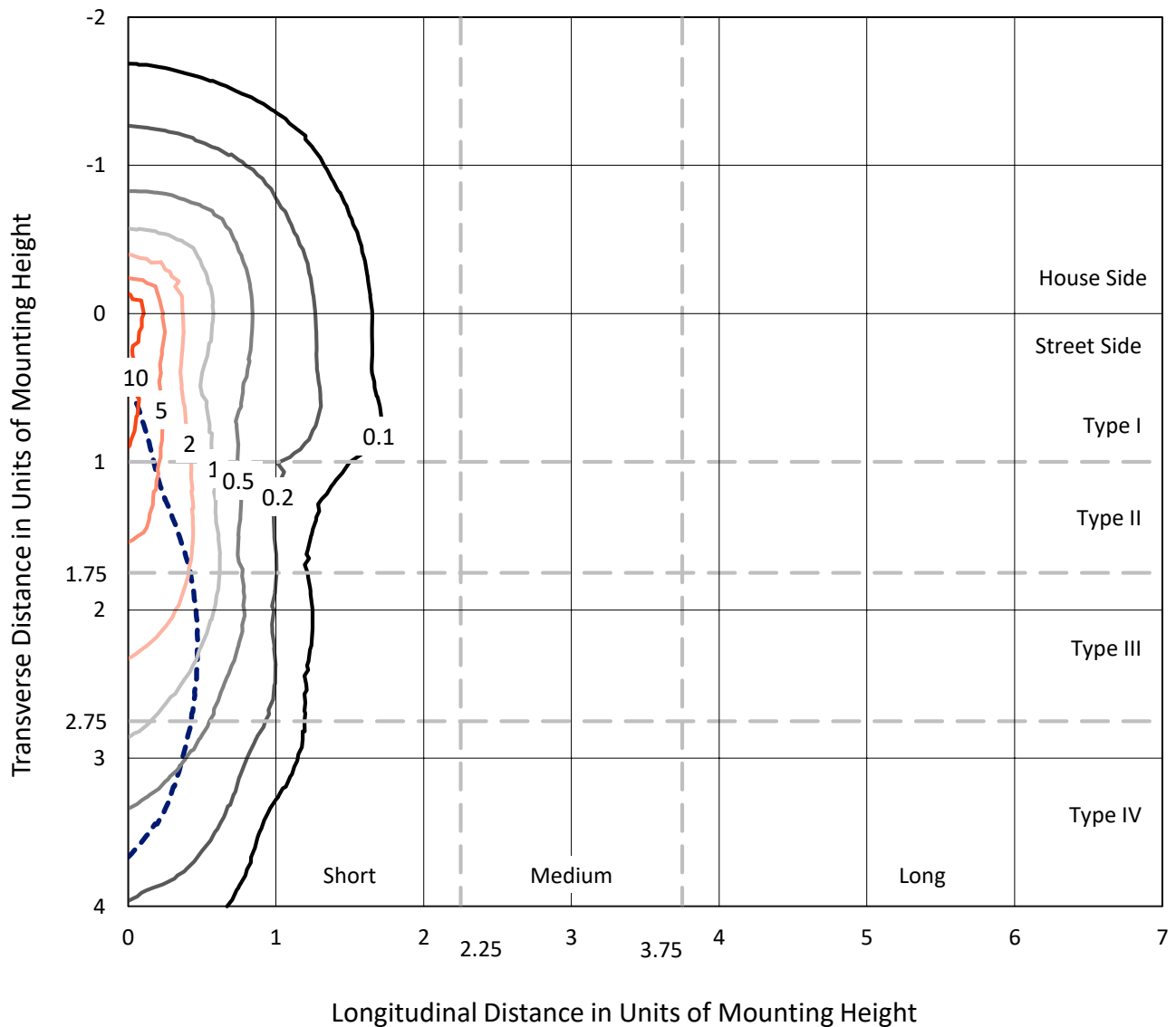


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Iso-Footcandle Lines of Horizontal Illumination

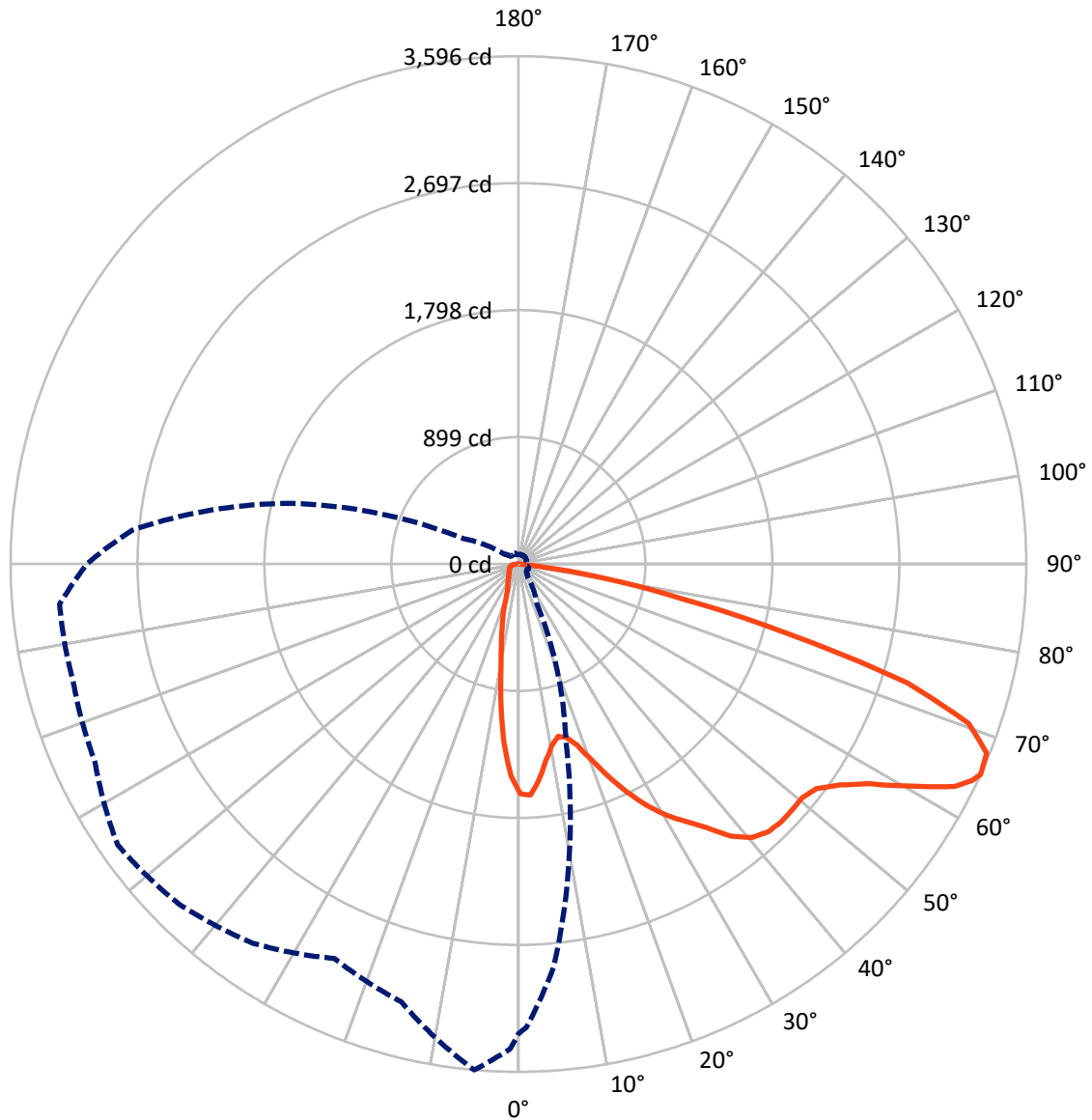
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 16.3 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	938.1	0.0	938.1
	% Fixture	20.5	0.0	20.5
Street Side	Lumens	3633.9	0.0	3633.9
	% Fixture	79.5	0.0	79.5
Total	Lumens	4572.0	0.0	4572.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	124.1	2.7
10°-20°	247.2	5.4
20°-30°	342.8	7.5
30°-40°	479.2	10.5
40°-50°	652.0	14.3
50°-60°	891.6	19.5
60°-70°	1090.2	23.8
70°-80°	658.2	14.4
80°-90°	86.8	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°	4572.0	100.0
0°-180°	4572.0	100.0



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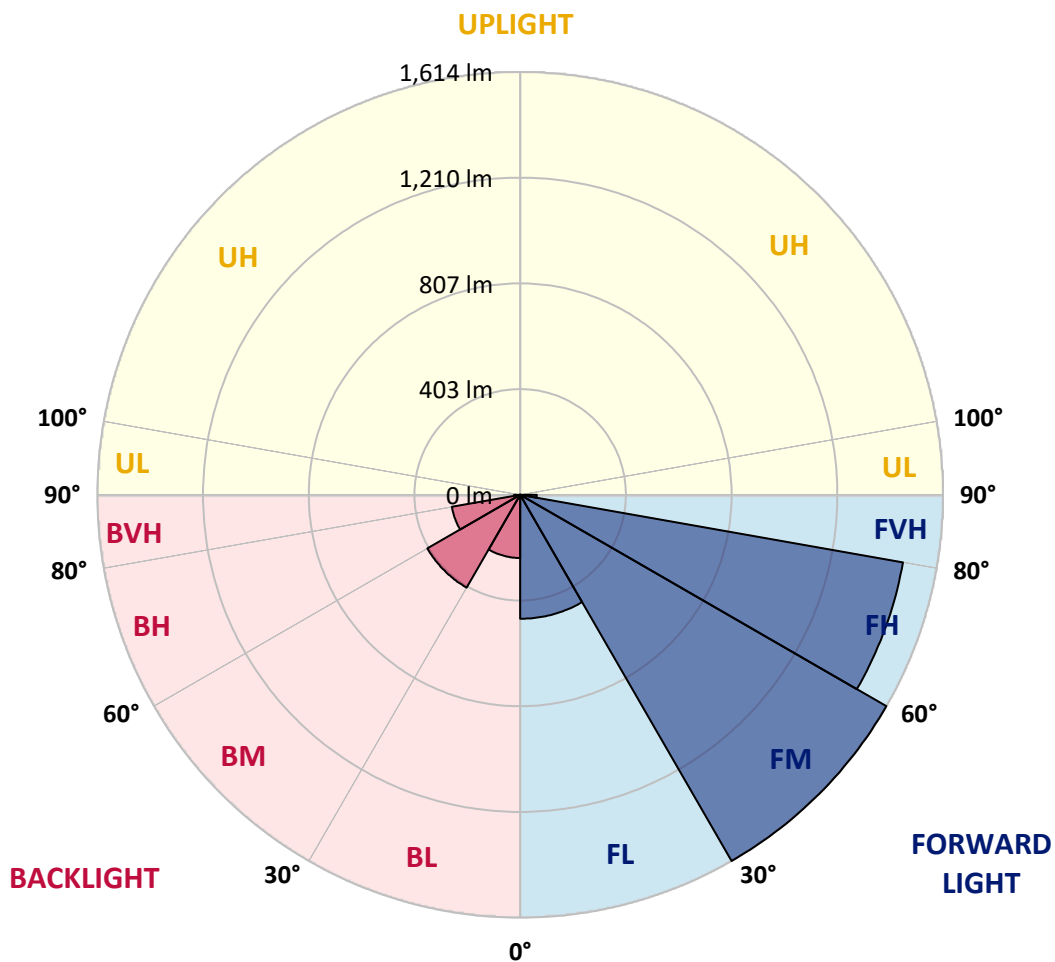
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	473.0	10.3			
FM	(30°-60°)	1613.8	35.3			
FH	(60°-80°)	1483.6	32.4			G1/1800
FVH	(80°-90°)	63.4	1.4			G1/100
BL	(0°-30°)	241.1	5.3	B1/500		
BM	(30°-60°)	408.9	8.9	B1/1000		
BH	(60°-80°)	264.8	5.8	B1/500		G1/500
BVH	(80°-90°)	23.4	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°	1627.0	1627.0	1627.0	1627.0	1627.0	1627.0	1627.0	1627.0	1627.0	1627.0	1627.0
2.5°	1623.1	1618.5	1607.1	1576.5	1543.6	1504.6	1497.7	1455.7	1460.3	1448.1	1451.1
5°	1482.5	1476.3	1445.0	1383.8	1300.5	1252.3	1214.9	1192.7	1174.3	1165.2	1176.6
7.5°	1345.6	1337.2	1299.7	1191.9	1099.4	1023.0	961.8	924.3	887.6	858.6	844.8
10°	1234.7	1231.7	1182.0	1060.4	944.2	850.9	811.2	771.4	740.1	698.8	665.2
12.5°	1178.9	1169.8	1110.9	969.4	856.3	799.0	761.5	711.0	668.2	617.8	574.2
15°	1181.2	1170.5	1097.1	948.8	825.7	756.1	698.8	638.4	575.7	524.5	480.1
17.5°	1247.0	1239.3	1149.9	967.9	799.7	703.4	613.9	535.9	467.1	402.9	363.2
20°	1357.8	1346.4	1222.5	990.9	766.8	643.0	521.4	414.4	340.2	283.6	252.3
22.5°	1502.3	1480.9	1325.7	1019.1	734.0	574.2	421.3	302.0	236.2	208.0	199.5
25°	1656.8	1640.0	1450.3	1055.1	698.8	499.2	311.9	219.4	196.5	185.0	178.9
27.5°	1799.0	1771.5	1584.1	1094.8	652.2	424.3	237.0	188.8	173.6	168.2	164.4
30°	1900.7	1877.0	1676.6	1140.7	611.6	346.3	202.6	171.3	159.0	150.6	149.1
32.5°	1997.8	1964.1	1743.9	1162.1	578.0	304.3	187.3	159.0	147.6	139.1	136.1
35°	2112.4	2078.8	1821.1	1165.2	552.8	286.7	172.8	149.9	137.6	130.0	126.2
37.5°	2247.8	2201.9	1908.3	1167.5	527.5	279.8	160.6	142.2	130.0	121.6	118.5
40°	2376.2	2341.0	1997.8	1163.6	510.7	269.9	152.9	133.8	122.3	114.7	110.9
42.5°	2473.3	2435.8	2074.2	1152.2	500.8	253.1	156.0	127.7	117.0	108.6	104.0
45°	2523.0	2489.4	2143.8	1141.5	495.4	238.5	152.9	125.4	113.2	103.2	98.6
47.5°	2560.5	2527.6	2214.9	1136.9	486.3	227.8	140.7	133.8	109.3	97.9	93.3
50°	2620.9	2592.6	2311.2	1162.9	471.7	221.0	129.2	143.0	107.8	93.3	87.9
52.5°	2729.4	2711.1	2470.2	1223.3	456.4	209.5	117.7	136.9	109.3	90.2	84.1
55°	2932.0	2920.6	2688.9	1302.8	441.9	195.0	105.5	123.9	108.6	84.9	80.3
57.5°	3150.7	3147.6	2954.2	1372.4	420.5	170.5	97.9	104.7	103.2	80.3	74.9
60°	3297.5	3287.5	3076.5	1411.4	393.0	140.7	91.7	88.7	105.5	75.7	69.6
62.5°	3347.9	3315.1	3039.8	1396.8	351.7	121.6	84.9	81.0	97.9	71.1	64.2
64°	3344.9	3296.7	2944.3	1341.8	324.9	117.7	81.0	75.7	86.4	68.0	61.9
65°	3327.3	3281.4	2864.8	1299.0	310.4	117.7	78.7	73.4	78.7	66.5	60.4
67.5°	3214.9	3154.5	2593.3	1100.2	272.9	119.3	73.4	67.3	65.8	61.2	56.6
70°	2958.8	2880.0	2221.0	865.5	253.1	120.0	67.3	61.2	58.9	55.8	52.0
72.5°	2376.2	2270.7	1767.6	618.5	232.4	117.7	61.2	55.8	53.5	50.5	46.6
75°	1593.3	1477.9	1302.8	407.5	190.4	105.5	52.8	48.2	47.4	44.3	41.3
77.5°	898.3	850.2	769.1	224.0	131.5	72.6	42.1	39.0	39.8	38.2	35.2
80°	469.4	447.3	411.3	108.6	63.5	35.2	26.8	26.8	30.6	30.6	29.1
82.5°	165.9	166.7	161.3	24.5	13.0	10.7	9.2	13.0	17.6	21.4	21.4
85°	0.8	0.8	0.0	0.0	0.0	0.0	0.0	0.0	1.5	3.1	5.4
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°	1627.0	1627.0	1627.0	1627.0	1627.0	1627.0	1627.0	1627.0	1627.0	1627.0	1627.0
2.5°	1425.1	1429.7	1441.9	1439.6	1451.9	1446.5	1462.6	1471.0	1475.6	1499.3	1510.7
5°	1167.5	1169.0	1212.6	1221.7	1244.7	1232.4	1260.7	1250.0	1273.0	1276.0	1314.3
7.5°	857.8	860.9	882.3	932.7	982.4	1003.1	1011.5	1024.5	1013.8	1010.0	1015.3
10°	652.2	654.5	656.7	692.7	736.3	779.8	779.8	780.6	761.5	742.4	738.6
12.5°	557.4	542.8	519.9	520.7	551.2	571.9	587.9	571.1	568.1	577.2	587.2
15°	458.7	444.2	428.9	410.6	411.3	425.9	434.3	433.5	448.8	455.7	476.3
17.5°	356.3	335.6	336.4	325.7	311.2	320.3	322.6	336.4	356.3	365.5	369.3
20°	239.3	239.3	245.4	258.4	251.5	257.7	258.4	269.1	278.3	272.9	278.3
22.5°	198.0	197.3	199.5	208.0	214.8	220.2	221.7	221.0	211.8	208.0	215.6
25°	179.7	178.9	179.7	184.3	191.9	198.8	195.7	191.1	180.4	179.7	181.2
27.5°	164.4	165.1	166.7	169.7	174.3	182.7	179.7	170.5	165.1	163.6	163.6
30°	151.4	151.4	154.4	157.5	162.8	170.5	165.1	157.5	152.1	150.6	149.9
32.5°	138.4	140.7	143.0	146.0	150.6	158.3	153.7	146.8	141.4	138.4	136.1
35°	125.4	126.9	131.5	136.1	139.9	146.0	143.0	136.9	131.5	124.6	121.6
37.5°	117.7	117.7	120.0	126.9	130.0	134.6	133.0	127.7	119.3	113.9	113.2
40°	110.9	110.9	111.6	115.4	120.8	126.2	123.1	114.7	109.3	107.0	106.3
42.5°	104.0	104.0	104.7	104.7	111.6	120.8	113.2	104.7	102.4	100.9	100.2
45°	97.9	97.9	97.9	97.1	100.9	112.4	104.0	97.1	95.6	95.6	94.8
47.5°	93.3	92.5	91.7	90.2	92.5	101.7	94.8	91.0	90.2	91.0	90.2
50°	87.2	86.4	85.6	84.9	86.4	90.2	88.7	84.9	85.6	85.6	86.4
52.5°	81.8	81.0	80.3	79.5	81.0	84.1	84.1	81.0	81.0	81.8	82.6
55°	78.7	77.2	76.5	76.5	77.2	81.0	80.3	78.0	78.0	79.5	80.3
57.5°	74.2	72.6	72.6	71.9	73.4	78.0	77.2	74.9	74.9	75.7	77.2
60°	69.6	68.8	68.0	69.6	70.3	74.9	74.2	72.6	71.9	74.2	74.2
62.5°	64.2	64.2	64.2	65.8	66.5	71.9	71.1	70.3	70.3	71.1	70.3
64°	61.2	61.2	61.9	62.7	64.2	68.8	68.8	68.8	68.8	68.8	68.0
65°	59.6	59.6	61.2	61.9	62.7	68.0	67.3	68.0	68.8	68.0	66.5
67.5°	55.8	55.8	58.1	58.1	58.9	65.0	64.2	65.8	67.3	65.8	64.2
70°	51.2	52.0	54.3	53.5	55.0	61.9	59.6	62.7	65.8	63.5	61.9
72.5°	46.6	47.4	50.5	48.9	49.7	58.1	55.0	58.1	62.7	61.2	59.6
75°	42.1	42.8	45.1	44.3	45.9	53.5	50.5	53.5	58.1	58.1	57.3
77.5°	35.9	37.5	39.0	38.2	41.3	48.2	45.1	47.4	51.2	54.3	52.8
80°	29.1	31.3	32.1	32.9	35.9	41.3	39.0	39.8	43.6	45.9	46.6
82.5°	19.9	23.7	25.2	26.0	30.6	32.1	32.9	32.1	34.4	37.5	35.2
85°	6.1	7.6	14.5	18.3	22.9	22.9	26.8	25.2	26.8	23.7	19.9
87.5°	0.0	0.0	0.0	5.4	13.8	13.8	19.1	17.6	18.3	13.8	12.2
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°	1627.0	1627.0	1627.0	1627.0	1627.0	1627.0	1627.0	1627.0	1627.0	1627.0	1627.0
2.5°	1513.0	1526.0	1555.1	1588.7	1607.1	1646.8	1671.3	1697.3	1723.3	1728.6	1737.0
5°	1321.9	1337.2	1370.1	1415.2	1460.3	1513.0	1574.2	1639.2	1711.1	1741.6	1771.5
7.5°	1029.8	1032.9	1079.5	1161.3	1201.1	1276.0	1363.2	1463.3	1574.2	1631.5	1692.7
10°	760.7	792.1	827.2	895.3	995.4	1081.8	1189.6	1306.6	1422.1	1505.4	1568.8
12.5°	597.9	637.6	695.7	770.7	846.4	928.2	1052.8	1178.2	1320.4	1395.3	1473.3
15°	492.4	542.8	618.5	697.3	767.6	840.2	951.1	1104.8	1286.7	1363.2	1432.8
17.5°	389.9	445.7	526.8	609.3	693.4	782.1	910.6	1100.9	1322.7	1411.4	1483.2
20°	298.9	342.5	410.6	493.9	592.5	714.1	878.5	1130.0	1428.9	1539.8	1587.2
22.5°	221.7	246.9	300.5	387.6	503.8	653.7	846.4	1171.3	1560.4	1690.4	1726.3
25°	183.5	190.4	214.8	290.5	410.6	585.6	821.9	1224.8	1691.9	1838.0	1864.0
27.5°	165.1	169.0	180.4	208.7	321.1	529.8	789.8	1286.7	1830.3	1984.0	1981.7
30°	149.1	149.9	156.7	176.6	260.7	480.1	752.3	1355.5	1953.4	2088.7	2081.9
32.5°	134.6	134.6	143.7	159.0	222.5	435.0	707.2	1405.2	2060.5	2174.4	2152.2
35°	121.6	123.9	132.3	147.6	197.3	384.6	665.2	1423.6	2152.2	2277.6	2214.9
37.5°	112.4	115.4	123.9	138.4	175.8	347.1	630.8	1445.0	2265.4	2402.2	2285.2
40°	106.3	108.6	116.2	128.4	159.0	315.8	593.3	1459.5	2377.7	2535.2	2359.4
42.5°	100.2	102.4	110.1	121.6	151.4	279.1	557.4	1467.9	2494.7	2650.7	2421.3
45°	94.8	97.9	105.5	116.2	152.1	246.2	527.5	1464.9	2565.1	2734.0	2469.5
47.5°	91.0	94.0	102.4	116.2	147.6	227.1	502.3	1454.2	2617.0	2788.3	2491.7
50°	87.2	90.2	100.2	128.4	139.9	221.7	483.2	1452.6	2671.3	2799.0	2491.7
52.5°	83.3	88.7	100.9	129.2	128.4	219.4	467.9	1493.2	2746.2	2817.4	2513.8
55°	81.0	85.6	104.0	119.3	112.4	211.8	458.7	1549.0	2872.4	2918.3	2625.5
57.5°	78.0	81.8	102.4	111.6	100.2	194.2	451.1	1602.5	3038.3	3105.6	2847.9
60°	74.2	78.7	99.4	95.6	91.0	165.1	446.5	1646.8	3100.2	3226.4	3087.2
62.5°	70.3	75.7	108.6	83.3	84.1	137.6	438.1	1689.6	2969.5	3197.3	3240.9
64°	68.0	73.4	100.9	78.0	80.3	125.4	429.7	1691.9	2854.1	3128.5	3270.0
65°	66.5	71.1	94.0	74.9	77.2	122.3	422.0	1659.8	2745.5	3055.1	3261.6
67.5°	64.2	67.3	72.6	69.6	71.9	117.0	370.0	1518.4	2514.6	2866.3	3130.8
70°	61.2	63.5	64.2	63.5	67.3	113.2	312.7	1317.3	2262.3	2668.3	2927.4
72.5°	58.1	58.1	58.1	57.3	61.9	107.8	281.4	1064.2	1954.9	2408.3	2674.4
75°	55.8	53.5	52.8	51.2	56.6	104.7	253.8	799.0	1510.7	2006.2	2240.9
77.5°	51.2	48.9	46.6	45.1	50.5	93.3	211.8	564.2	1113.9	1459.5	1729.4
80°	44.3	42.8	39.8	37.5	42.1	73.4	160.6	348.6	815.0	985.5	1134.6
82.5°	35.9	35.2	32.1	29.1	30.6	52.8	109.3	177.4	543.6	535.2	633.8
85°	22.2	27.5	23.7	19.1	20.6	30.6	44.3	56.6	166.7	100.2	155.2
87.5°	13.0	17.6	14.5	9.9	7.6	13.8	12.2	11.5	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°	1627.0	1627.0	1627.0	1627.0	1627.0	1627.0	1627.0	1627.0	1627.0	1627.0
2.5°	1756.9	1766.9	1772.2	1752.3	1730.9	1711.8	1675.1	1638.4	1619.3	1623.1
5°	1828.8	1845.6	1850.2	1821.1	1760.7	1698.8	1609.4	1532.2	1485.5	1482.5
7.5°	1801.3	1856.3	1865.5	1834.1	1747.8	1632.3	1510.7	1402.9	1356.3	1345.6
10°	1703.4	1787.5	1815.0	1804.3	1720.2	1588.0	1440.4	1303.6	1256.9	1234.7
12.5°	1603.3	1691.2	1708.0	1718.7	1667.5	1555.9	1393.8	1253.1	1197.3	1178.9
15°	1537.5	1597.9	1602.5	1612.4	1601.7	1540.6	1415.2	1273.7	1206.5	1181.2
17.5°	1528.3	1506.9	1492.4	1513.0	1526.0	1541.3	1471.0	1351.0	1279.1	1247.0
20°	1529.9	1463.3	1422.1	1420.5	1476.3	1561.2	1584.1	1480.9	1387.7	1357.8
22.5°	1585.7	1440.4	1371.6	1363.2	1431.2	1594.8	1699.6	1635.4	1542.1	1502.3
25°	1669.0	1426.6	1335.7	1338.0	1406.0	1617.0	1798.2	1789.8	1708.0	1656.8
27.5°	1749.3	1449.6	1331.1	1337.2	1414.4	1631.5	1880.0	1935.1	1843.3	1799.0
30°	1813.5	1500.8	1344.8	1350.2	1440.4	1651.4	1920.5	2064.3	1953.4	1900.7
32.5°	1869.3	1549.0	1365.5	1369.3	1481.7	1679.7	1958.8	2172.8	2060.5	1997.8
35°	1919.8	1590.3	1396.8	1409.8	1534.4	1720.2	1997.8	2290.6	2191.2	2112.4
37.5°	1964.1	1640.7	1458.8	1480.2	1611.7	1779.1	2048.2	2445.8	2337.2	2247.8
40°	1989.3	1685.8	1550.5	1582.6	1711.8	1855.6	2112.4	2546.7	2477.1	2376.2
42.5°	2008.5	1747.8	1698.1	1756.2	1867.0	1927.4	2143.0	2591.8	2559.7	2473.3
45°	2018.4	1870.1	1919.8	1974.1	2042.1	2006.2	2126.2	2607.1	2597.2	2523.0
47.5°	2063.5	2054.3	2176.7	2251.6	2247.8	2124.7	2094.1	2605.6	2621.6	2560.5
50°	2155.3	2269.2	2440.4	2513.8	2485.5	2235.5	2088.0	2603.3	2670.6	2620.9
52.5°	2264.6	2484.0	2725.6	2756.2	2696.6	2347.9	2133.8	2643.0	2762.3	2729.4
55°	2408.3	2685.9	2949.6	2959.6	2875.5	2457.3	2231.7	2760.0	2933.6	2932.0
57.5°	2608.6	2867.0	3137.7	3125.5	3007.0	2608.6	2389.2	2935.1	3123.9	3150.7
60°	2826.5	3058.2	3289.8	3283.0	3156.8	2782.9	2605.6	3194.3	3290.6	3297.5
62.5°	3035.2	3235.6	3436.6	3403.8	3261.6	2963.4	2905.3	3469.5	3399.2	3347.9
64°	3171.3	3295.2	3474.1	3422.1	3286.8	3049.8	3078.1	3559.0	3429.8	3344.9
65°	3261.6	3309.7	3465.7	3403.0	3278.4	3081.9	3208.8	3596.4	3435.1	3327.3
67.5°	3423.6	3226.4	3237.9	3188.2	3076.5	3052.1	3422.9	3575.8	3376.2	3214.9
70°	3378.5	2890.7	2733.3	2701.9	2568.1	2705.7	3396.1	3381.6	3155.3	2958.8
72.5°	2993.2	2321.2	2094.9	2066.6	1880.8	2050.5	2930.5	2880.0	2539.1	2376.2
75°	2466.4	1759.2	1496.2	1519.9	1378.5	1535.2	2331.1	1973.3	1690.4	1593.3
77.5°	1914.4	1243.2	1033.7	1005.4	977.1	993.9	1602.5	1185.0	987.8	898.3
80°	1220.2	781.4	775.2	708.7	685.8	578.0	823.4	630.8	496.2	469.4
82.5°	648.3	450.3	511.5	409.8	329.5	237.0	279.1	187.3	158.3	165.9
85°	177.4	93.3	26.0	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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