

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: P401546

Luminaire Tested: **ENT-SA1D-760-U-SLL**

Issue Date: 5/20/2020

Test Information

Test Method: LM-79-08
Report Number: P401546
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-SA1D-760-U-SLL
Description: ENTRI LED LUMINAIRE
(1) 70 CRI, 5700K, 800mA LIGHTSQUARE WITH 16 LEDS AND SPILL LIGHT ELIMINATOR LEFT OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4992 lumens
Efficiency: N/A
Efficacy: 115.8 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

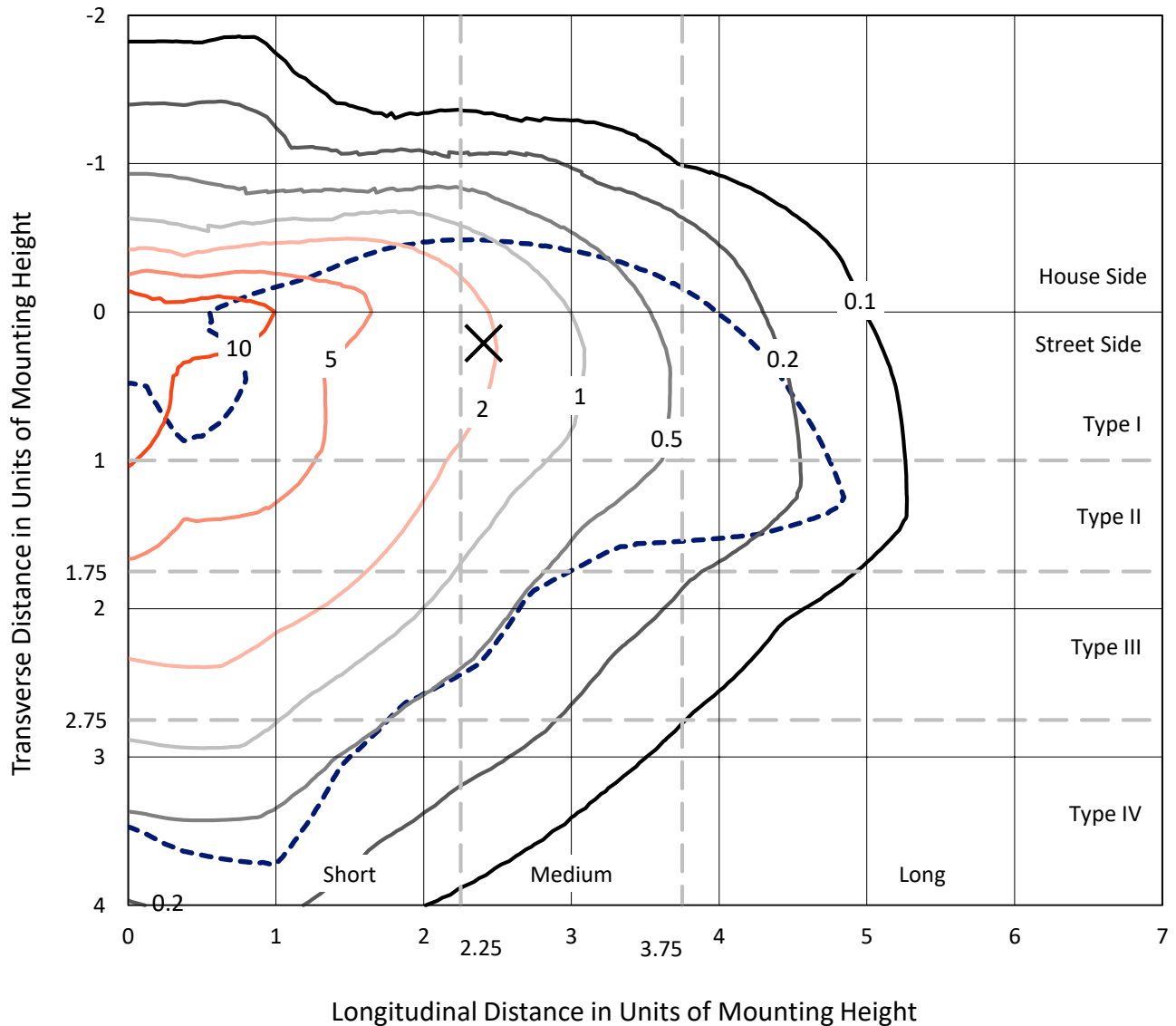
Input Watts (W): 43.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

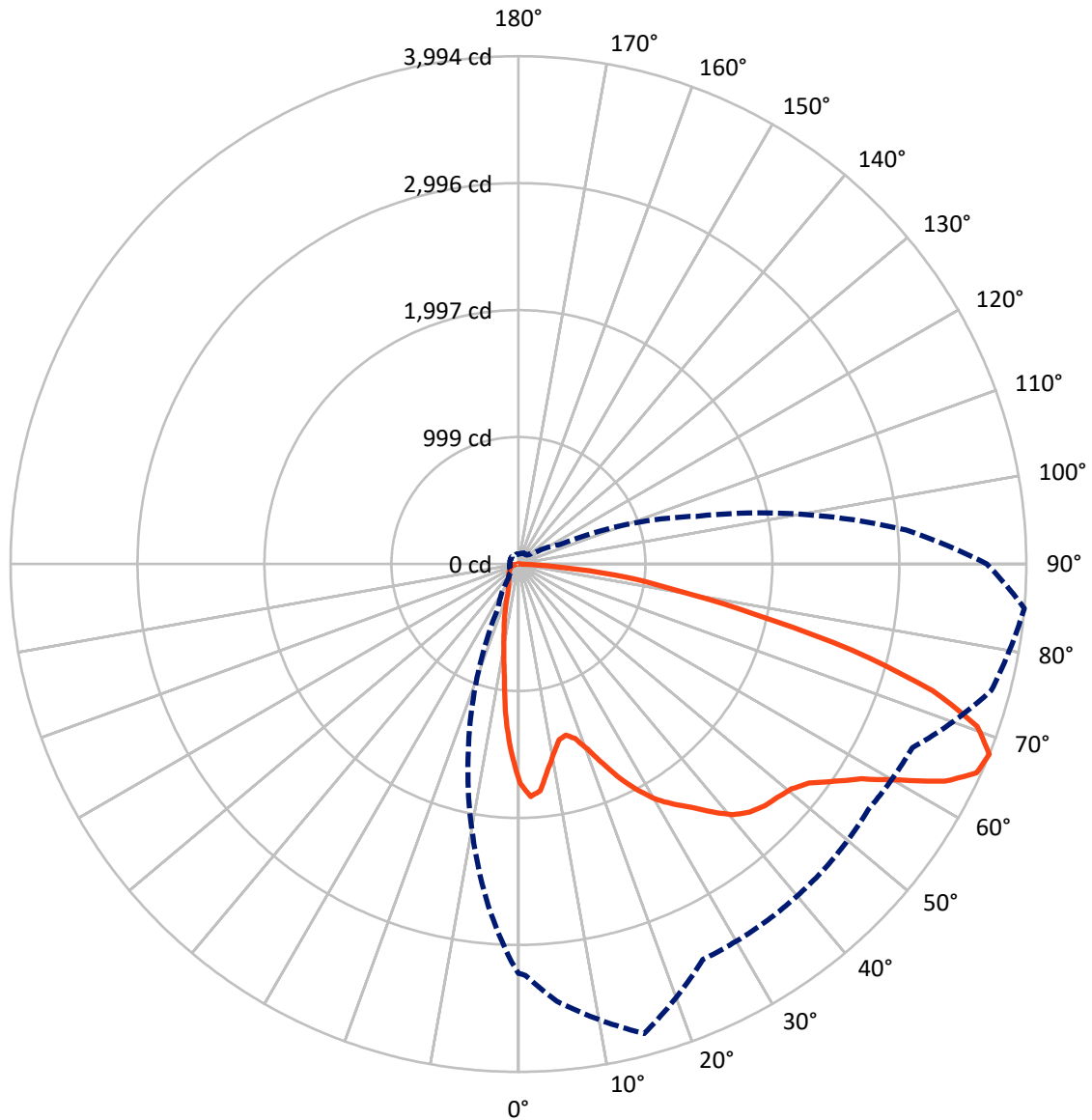
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 18.4 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	1005.8	0.0	1005.8
	% Fixture	20.1	0.0	20.1
Street Side	Lumens	3986.2	0.0	3986.2
	% Fixture	79.9	0.0	79.9
Total	Lumens	4992.0	0.0	4992.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	131.1	2.6
10°-20°	258.6	5.2
20°-30°	361.3	7.2
30°-40°	509.3	10.2
40°-50°	705.8	14.1
50°-60°	991.7	19.9
60°-70°	1212.4	24.3
70°-80°	712.6	14.3
80°-90°	109.1	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°	4992.0	100.0
0°-180°	4992.0	100.0



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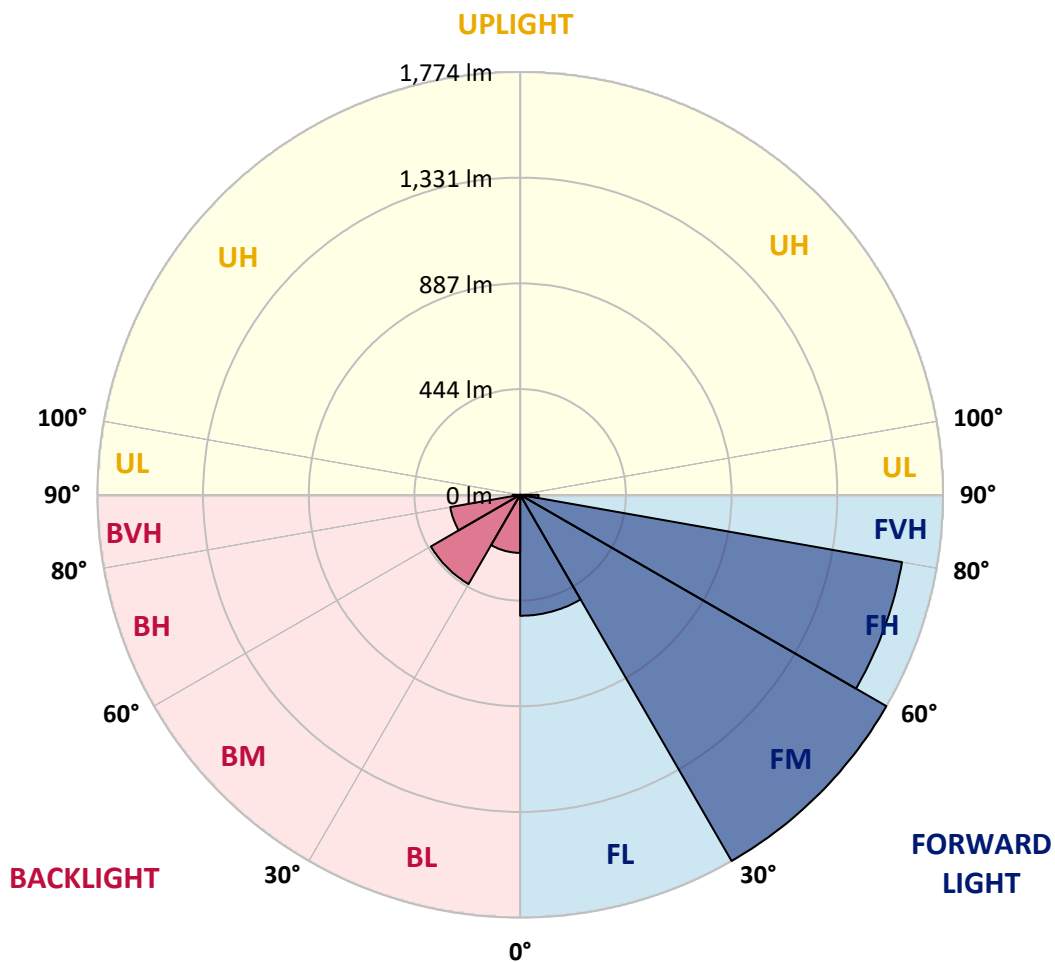
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	507.5	10.2			
FM	(30°-60°)	1774.5	35.5			
FH	(60°-80°)	1627.0	32.6			G1/1800
FVH	(80°-90°)	77.2	1.5			G1/100
BL	(0°-30°)	243.6	4.9	B1/500		
BM	(30°-60°)	432.4	8.7	B1/1000		
BH	(60°-80°)	297.9	6.0	B1/500		G1/500
BVH	(80°-90°)	31.9	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°	1724.6	1724.6	1724.6	1724.6	1724.6	1724.6	1724.6	1724.6	1724.6	1724.6	1724.6
2.5°	1772.0	1764.0	1791.3	1831.4	1858.7	1877.9	1884.3	1883.5	1877.9	1862.7	1830.6
5°	1693.3	1686.1	1741.5	1830.6	1908.4	1964.6	1980.6	1958.2	1930.1	1870.7	1792.1
7.5°	1544.1	1555.3	1625.9	1751.1	1876.3	1965.4	1987.1	1951.8	1894.0	1772.8	1640.4
10°	1430.9	1436.5	1516.0	1666.9	1800.1	1891.6	1929.3	1898.0	1822.6	1669.3	1516.0
12.5°	1361.1	1366.7	1443.8	1583.4	1725.4	1796.9	1808.1	1807.3	1744.7	1596.2	1418.9
15°	1370.7	1377.9	1455.0	1570.6	1650.8	1682.1	1682.9	1691.7	1673.3	1560.1	1395.6
17.5°	1463.8	1463.8	1537.7	1607.5	1589.0	1566.5	1583.4	1599.4	1631.5	1581.8	1443.0
20°	1610.7	1617.1	1685.3	1673.3	1560.9	1504.7	1484.7	1512.8	1612.3	1646.8	1554.5
22.5°	1769.6	1786.4	1857.9	1769.6	1556.1	1447.0	1424.5	1455.0	1614.7	1749.5	1707.8
25°	1945.3	1966.2	2014.4	1881.9	1570.6	1414.9	1399.6	1428.5	1621.1	1844.2	1873.1
27.5°	2105.8	2107.4	2154.8	1976.6	1608.3	1418.1	1392.4	1430.1	1638.8	1918.9	2019.2
30°	2219.8	2219.8	2240.7	2024.8	1654.8	1438.1	1398.8	1454.2	1663.6	1959.8	2151.6
32.5°	2324.1	2329.8	2319.3	2075.3	1699.0	1467.0	1414.1	1502.3	1703.0	1993.5	2253.5
35°	2456.6	2455.7	2409.2	2115.5	1739.9	1498.3	1451.8	1563.3	1760.0	2043.2	2350.6
37.5°	2620.3	2612.2	2513.5	2151.6	1789.6	1552.1	1523.2	1646.8	1836.2	2101.8	2473.4
40°	2768.7	2755.9	2609.0	2185.3	1829.0	1656.4	1639.6	1750.3	1932.5	2174.9	2593.0
42.5°	2884.3	2865.0	2690.1	2209.4	1888.4	1820.1	1834.6	1936.5	2029.6	2239.9	2667.6
45°	2981.4	2961.3	2751.1	2221.4	2032.0	2053.7	2081.8	2166.8	2133.1	2257.5	2713.4
47.5°	3051.2	3018.3	2777.6	2256.7	2226.2	2326.5	2413.2	2418.8	2279.2	2256.7	2741.5
50°	3092.2	3056.0	2802.4	2344.2	2451.7	2636.3	2728.6	2685.3	2430.9	2271.2	2781.6
52.5°	3174.8	3137.1	2906.0	2486.2	2682.9	2950.1	2999.9	2930.0	2588.2	2345.8	2861.8
55°	3382.7	3365.8	3106.6	2677.2	2910.0	3203.7	3226.2	3156.4	2752.7	2475.0	3015.1
57.5°	3617.8	3580.9	3377.9	2917.2	3127.5	3401.9	3438.0	3341.7	2925.2	2656.4	3186.1
60°	3683.6	3676.4	3607.4	3197.3	3352.2	3613.8	3616.2	3493.4	3126.7	2872.3	3446.9
62.5°	3587.3	3610.6	3702.9	3456.5	3540.8	3755.9	3735.8	3608.2	3337.7	3215.7	3763.9
65°	3419.6	3452.5	3637.9	3701.3	3584.1	3727.8	3685.2	3604.2	3471.0	3585.7	3960.5
67.5°	3218.2	3235.8	3451.7	3823.3	3432.4	3418.8	3398.7	3361.8	3418.0	3848.9	3994.2
70°	3008.7	3023.9	3223.0	3655.5	2977.4	2820.9	2804.0	2771.9	2991.0	3845.7	3828.9
72.5°	2536.0	2526.4	2710.2	3051.2	2273.6	2060.9	2203.8	2133.9	2419.6	3454.9	3410.8
75°	1575.4	1628.3	1858.7	2139.6	1557.7	1411.7	1609.1	1591.4	1964.6	2975.0	2715.8
77.5°	959.8	970.3	1100.3	1333.8	938.2	978.3	1034.5	1143.6	1456.6	2411.6	1893.2
80°	502.4	467.1	562.6	731.9	557.0	656.5	758.4	878.8	924.5	1572.2	1265.6
82.5°	145.3	144.5	190.2	306.6	264.0	322.6	382.8	552.1	605.9	935.0	866.7
85°	0.8	0.8	0.8	1.6	2.4	4.0	16.9	142.0	187.8	433.4	356.3
87.5°	0.0	0.0	0.8	1.6	1.6	3.2	4.8	6.4	8.0	9.6	35.3
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°	1724.6	1724.6	1724.6	1724.6	1724.6	1724.6	1724.6	1724.6	1724.6	1724.6	1724.6
2.5°	1820.1	1808.1	1782.4	1747.9	1723.8	1682.1	1673.3	1646.8	1620.3	1598.6	1599.4
5°	1754.3	1713.4	1650.8	1578.6	1509.6	1447.8	1435.7	1399.6	1389.2	1378.8	1349.9
7.5°	1581.8	1533.6	1446.2	1339.4	1252.8	1194.2	1131.6	1093.9	1060.1	1021.6	1031.3
10°	1449.4	1380.4	1260.0	1134.8	1026.4	947.8	878.8	843.5	794.5	759.2	754.4
12.5°	1347.5	1272.8	1128.4	981.5	879.6	833.8	789.7	734.3	679.7	633.2	609.1
15°	1313.7	1229.5	1061.8	915.7	835.4	780.1	718.3	654.9	588.3	538.5	519.2
17.5°	1353.1	1253.6	1060.9	887.6	787.3	706.2	629.2	557.8	479.1	429.4	414.1
20°	1461.4	1337.0	1083.4	861.1	728.7	618.8	510.4	433.4	353.1	317.8	301.8
22.5°	1612.3	1450.2	1117.9	829.0	663.7	512.0	390.0	292.9	253.6	235.9	231.9
25°	1767.2	1593.8	1166.9	801.7	592.3	407.7	280.1	234.3	215.9	207.9	207.9
27.5°	1937.3	1737.5	1219.8	768.8	518.4	303.4	227.9	206.3	196.6	191.8	191.0
30°	2075.3	1854.7	1280.0	730.3	451.8	248.8	202.2	187.8	179.0	176.6	176.6
32.5°	2174.9	1942.1	1343.4	691.8	390.8	224.7	187.8	175.0	165.3	163.7	163.7
35°	2291.2	2025.6	1372.3	670.1	353.9	209.5	177.4	164.5	155.7	151.7	151.7
37.5°	2430.9	2125.1	1388.4	649.2	337.9	195.0	170.1	155.7	146.9	142.0	142.0
40°	2608.2	2238.3	1405.2	628.4	328.2	183.0	162.1	147.7	140.4	134.8	134.8
42.5°	2735.0	2342.6	1418.1	610.7	311.4	177.4	155.7	142.0	133.2	128.4	127.6
45°	2801.6	2439.7	1423.7	600.3	292.1	182.2	150.9	137.2	126.8	122.0	121.2
47.5°	2846.6	2520.0	1430.9	592.3	276.9	173.3	150.1	132.4	122.0	115.6	115.6
50°	2918.0	2625.9	1449.4	577.0	268.0	162.1	162.1	130.0	116.4	110.7	109.9
52.5°	3045.6	2777.6	1499.1	560.2	258.4	150.9	166.9	130.8	112.4	105.9	104.3
55°	3238.2	3019.1	1581.8	536.1	244.8	137.2	155.7	131.6	108.3	102.7	100.3
57.5°	3488.6	3311.2	1678.1	516.8	221.5	126.0	142.0	127.6	103.5	98.7	97.1
60°	3657.1	3506.3	1739.1	492.0	188.6	118.8	122.0	123.6	98.7	93.1	92.3
62.5°	3747.8	3509.5	1739.9	457.4	158.1	112.4	109.1	126.0	94.7	87.5	86.7
65°	3754.2	3338.5	1652.4	413.3	147.7	105.1	100.3	111.6	90.7	83.5	82.7
67.5°	3684.4	3060.1	1452.6	362.7	151.7	99.5	93.1	93.9	85.9	79.5	78.6
70°	3434.0	2699.7	1165.3	322.6	152.5	92.3	87.5	85.1	81.1	75.4	73.8
72.5°	2962.9	2255.9	882.8	309.8	154.9	86.7	81.1	78.6	75.4	70.6	69.0
75°	2235.9	1760.0	662.9	288.9	156.5	80.3	73.8	72.2	69.0	64.2	63.4
77.5°	1544.9	1304.9	460.7	244.0	139.6	73.0	66.6	65.0	62.6	57.8	57.0
80°	1043.3	894.8	282.5	183.0	105.9	64.2	57.8	57.8	55.4	50.6	50.6
82.5°	726.3	668.5	162.9	119.6	77.0	53.0	50.6	50.6	48.2	43.3	42.5
85°	303.4	404.5	73.0	65.0	53.8	41.7	41.7	42.5	40.1	36.1	35.3
87.5°	10.4	43.3	28.9	30.5	32.1	28.9	32.1	32.1	31.3	28.1	27.3
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°	1724.6	1724.6	1724.6	1724.6	1724.6	1724.6	1724.6	1724.6	1724.6	1724.6	1724.6
2.5°	1576.2	1565.7	1533.6	1529.6	1505.6	1503.9	1514.4	1496.7	1498.3	1520.0	1516.8
5°	1356.3	1332.2	1331.4	1304.9	1275.2	1268.0	1242.3	1232.7	1228.7	1219.8	1252.0
7.5°	1060.9	1049.7	1059.3	1056.1	1028.8	1013.6	959.0	917.3	896.4	905.3	907.7
10°	754.4	771.2	796.9	821.8	802.5	752.0	728.7	695.0	691.0	688.6	704.6
12.5°	597.9	578.6	590.7	599.5	581.0	559.4	549.7	535.3	543.3	561.8	572.2
15°	496.8	463.1	447.8	437.4	442.2	429.4	434.2	429.4	435.0	440.6	459.9
17.5°	392.4	380.4	351.5	337.9	338.7	333.1	334.7	333.9	330.6	343.5	358.7
20°	295.3	292.1	285.7	276.1	277.7	273.7	271.3	257.6	252.0	256.0	268.8
22.5°	230.3	234.3	238.4	237.5	241.6	231.1	221.5	209.5	207.9	208.7	211.9
25°	206.3	207.9	211.1	215.1	217.5	207.9	194.2	187.0	186.2	187.8	187.8
27.5°	191.8	190.2	194.2	199.0	202.2	190.2	179.0	172.5	170.9	169.3	168.5
30°	176.6	176.6	179.8	184.6	187.0	176.6	166.9	160.5	156.5	154.1	153.3
32.5°	165.3	166.1	167.7	170.9	175.0	164.5	156.5	150.9	143.7	141.2	139.6
35°	152.5	155.7	158.1	158.9	162.1	154.9	146.9	138.0	131.6	129.2	129.2
37.5°	142.0	144.5	148.5	147.7	150.1	145.3	136.4	126.8	123.6	122.8	122.0
40°	134.0	134.0	137.2	140.4	143.7	134.8	124.4	119.6	117.2	115.6	116.4
42.5°	126.8	126.0	126.0	131.6	137.2	124.4	115.6	112.4	111.6	109.9	110.7
45°	120.4	119.6	117.2	119.6	127.6	114.0	108.3	105.9	105.1	105.1	105.1
47.5°	114.8	113.2	109.9	110.7	116.4	105.9	101.1	100.3	99.5	99.5	100.3
50°	108.3	106.7	104.3	103.5	105.1	100.3	96.3	94.7	94.7	94.7	96.3
52.5°	102.7	101.9	98.7	97.9	98.7	95.5	91.5	90.7	90.7	90.7	93.1
55°	98.7	97.1	95.5	93.9	95.5	91.5	88.3	86.7	86.7	88.3	89.9
57.5°	94.7	93.1	92.3	90.7	92.3	88.3	85.1	83.5	84.3	85.1	85.1
60°	90.7	89.1	88.3	86.7	89.1	85.1	81.9	81.1	81.1	80.3	80.3
62.5°	86.7	85.9	84.3	82.7	85.9	81.1	78.6	77.0	76.2	76.2	76.2
65°	81.9	81.1	80.3	79.5	81.1	77.0	74.6	73.8	72.2	71.4	72.2
67.5°	77.8	77.8	76.2	74.6	77.0	72.2	70.6	69.8	67.4	66.6	67.4
70°	73.0	73.0	71.4	70.6	73.8	67.4	65.8	65.0	63.4	62.6	62.6
72.5°	68.2	68.2	66.6	65.8	69.8	62.6	61.0	60.2	57.8	57.0	57.0
75°	63.4	62.6	61.8	61.0	65.8	57.8	55.4	53.8	51.4	50.6	49.8
77.5°	57.8	57.0	55.4	56.2	59.4	51.4	48.2	47.3	44.9	44.1	43.3
80°	50.6	49.8	49.0	50.6	50.6	44.9	40.9	39.3	36.9	35.3	34.5
82.5°	43.3	42.5	42.5	44.1	41.7	39.3	34.5	31.3	27.3	24.9	24.1
85°	35.3	36.9	35.3	36.9	31.3	31.3	24.1	18.5	12.8	10.4	9.6
87.5°	27.3	28.1	27.3	28.1	21.7	20.9	11.2	6.4	0.8	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°	1724.6	1724.6	1724.6	1724.6	1724.6	1724.6	1724.6	1724.6	1724.6	1724.6
2.5°	1540.9	1542.5	1577.0	1611.5	1632.4	1684.5	1710.2	1739.1	1754.3	1772.0
5°	1236.7	1267.2	1295.3	1364.3	1399.6	1482.3	1542.5	1638.8	1669.3	1693.3
7.5°	934.1	979.9	1014.4	1100.3	1166.9	1269.6	1374.7	1489.5	1522.4	1544.1
10°	742.3	784.1	849.1	916.5	991.1	1115.5	1229.5	1348.3	1406.0	1430.9
12.5°	623.6	690.2	766.4	829.0	888.4	979.9	1124.3	1274.4	1334.6	1361.1
15°	514.4	589.1	666.9	743.9	817.8	921.3	1073.0	1268.0	1344.2	1370.7
17.5°	408.5	469.5	548.1	641.2	748.8	880.4	1082.6	1336.2	1429.3	1463.8
20°	290.5	349.9	430.2	544.9	672.5	837.8	1105.1	1438.9	1571.4	1610.7
22.5°	219.1	252.0	325.8	439.0	604.3	804.1	1140.4	1579.4	1734.3	1769.6
25°	192.6	203.8	241.6	350.7	536.1	773.6	1186.9	1719.0	1906.8	1945.3
27.5°	170.9	177.4	196.6	281.7	485.5	742.3	1242.3	1869.9	2055.3	2105.8
30°	154.1	162.1	178.2	235.9	436.6	697.4	1292.9	2005.5	2181.3	2219.8
32.5°	141.2	150.1	164.5	213.5	394.8	663.7	1321.8	2106.6	2288.8	2324.1
35°	132.4	140.4	154.9	193.4	357.9	640.4	1330.6	2207.0	2420.4	2456.6
37.5°	124.4	132.4	145.3	173.3	332.2	609.9	1344.2	2326.5	2572.9	2620.3
40°	118.8	125.2	137.2	159.7	296.9	577.0	1360.3	2466.2	2721.4	2768.7
42.5°	113.2	120.4	130.8	160.5	261.6	548.9	1370.7	2573.7	2839.4	2884.3
45°	108.3	116.4	128.4	157.3	235.1	523.3	1365.9	2663.6	2946.9	2981.4
47.5°	103.5	113.2	134.8	150.9	227.1	500.0	1369.9	2750.3	3023.9	3051.2
50°	100.3	112.4	144.5	141.2	228.7	489.5	1408.4	2853.8	3081.7	3092.2
52.5°	97.9	114.8	136.4	127.6	228.7	484.7	1482.3	3020.7	3182.0	3174.8
55°	93.9	114.0	127.6	115.6	219.1	487.1	1552.1	3241.4	3422.8	3382.7
57.5°	90.7	109.1	114.8	106.7	196.6	487.9	1655.6	3427.6	3612.2	3617.8
60°	86.7	117.2	99.5	99.5	168.5	483.9	1747.1	3424.4	3646.7	3683.6
62.5°	82.7	114.8	89.1	92.3	149.3	468.7	1802.5	3224.6	3519.1	3587.3
65°	77.8	90.7	81.9	85.9	141.2	431.0	1723.8	2976.6	3346.6	3419.6
67.5°	72.2	74.6	74.6	79.5	138.0	374.0	1525.6	2702.9	3129.9	3218.2
70°	65.8	66.6	68.2	75.4	128.4	321.8	1242.3	2411.6	2897.1	3008.7
72.5°	59.4	60.2	60.2	68.2	120.4	277.7	879.6	1910.8	2418.8	2536.0
75°	52.2	53.0	52.2	59.4	105.1	207.9	522.4	1208.6	1443.0	1575.4
77.5°	44.1	44.1	42.5	46.5	72.2	131.6	285.7	734.3	878.0	959.8
80°	36.1	32.9	27.3	28.1	39.3	75.4	127.6	421.3	481.5	502.4
82.5°	24.1	18.5	11.2	10.4	12.8	20.9	29.7	166.9	153.3	145.3
85°	4.8	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8
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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