

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: P401620

Luminaire Tested: **ENT-SA1E-727-U-SLR**

Issue Date: 5/20/2020

Test Information

Test Method: LM-79-08
Report Number: P401620
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-727-U-SLR
Description: ENTRI LED LUMINAIRE
(1) 70 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: 5202 lumens
Efficiency: N/A
Efficacy: 90.9 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

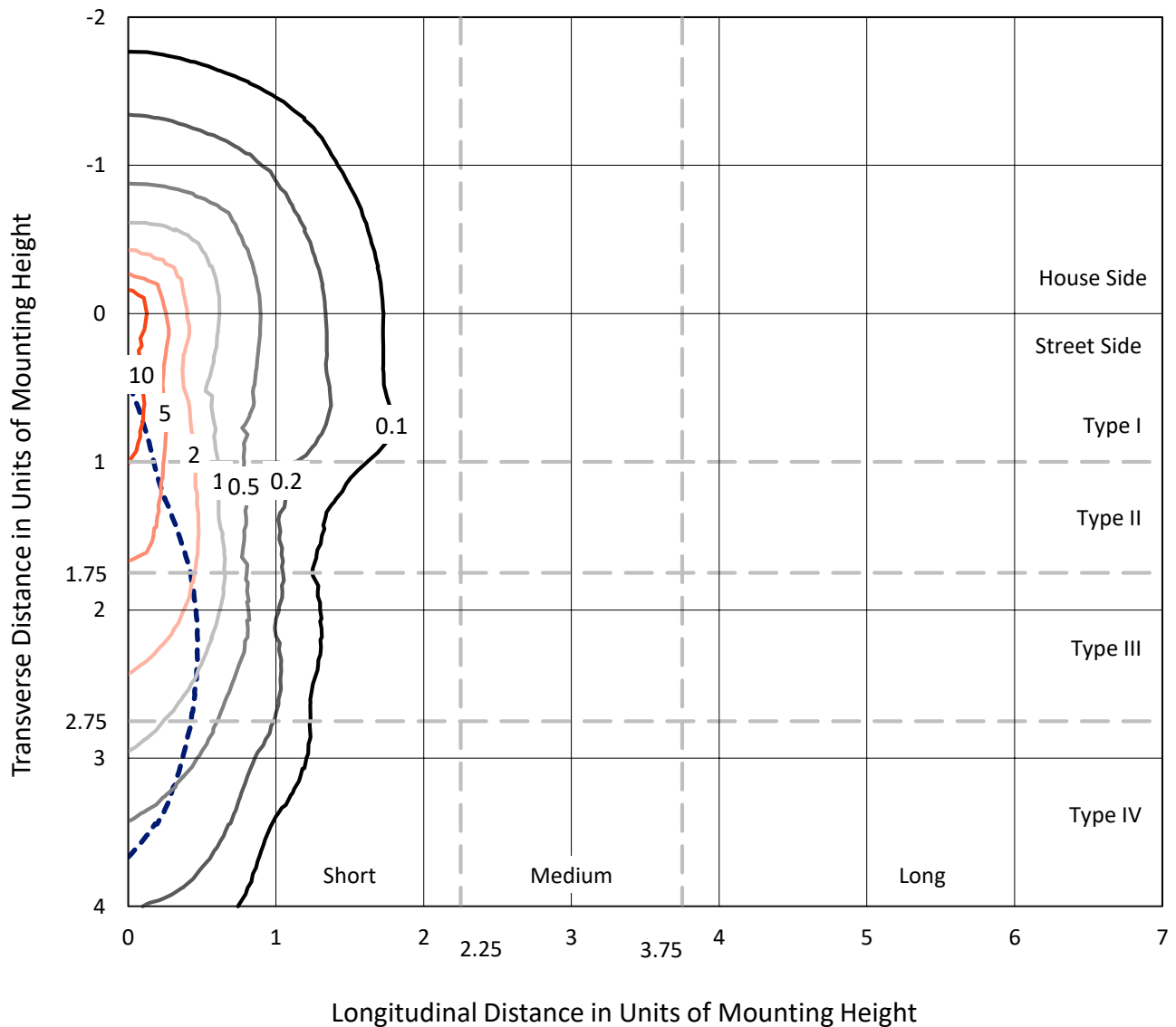


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Iso-Footcandle Lines of Horizontal Illumination

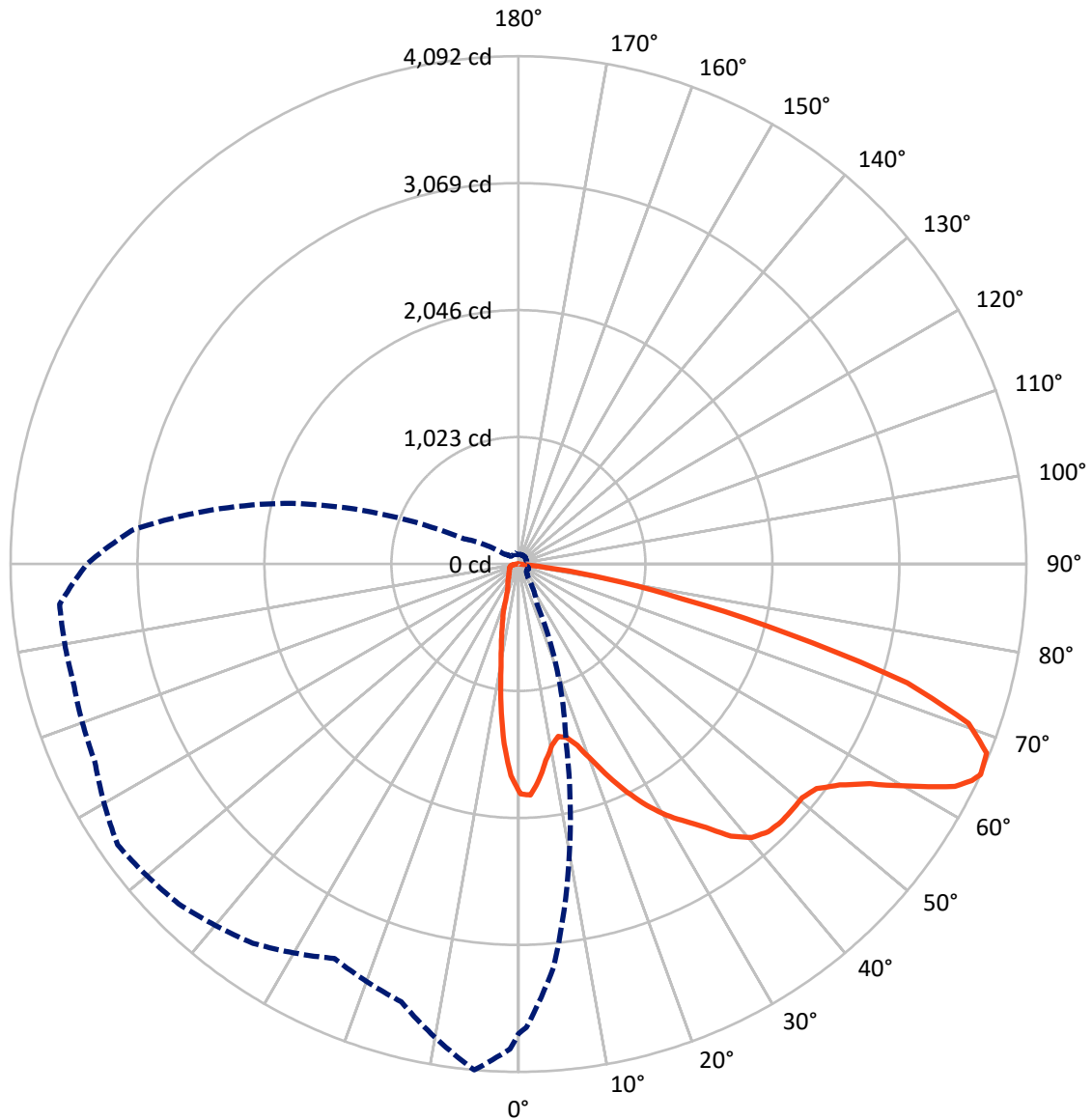
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 18.5 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	1067.4	0.0	1067.4
	% Fixture	20.5	0.0	20.5
Street Side	Lumens	4134.6	0.0	4134.6
	% Fixture	79.5	0.0	79.5
Total	Lumens	5202.0	0.0	5202.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	141.2	2.7
10°-20°	281.3	5.4
20°-30°	390.0	7.5
30°-40°	545.2	10.5
40°-50°	741.9	14.3
50°-60°	1014.5	19.5
60°-70°	1240.4	23.8
70°-80°	748.9	14.4
80°-90°	98.8	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°	5202.0	100.0
0°-180°	5202.0	100.0



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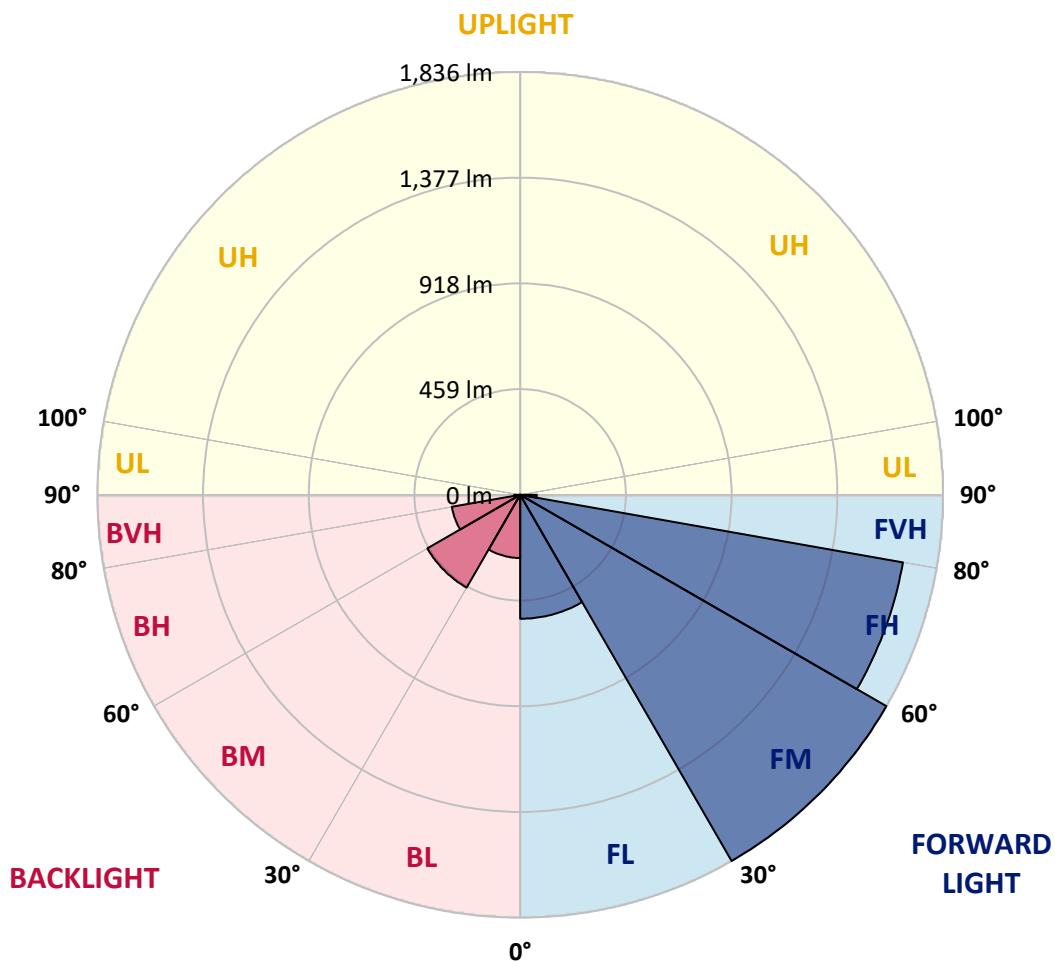
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	538.2	10.3			
FM	(30°-60°)	1836.2	35.3			
FH	(60°-80°)	1688.0	32.4			G1/1800
FVH	(80°-90°)	72.2	1.4			G1/100
BL	(0°-30°)	274.3	5.3	B1/500		
BM	(30°-60°)	465.3	8.9	B1/1000		
BH	(60°-80°)	301.2	5.8	B1/500		G1/500
BVH	(80°-90°)	26.6	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°	1851.1	1851.1	1851.1	1851.1	1851.1	1851.1	1851.1	1851.1	1851.1	1851.1	1851.1
2.5°	1846.8	1841.6	1828.5	1793.7	1756.3	1712.0	1704.1	1656.3	1661.5	1647.6	1651.1
5°	1686.7	1679.8	1644.1	1574.5	1479.7	1424.9	1382.3	1357.0	1336.2	1325.7	1338.8
7.5°	1531.0	1521.4	1478.8	1356.2	1250.9	1163.9	1094.3	1051.7	1010.0	976.9	961.2
10°	1404.9	1401.4	1344.9	1206.5	1074.3	968.2	923.0	877.7	842.1	795.1	756.8
12.5°	1341.4	1330.9	1264.0	1103.0	974.3	909.0	866.4	809.0	760.3	702.9	653.3
15°	1344.0	1331.8	1248.3	1079.5	939.5	860.3	795.1	726.4	655.0	596.7	546.3
17.5°	1418.8	1410.1	1308.3	1101.3	909.9	800.3	698.5	609.8	531.5	458.4	413.2
20°	1544.9	1531.9	1391.0	1127.4	872.5	731.6	593.3	471.5	387.1	322.7	287.1
22.5°	1709.3	1685.0	1508.4	1159.6	835.1	653.3	479.3	343.6	268.8	236.6	227.0
25°	1885.1	1865.9	1650.2	1200.5	795.1	568.0	354.9	249.7	223.6	210.5	203.6
27.5°	2046.9	2015.6	1802.4	1245.7	742.0	482.8	269.7	214.9	197.5	191.4	187.0
30°	2162.6	2135.6	1907.7	1297.9	695.9	394.1	230.5	194.9	180.9	171.4	169.6
32.5°	2273.0	2234.8	1984.2	1322.2	657.6	346.2	213.1	180.9	167.9	158.3	154.8
35°	2403.5	2365.2	2072.1	1325.7	628.9	326.2	196.6	170.5	156.6	147.9	143.5
37.5°	2557.5	2505.3	2171.3	1328.3	600.2	318.4	182.7	161.8	147.9	138.3	134.8
40°	2703.6	2663.6	2273.0	1324.0	581.1	307.1	174.0	152.2	139.2	130.5	126.1
42.5°	2814.1	2771.5	2360.0	1310.9	569.8	287.9	177.5	145.3	133.1	123.5	118.3
45°	2870.7	2832.4	2439.2	1298.8	563.7	271.4	174.0	142.7	128.7	117.4	112.2
47.5°	2913.3	2875.9	2520.1	1293.5	553.3	259.2	160.1	152.2	124.4	111.3	106.1
50°	2982.0	2949.8	2629.7	1323.1	536.7	251.4	147.0	162.7	122.7	106.1	100.0
52.5°	3105.5	3084.7	2810.6	1391.8	519.3	238.4	134.0	155.7	124.4	102.6	95.7
55°	3336.1	3323.0	3059.4	1482.3	502.8	221.8	120.0	140.9	123.5	96.6	91.3
57.5°	3584.8	3581.4	3361.3	1561.5	478.4	194.0	111.3	119.2	117.4	91.3	85.2
60°	3751.9	3740.6	3500.5	1605.8	447.1	160.1	104.4	100.9	120.0	86.1	79.2
62.5°	3809.3	3771.9	3458.7	1589.3	400.2	138.3	96.6	92.2	111.3	80.9	73.1
64°	3805.8	3751.0	3350.0	1526.7	369.7	134.0	92.2	86.1	98.3	77.4	70.5
65°	3785.8	3733.6	3259.5	1478.0	353.2	134.0	89.6	83.5	89.6	75.7	68.7
67.5°	3657.9	3589.2	2950.7	1251.8	310.6	135.7	83.5	76.6	74.8	69.6	64.4
70°	3366.5	3276.9	2527.1	984.7	287.9	136.6	76.6	69.6	67.0	63.5	59.2
72.5°	2703.6	2583.6	2011.2	703.7	264.4	134.0	69.6	63.5	60.9	57.4	53.1
75°	1812.9	1681.5	1482.3	463.7	216.6	120.0	60.0	54.8	53.9	50.5	47.0
77.5°	1022.1	967.3	875.1	254.9	149.6	82.6	47.8	44.4	45.2	43.5	40.0
80°	534.1	508.9	468.0	123.5	72.2	40.0	30.4	30.4	34.8	34.8	33.1
82.5°	188.8	189.6	183.5	27.8	14.8	12.2	10.4	14.8	20.0	24.4	24.4
85°	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0	1.7	3.5	6.1
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°	1851.1	1851.1	1851.1	1851.1	1851.1	1851.1	1851.1	1851.1	1851.1	1851.1	1851.1
2.5°	1621.5	1626.7	1640.6	1638.0	1651.9	1645.8	1664.1	1673.7	1678.9	1705.9	1718.9
5°	1328.3	1330.1	1379.7	1390.1	1416.2	1402.3	1434.5	1422.3	1448.4	1451.9	1495.4
7.5°	976.0	979.5	1003.9	1061.3	1117.8	1141.3	1150.9	1165.7	1153.5	1149.1	1155.2
10°	742.0	744.6	747.2	788.1	837.7	887.3	887.3	888.2	866.4	844.7	840.3
12.5°	634.2	617.6	591.5	592.4	627.2	650.7	669.0	649.8	646.3	656.8	668.1
15°	521.9	505.4	488.0	467.1	468.0	484.5	494.1	493.2	510.6	518.5	541.9
17.5°	405.4	381.9	382.8	370.6	354.0	364.5	367.1	382.8	405.4	415.8	420.2
20°	272.3	272.3	279.2	294.0	286.2	293.2	294.0	306.2	316.6	310.6	316.6
22.5°	225.3	224.4	227.0	236.6	244.4	250.5	252.3	251.4	241.0	236.6	245.3
25°	204.4	203.6	204.4	209.6	218.3	226.2	222.7	217.5	205.3	204.4	206.2
27.5°	187.0	187.9	189.6	193.1	198.3	207.9	204.4	194.0	187.9	186.2	186.2
30°	172.2	172.2	175.7	179.2	185.3	194.0	187.9	179.2	173.1	171.4	170.5
32.5°	157.5	160.1	162.7	166.2	171.4	180.1	174.8	167.0	160.9	157.5	154.8
35°	142.7	144.4	149.6	154.8	159.2	166.2	162.7	155.7	149.6	141.8	138.3
37.5°	134.0	134.0	136.6	144.4	147.9	153.1	151.4	145.3	135.7	129.6	128.7
40°	126.1	126.1	127.0	131.4	137.4	143.5	140.1	130.5	124.4	121.8	120.9
42.5°	118.3	118.3	119.2	119.2	127.0	137.4	128.7	119.2	116.6	114.8	114.0
45°	111.3	111.3	111.3	110.5	114.8	127.9	118.3	110.5	108.7	108.7	107.9
47.5°	106.1	105.3	104.4	102.6	105.3	115.7	107.9	103.5	102.6	103.5	102.6
50°	99.2	98.3	97.4	96.6	98.3	102.6	100.9	96.6	97.4	97.4	98.3
52.5°	93.1	92.2	91.3	90.5	92.2	95.7	95.7	92.2	92.2	93.1	93.9
55°	89.6	87.9	87.0	87.0	87.9	92.2	91.3	88.7	88.7	90.5	91.3
57.5°	84.4	82.6	82.6	81.8	83.5	88.7	87.9	85.2	85.2	86.1	87.9
60°	79.2	78.3	77.4	79.2	80.0	85.2	84.4	82.6	81.8	84.4	84.4
62.5°	73.1	73.1	73.1	74.8	75.7	81.8	80.9	80.0	80.0	80.9	80.0
64°	69.6	69.6	70.5	71.3	73.1	78.3	78.3	78.3	78.3	78.3	77.4
65°	67.9	67.9	69.6	70.5	71.3	77.4	76.6	77.4	78.3	77.4	75.7
67.5°	63.5	63.5	66.1	66.1	67.0	73.9	73.1	74.8	76.6	74.8	73.1
70°	58.3	59.2	61.8	60.9	62.6	70.5	67.9	71.3	74.8	72.2	70.5
72.5°	53.1	53.9	57.4	55.7	56.5	66.1	62.6	66.1	71.3	69.6	67.9
75°	47.8	48.7	51.3	50.5	52.2	60.9	57.4	60.9	66.1	66.1	65.2
77.5°	40.9	42.6	44.4	43.5	47.0	54.8	51.3	53.9	58.3	61.8	60.0
80°	33.1	35.7	36.5	37.4	40.9	47.0	44.4	45.2	49.6	52.2	53.1
82.5°	22.6	27.0	28.7	29.6	34.8	36.5	37.4	36.5	39.1	42.6	40.0
85°	7.0	8.7	16.5	20.9	26.1	26.1	30.4	28.7	30.4	27.0	22.6
87.5°	0.0	0.0	0.0	6.1	15.7	15.7	21.7	20.0	20.9	15.7	13.9
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°	1851.1	1851.1	1851.1	1851.1	1851.1	1851.1	1851.1	1851.1	1851.1	1851.1	1851.1
2.5°	1721.5	1736.3	1769.4	1807.6	1828.5	1873.8	1901.6	1931.2	1960.7	1966.8	1976.4
5°	1504.1	1521.4	1558.9	1610.2	1661.5	1721.5	1791.1	1865.1	1946.8	1981.6	2015.6
7.5°	1171.8	1175.2	1228.3	1321.4	1366.6	1451.9	1551.0	1665.0	1791.1	1856.4	1926.0
10°	865.5	901.2	941.2	1018.6	1132.6	1230.9	1353.6	1486.7	1618.0	1712.8	1785.0
12.5°	680.3	725.5	791.6	876.9	963.0	1056.1	1197.8	1340.5	1502.3	1587.6	1676.3
15°	560.2	617.6	703.7	793.3	873.4	956.0	1082.2	1257.0	1464.0	1551.0	1630.2
17.5°	443.6	507.1	599.4	693.3	789.0	889.9	1036.0	1252.7	1504.9	1605.8	1687.6
20°	340.1	389.7	467.1	562.0	674.2	812.5	999.5	1285.7	1625.8	1752.0	1805.9
22.5°	252.3	281.0	341.9	441.0	573.3	743.8	963.0	1332.7	1775.5	1923.3	1964.2
25°	208.8	216.6	244.4	330.6	467.1	666.3	935.1	1393.6	1925.1	2091.2	2120.8
27.5°	187.9	192.2	205.3	237.5	365.4	602.8	898.6	1464.0	2082.5	2257.4	2254.8
30°	169.6	170.5	178.3	200.9	296.6	546.3	856.0	1542.3	2222.6	2376.6	2368.7
32.5°	153.1	153.1	163.5	180.9	253.1	495.0	804.7	1598.9	2344.4	2474.0	2448.8
35°	138.3	140.9	150.5	167.9	224.4	437.6	756.8	1619.7	2448.8	2591.4	2520.1
37.5°	127.9	131.4	140.9	157.5	200.1	394.9	717.7	1644.1	2577.5	2733.2	2600.1
40°	120.9	123.5	132.2	146.1	180.9	359.3	675.0	1660.6	2705.4	2884.6	2684.5
42.5°	114.0	116.6	125.3	138.3	172.2	317.5	634.2	1670.2	2838.5	3015.9	2755.0
45°	107.9	111.3	120.0	132.2	173.1	280.1	600.2	1666.7	2918.5	3110.8	2809.8
47.5°	103.5	107.0	116.6	132.2	167.9	258.4	571.5	1654.5	2977.7	3172.5	2835.0
50°	99.2	102.6	114.0	146.1	159.2	252.3	549.8	1652.8	3039.4	3184.7	2835.0
52.5°	94.8	100.9	114.8	147.0	146.1	249.7	532.4	1698.9	3124.7	3205.6	2860.2
55°	92.2	97.4	118.3	135.7	127.9	241.0	521.9	1762.4	3268.2	3320.4	2987.2
57.5°	88.7	93.1	116.6	127.0	114.0	221.0	513.2	1823.3	3457.0	3533.5	3240.4
60°	84.4	89.6	113.1	108.7	103.5	187.9	508.0	1873.8	3527.4	3671.0	3512.6
62.5°	80.0	86.1	123.5	94.8	95.7	156.6	498.5	1922.5	3378.7	3637.9	3687.5
64°	77.4	83.5	114.8	88.7	91.3	142.7	488.9	1925.1	3247.3	3559.6	3720.5
65°	75.7	80.9	107.0	85.2	87.9	139.2	480.2	1888.5	3123.8	3476.1	3711.0
67.5°	73.1	76.6	82.6	79.2	81.8	133.1	421.0	1727.6	2861.1	3261.2	3562.2
70°	69.6	72.2	73.1	72.2	76.6	128.7	355.8	1498.8	2574.0	3035.9	3330.8
72.5°	66.1	66.1	66.1	65.2	70.5	122.7	320.1	1210.9	2224.3	2740.2	3042.9
75°	63.5	60.9	60.0	58.3	64.4	119.2	288.8	909.0	1718.9	2282.6	2549.7
77.5°	58.3	55.7	53.1	51.3	57.4	106.1	241.0	642.0	1267.4	1660.6	1967.7
80°	50.5	48.7	45.2	42.6	47.8	83.5	182.7	396.7	927.3	1121.3	1290.9
82.5°	40.9	40.0	36.5	33.1	34.8	60.0	124.4	201.8	618.5	608.9	721.1
85°	25.2	31.3	27.0	21.7	23.5	34.8	50.5	64.4	189.6	114.0	176.6
87.5°	14.8	20.0	16.5	11.3	8.7	15.7	13.9	13.0	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°	1851.1	1851.1	1851.1	1851.1	1851.1	1851.1	1851.1	1851.1	1851.1	1851.1
2.5°	1999.0	2010.3	2016.4	1993.8	1969.4	1947.7	1905.9	1864.2	1842.4	1846.8
5°	2080.8	2099.9	2105.2	2072.1	2003.4	1932.9	1831.1	1743.3	1690.2	1686.7
7.5°	2049.5	2112.1	2122.5	2086.9	1988.6	1857.2	1718.9	1596.3	1543.2	1531.0
10°	1938.1	2033.8	2065.1	2053.0	1957.3	1806.8	1638.9	1483.2	1430.1	1404.9
12.5°	1824.2	1924.2	1943.3	1955.5	1897.2	1770.2	1585.8	1425.8	1362.3	1341.4
15°	1749.4	1818.1	1823.3	1834.6	1822.4	1752.8	1610.2	1449.2	1372.7	1344.0
17.5°	1738.9	1714.6	1698.0	1721.5	1736.3	1753.7	1673.7	1537.1	1455.3	1418.8
20°	1740.7	1665.0	1618.0	1616.3	1679.8	1776.3	1802.4	1685.0	1578.9	1544.9
22.5°	1804.2	1638.9	1560.6	1551.0	1628.4	1814.6	1933.8	1860.7	1754.6	1709.3
25°	1899.0	1623.2	1519.7	1522.3	1599.7	1839.8	2046.0	2036.4	1943.3	1885.1
27.5°	1990.3	1649.3	1514.5	1521.4	1609.3	1856.4	2139.1	2201.7	2097.3	2046.9
30°	2063.4	1707.6	1530.1	1536.2	1638.9	1879.0	2185.2	2348.7	2222.6	2162.6
32.5°	2126.9	1762.4	1553.6	1558.0	1685.9	1911.2	2228.7	2472.2	2344.4	2273.0
35°	2184.3	1809.4	1589.3	1604.1	1745.9	1957.3	2273.0	2606.2	2493.1	2403.5
37.5°	2234.8	1866.8	1659.8	1684.1	1833.7	2024.3	2330.5	2782.8	2659.3	2557.5
40°	2263.5	1918.1	1764.2	1800.7	1947.7	2111.2	2403.5	2897.6	2818.5	2703.6
42.5°	2285.2	1988.6	1932.0	1998.2	2124.3	2193.0	2438.3	2949.0	2912.4	2814.1
45°	2296.5	2127.8	2184.3	2246.1	2323.5	2282.6	2419.2	2966.3	2955.0	2870.7
47.5°	2347.9	2337.4	2476.6	2561.8	2557.5	2417.4	2382.6	2964.6	2982.9	2913.3
50°	2452.2	2581.9	2776.7	2860.2	2828.0	2543.6	2375.7	2962.0	3038.6	2982.0
52.5°	2576.6	2826.3	3101.2	3136.0	3068.1	2671.5	2427.9	3007.2	3142.9	3105.5
55°	2740.2	3055.9	3356.1	3367.4	3271.7	2795.8	2539.2	3140.3	3337.8	3336.1
57.5°	2968.1	3262.1	3570.1	3556.1	3421.3	2968.1	2718.4	3339.5	3554.4	3584.8
60°	3216.0	3479.6	3743.2	3735.3	3591.8	3166.4	2964.6	3634.4	3744.0	3751.9
62.5°	3453.5	3681.4	3910.2	3872.8	3711.0	3371.7	3305.6	3947.6	3867.6	3809.3
64°	3608.3	3749.3	3952.8	3893.7	3739.7	3470.0	3502.2	4049.4	3902.4	3805.8
65°	3711.0	3765.8	3943.2	3871.9	3730.1	3506.6	3651.0	4092.0	3908.4	3785.8
67.5°	3895.4	3671.0	3684.0	3627.5	3500.5	3472.6	3894.5	4068.5	3841.5	3657.9
70°	3844.1	3289.1	3109.9	3074.2	2922.0	3078.6	3864.1	3847.6	3590.1	3366.5
72.5°	3405.6	2641.0	2383.5	2351.3	2139.9	2333.1	3334.3	3276.9	2888.9	2703.6
75°	2806.3	2001.6	1702.4	1729.4	1568.4	1746.8	2652.3	2245.2	1923.3	1812.9
77.5°	2178.2	1414.5	1176.1	1143.9	1111.7	1130.9	1823.3	1348.3	1123.9	1022.1
80°	1388.4	889.0	882.1	806.4	780.3	657.6	936.9	717.7	564.6	534.1
82.5°	737.7	512.4	582.0	466.3	374.9	269.7	317.5	213.1	180.1	188.8
85°	201.8	106.1	29.6	0.0	0.0	0.0	0.0	0.9	0.9	0.9
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	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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