

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: P401474

Luminaire Tested: **ENT-SA1D-735-U-SLL**

Issue Date: 5/20/2020

Test Information

Test Method: LM-79-08
Report Number: P401474
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-735-U-SLL
Description: ENTRI LED LUMINAIRE
(1) 70 CRI, 3500K, 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: 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 III - Medium - Non-Cutoff
BUG Rating: B1 - U0 - G1

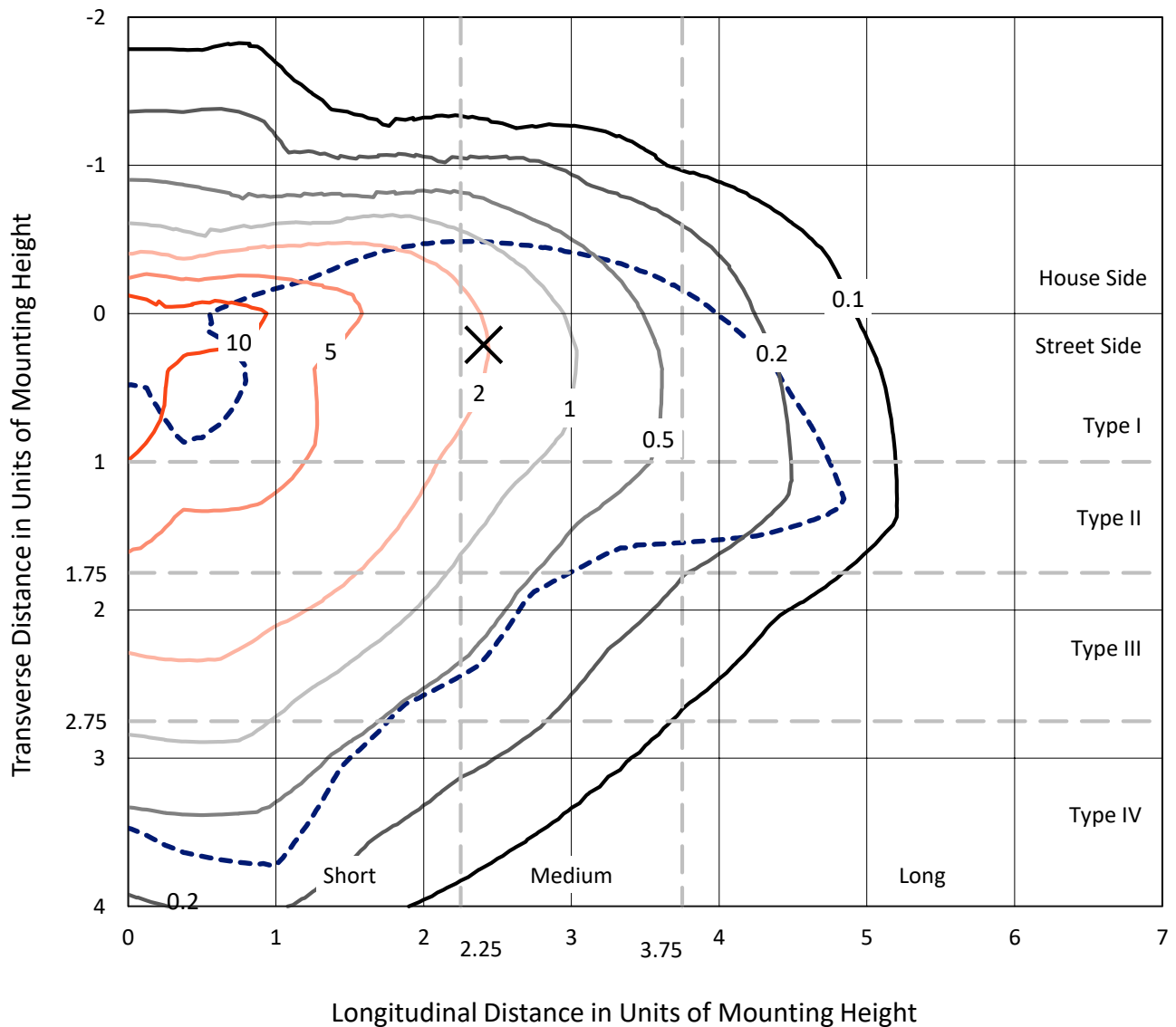
Input Watts (W): 43.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

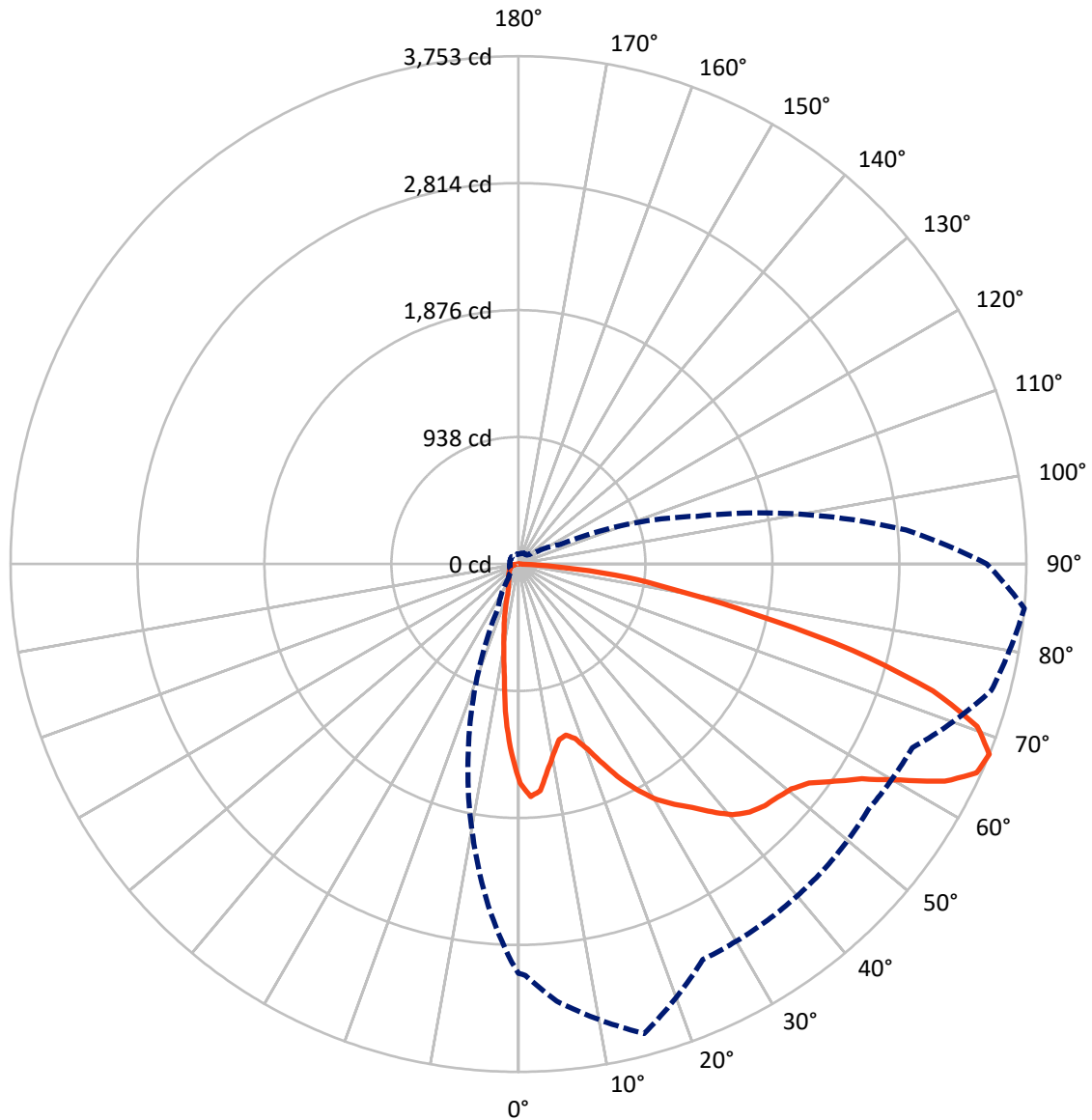
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 17.3 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	945.0	0.0	945.0
	% Fixture	20.1	0.0	20.1
Street Side	Lumens	3745.0	0.0	3745.0
	% Fixture	79.9	0.0	79.9
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°	123.2	2.6
10°-20°	243.0	5.2
20°-30°	339.5	7.2
30°-40°	478.5	10.2
40°-50°	663.1	14.1
50°-60°	931.7	19.9
60°-70°	1139.1	24.3
70°-80°	669.4	14.3
80°-90°	102.5	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°	4690.0	100.0
0°-180°	4690.0	100.0



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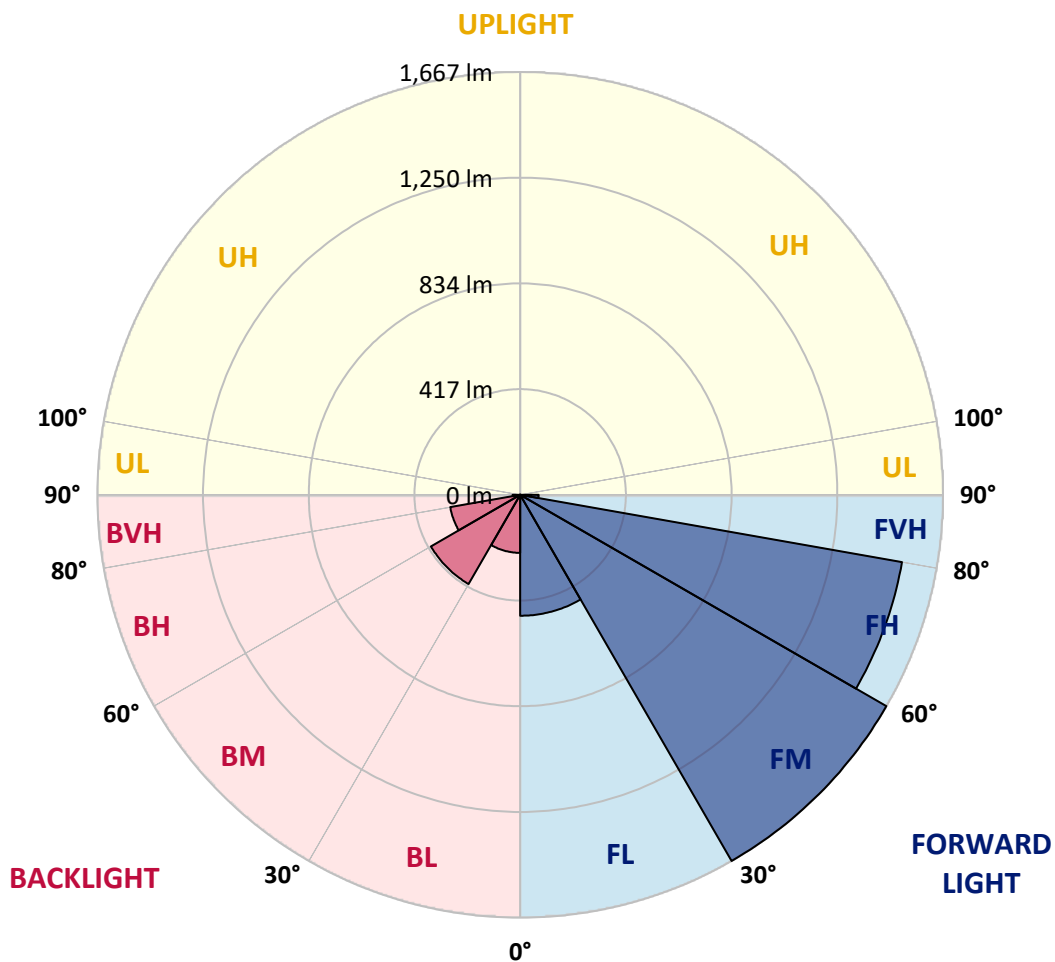
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	476.8	10.2			
FM	(30°-60°)	1667.1	35.5			
FH	(60°-80°)	1528.6	32.6			G1/1800
FVH	(80°-90°)	72.6	1.5			G1/100
BL	(0°-30°)	228.9	4.9	B1/500		
BM	(30°-60°)	406.2	8.7	B1/1000		
BH	(60°-80°)	279.9	6.0	B1/500		G1/500
BVH	(80°-90°)	30.0	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°	1620.3	1620.3	1620.3	1620.3	1620.3	1620.3	1620.3	1620.3	1620.3	1620.3	1620.3
2.5°	1664.8	1657.3	1682.9	1720.6	1746.2	1764.3	1770.3	1769.6	1764.3	1750.0	1719.8
5°	1590.9	1584.1	1636.1	1719.8	1793.0	1845.7	1860.8	1839.7	1813.3	1757.5	1683.6
7.5°	1450.7	1461.2	1527.6	1645.2	1762.8	1846.5	1866.9	1833.7	1779.4	1665.5	1541.1
10°	1344.3	1349.6	1424.3	1566.0	1691.2	1777.1	1812.6	1783.2	1712.3	1568.3	1424.3
12.5°	1278.8	1284.0	1356.4	1487.6	1621.1	1688.2	1698.7	1698.0	1639.2	1499.7	1333.0
15°	1287.8	1294.6	1367.0	1475.5	1550.9	1580.3	1581.1	1589.4	1572.1	1465.7	1311.2
17.5°	1375.3	1375.3	1444.6	1510.2	1492.9	1471.8	1487.6	1502.7	1532.8	1486.1	1355.7
20°	1513.2	1519.3	1583.4	1572.1	1466.5	1413.7	1394.9	1421.3	1514.7	1547.2	1460.5
22.5°	1662.5	1678.4	1745.5	1662.5	1462.0	1359.4	1338.3	1367.0	1517.0	1643.7	1604.5
25°	1827.7	1847.3	1892.5	1768.1	1475.5	1329.3	1314.9	1342.1	1523.0	1732.6	1759.8
27.5°	1978.4	1980.0	2024.4	1857.1	1511.0	1332.3	1308.2	1343.6	1539.6	1802.8	1897.0
30°	2085.5	2085.5	2105.1	1902.3	1554.7	1351.1	1314.2	1366.2	1563.0	1841.2	2021.4
32.5°	2183.5	2188.8	2179.0	1949.8	1596.2	1378.3	1328.5	1411.5	1599.9	1872.9	2117.2
35°	2307.9	2307.2	2263.5	1987.5	1634.6	1407.7	1364.0	1468.8	1653.5	1919.6	2208.4
37.5°	2461.8	2454.2	2361.5	2021.4	1681.4	1458.2	1431.1	1547.2	1725.1	1974.7	2323.8
40°	2601.2	2589.2	2451.2	2053.1	1718.3	1556.2	1540.4	1644.4	1815.6	2043.3	2436.1
42.5°	2709.8	2691.7	2527.3	2075.7	1774.1	1710.0	1723.6	1819.4	1906.8	2104.4	2506.2
45°	2801.0	2782.2	2584.6	2087.0	1909.1	1929.4	1955.8	2035.8	2004.1	2121.0	2549.2
47.5°	2866.6	2835.7	2609.5	2120.2	2091.5	2185.8	2267.2	2272.5	2141.3	2120.2	2575.6
50°	2905.1	2871.2	2632.9	2202.4	2303.4	2476.8	2563.5	2522.8	2283.8	2133.8	2613.3
52.5°	2982.8	2947.3	2730.2	2335.8	2520.6	2771.6	2818.4	2752.8	2431.6	2203.9	2688.7
55°	3178.0	3162.2	2918.7	2515.3	2733.9	3009.9	3031.0	2965.4	2586.2	2325.3	2832.7
57.5°	3398.9	3364.3	3173.5	2740.7	2938.3	3196.1	3230.1	3139.6	2748.3	2495.7	2993.3
60°	3460.8	3454.0	3389.1	3003.9	3149.4	3395.2	3397.4	3282.1	2937.5	2698.5	3238.4
62.5°	3370.3	3392.2	3478.9	3247.4	3326.6	3528.6	3509.8	3389.9	3135.8	3021.2	3536.2
65°	3212.7	3243.6	3417.8	3477.4	3367.3	3502.2	3462.3	3386.1	3261.0	3368.8	3720.9
67.5°	3023.5	3040.1	3242.9	3592.0	3224.8	3212.0	3193.1	3158.4	3211.2	3616.1	3752.6
70°	2826.7	2841.0	3028.0	3434.4	2797.3	2650.2	2634.4	2604.3	2810.1	3613.1	3597.2
72.5°	2382.6	2373.5	2546.2	2866.6	2136.0	1936.2	2070.4	2004.8	2273.3	3245.9	3204.4
75°	1480.1	1529.8	1746.2	2010.1	1463.5	1326.3	1511.7	1495.1	1845.7	2795.0	2551.5
77.5°	901.8	911.6	1033.7	1253.1	881.4	919.1	971.9	1074.4	1368.5	2265.7	1778.6
80°	472.0	438.8	528.5	687.6	523.3	616.8	712.5	825.6	868.6	1477.1	1189.0
82.5°	136.5	135.7	178.7	288.0	248.1	303.1	359.6	518.7	569.3	878.4	814.3
85°	0.8	0.8	0.8	1.5	2.3	3.8	15.8	133.5	176.4	407.2	334.8
87.5°	0.0	0.0	0.8	1.5	1.5	3.0	4.5	6.0	7.5	9.0	33.2
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):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1620.3	1620.3	1620.3	1620.3	1620.3	1620.3	1620.3	1620.3	1620.3	1620.3	1620.3
2.5°	1710.0	1698.7	1674.6	1642.2	1619.6	1580.3	1572.1	1547.2	1522.3	1501.9	1502.7
5°	1648.2	1609.8	1550.9	1483.1	1418.2	1360.2	1348.9	1314.9	1305.1	1295.3	1268.2
7.5°	1486.1	1440.9	1358.7	1258.4	1177.0	1121.9	1063.1	1027.7	996.0	959.8	968.9
10°	1361.7	1296.8	1183.8	1066.1	964.3	890.5	825.6	792.4	746.4	713.3	708.7
12.5°	1265.9	1195.8	1060.1	922.1	826.4	783.4	741.9	689.9	638.6	594.9	572.3
15°	1234.3	1155.1	997.5	860.3	784.9	732.9	674.8	615.2	552.7	505.9	487.8
17.5°	1271.2	1177.7	996.8	833.9	739.7	663.5	591.1	524.0	450.1	403.4	389.1
20°	1373.0	1256.1	1017.9	809.0	684.6	581.3	479.5	407.2	331.8	298.6	283.5
22.5°	1514.7	1362.4	1050.3	778.9	623.5	481.0	366.4	275.2	238.3	221.7	217.9
25°	1660.3	1497.4	1096.3	753.2	556.4	383.0	263.1	220.2	202.8	195.3	195.3
27.5°	1820.1	1632.4	1146.1	722.3	487.1	285.0	214.1	193.8	184.7	180.2	179.4
30°	1949.8	1742.5	1202.6	686.1	424.5	233.7	190.0	176.4	168.1	165.9	165.9
32.5°	2043.3	1824.6	1262.2	649.9	367.2	211.1	176.4	164.4	155.3	153.8	153.8
35°	2152.6	1903.0	1289.3	629.6	332.5	196.8	166.6	154.6	146.3	142.5	142.5
37.5°	2283.8	1996.5	1304.4	610.0	317.4	183.2	159.8	146.3	138.0	133.5	133.5
40°	2450.4	2102.9	1320.2	590.4	308.4	171.9	152.3	138.7	131.9	126.7	126.7
42.5°	2569.6	2200.9	1332.3	573.8	292.5	166.6	146.3	133.5	125.2	120.6	119.9
45°	2632.2	2292.1	1337.6	564.0	274.4	171.2	141.7	128.9	119.1	114.6	113.9
47.5°	2674.4	2367.5	1344.3	556.4	260.1	162.9	141.0	124.4	114.6	108.6	108.6
50°	2741.5	2467.0	1361.7	542.1	251.8	152.3	152.3	122.1	109.3	104.0	103.3
52.5°	2861.4	2609.5	1408.4	526.3	242.8	141.7	156.8	122.9	105.6	99.5	98.0
55°	3042.3	2836.5	1486.1	503.7	230.0	128.9	146.3	123.7	101.8	96.5	94.2
57.5°	3277.6	3110.9	1576.6	485.6	208.1	118.4	133.5	119.9	97.3	92.7	91.2
60°	3435.9	3294.1	1633.9	462.2	177.2	111.6	114.6	116.1	92.7	87.5	86.7
62.5°	3521.1	3297.2	1634.6	429.8	148.5	105.6	102.5	118.4	89.0	82.2	81.4
65°	3527.1	3136.6	1552.4	388.3	138.7	98.8	94.2	104.8	85.2	78.4	77.7
67.5°	3461.5	2874.9	1364.7	340.8	142.5	93.5	87.5	88.2	80.7	74.6	73.9
70°	3226.3	2536.4	1094.8	303.1	143.3	86.7	82.2	79.9	76.2	70.9	69.4
72.5°	2783.7	2119.4	829.4	291.0	145.5	81.4	76.2	73.9	70.9	66.4	64.8
75°	2100.6	1653.5	622.8	271.4	147.0	75.4	69.4	67.9	64.8	60.3	59.6
77.5°	1451.4	1226.0	432.8	229.2	131.2	68.6	62.6	61.1	58.8	54.3	53.5
80°	980.2	840.7	265.4	171.9	99.5	60.3	54.3	54.3	52.0	47.5	47.5
82.5°	682.4	628.1	153.1	112.3	72.4	49.8	47.5	47.5	45.2	40.7	40.0
85°	285.0	380.0	68.6	61.1	50.5	39.2	39.2	40.0	37.7	33.9	33.2
87.5°	9.8	40.7	27.1	28.7	30.2	27.1	30.2	30.2	29.4	26.4	25.6
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°	1620.3	1620.3	1620.3	1620.3	1620.3	1620.3	1620.3	1620.3	1620.3	1620.3	1620.3
2.5°	1480.8	1471.0	1440.9	1437.1	1414.5	1413.0	1422.8	1406.2	1407.7	1428.0	1425.0
5°	1274.2	1251.6	1250.9	1226.0	1198.1	1191.3	1167.2	1158.1	1154.3	1146.1	1176.2
7.5°	996.8	986.2	995.3	992.2	966.6	952.3	901.0	861.8	842.2	850.5	852.8
10°	708.7	724.6	748.7	772.1	754.0	706.5	684.6	652.9	649.2	646.9	662.0
12.5°	561.7	543.6	554.9	563.2	545.9	525.5	516.5	502.9	510.4	527.8	537.6
15°	466.7	435.0	420.7	410.9	415.4	403.4	407.9	403.4	408.7	413.9	432.0
17.5°	368.7	357.4	330.2	317.4	318.2	312.9	314.4	313.7	310.6	322.7	337.0
20°	277.5	274.4	268.4	259.4	260.9	257.1	254.8	242.0	236.8	240.5	252.6
22.5°	216.4	220.2	223.9	223.2	226.9	217.1	208.1	196.8	195.3	196.0	199.1
25°	193.8	195.3	198.3	202.1	204.3	195.3	182.5	175.7	174.9	176.4	176.4
27.5°	180.2	178.7	182.5	187.0	190.0	178.7	168.1	162.1	160.6	159.1	158.3
30°	165.9	165.9	168.9	173.4	175.7	165.9	156.8	150.8	147.0	144.8	144.0
32.5°	155.3	156.1	157.6	160.6	164.4	154.6	147.0	141.7	135.0	132.7	131.2
35°	143.3	146.3	148.5	149.3	152.3	145.5	138.0	129.7	123.7	121.4	121.4
37.5°	133.5	135.7	139.5	138.7	141.0	136.5	128.2	119.1	116.1	115.4	114.6
40°	125.9	125.9	128.9	131.9	135.0	126.7	116.9	112.3	110.1	108.6	109.3
42.5°	119.1	118.4	118.4	123.7	128.9	116.9	108.6	105.6	104.8	103.3	104.0
45°	113.1	112.3	110.1	112.3	119.9	107.1	101.8	99.5	98.8	98.8	98.8
47.5°	107.8	106.3	103.3	104.0	109.3	99.5	95.0	94.2	93.5	93.5	94.2
50°	101.8	100.3	98.0	97.3	98.8	94.2	90.5	89.0	89.0	89.0	90.5
52.5°	96.5	95.8	92.7	92.0	92.7	89.7	86.0	85.2	85.2	85.2	87.5
55°	92.7	91.2	89.7	88.2	89.7	86.0	82.9	81.4	81.4	82.9	84.4
57.5°	89.0	87.5	86.7	85.2	86.7	82.9	79.9	78.4	79.2	79.9	79.9
60°	85.2	83.7	82.9	81.4	83.7	79.9	76.9	76.2	76.2	75.4	75.4
62.5°	81.4	80.7	79.2	77.7	80.7	76.2	73.9	72.4	71.6	71.6	71.6
65°	76.9	76.2	75.4	74.6	76.2	72.4	70.1	69.4	67.9	67.1	67.9
67.5°	73.1	73.1	71.6	70.1	72.4	67.9	66.4	65.6	63.3	62.6	63.3
70°	68.6	68.6	67.1	66.4	69.4	63.3	61.8	61.1	59.6	58.8	58.8
72.5°	64.1	64.1	62.6	61.8	65.6	58.8	57.3	56.5	54.3	53.5	53.5
75°	59.6	58.8	58.1	57.3	61.8	54.3	52.0	50.5	48.3	47.5	46.7
77.5°	54.3	53.5	52.0	52.8	55.8	48.3	45.2	44.5	42.2	41.5	40.7
80°	47.5	46.7	46.0	47.5	47.5	42.2	38.5	36.9	34.7	33.2	32.4
82.5°	40.7	40.0	40.0	41.5	39.2	36.9	32.4	29.4	25.6	23.4	22.6
85°	33.2	34.7	33.2	34.7	29.4	29.4	22.6	17.3	12.1	9.8	9.0
87.5°	25.6	26.4	25.6	26.4	20.4	19.6	10.6	6.0	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°	1620.3	1620.3	1620.3	1620.3	1620.3	1620.3	1620.3	1620.3	1620.3	1620.3
2.5°	1447.6	1449.2	1481.6	1514.0	1533.6	1582.6	1606.7	1633.9	1648.2	1664.8
5°	1161.9	1190.5	1216.9	1281.8	1314.9	1392.6	1449.2	1539.6	1568.3	1590.9
7.5°	877.6	920.6	953.0	1033.7	1096.3	1192.8	1291.6	1399.4	1430.3	1450.7
10°	697.4	736.6	797.7	861.0	931.2	1048.0	1155.1	1266.7	1321.0	1344.3
12.5°	585.8	648.4	720.1	778.9	834.7	920.6	1056.3	1197.3	1253.9	1278.8
15°	483.3	553.4	626.6	698.9	768.3	865.6	1008.1	1191.3	1262.9	1287.8
17.5°	383.8	441.1	515.0	602.4	703.5	827.1	1017.1	1255.4	1342.8	1375.3
20°	272.9	328.7	404.1	512.0	631.8	787.2	1038.2	1351.9	1476.3	1513.2
22.5°	205.8	236.8	306.1	412.4	567.7	755.5	1071.4	1483.8	1629.4	1662.5
25°	181.0	191.5	226.9	329.5	503.7	726.8	1115.1	1615.0	1791.5	1827.7
27.5°	160.6	166.6	184.7	264.6	456.2	697.4	1167.2	1756.8	1930.9	1978.4
30°	144.8	152.3	167.4	221.7	410.2	655.2	1214.7	1884.2	2049.3	2085.5
32.5°	132.7	141.0	154.6	200.6	371.0	623.5	1241.8	1979.2	2150.4	2183.5
35°	124.4	131.9	145.5	181.7	336.3	601.7	1250.1	2073.4	2274.0	2307.9
37.5°	116.9	124.4	136.5	162.9	312.1	573.0	1262.9	2185.8	2417.3	2461.8
40°	111.6	117.6	128.9	150.0	279.0	542.1	1278.0	2317.0	2556.8	2601.2
42.5°	106.3	113.1	122.9	150.8	245.8	515.7	1287.8	2418.0	2667.6	2709.8
45°	101.8	109.3	120.6	147.8	220.9	491.6	1283.3	2502.5	2768.6	2801.0
47.5°	97.3	106.3	126.7	141.7	213.4	469.7	1287.0	2583.9	2841.0	2866.6
50°	94.2	105.6	135.7	132.7	214.9	459.9	1323.2	2681.2	2895.3	2905.1
52.5°	92.0	107.8	128.2	119.9	214.9	455.4	1392.6	2838.0	2989.5	2982.8
55°	88.2	107.1	119.9	108.6	205.8	457.7	1458.2	3045.3	3215.7	3178.0
57.5°	85.2	102.5	107.8	100.3	184.7	458.4	1555.5	3220.3	3393.7	3398.9
60°	81.4	110.1	93.5	93.5	158.3	454.7	1641.4	3217.2	3426.1	3460.8
62.5°	77.7	107.8	83.7	86.7	140.2	440.3	1693.4	3029.5	3306.2	3370.3
65°	73.1	85.2	76.9	80.7	132.7	404.9	1619.6	2796.5	3144.1	3212.7
67.5°	67.9	70.1	70.1	74.6	129.7	351.4	1433.3	2539.4	2940.5	3023.5
70°	61.8	62.6	64.1	70.9	120.6	302.3	1167.2	2265.7	2721.9	2826.7
72.5°	55.8	56.5	56.5	64.1	113.1	260.9	826.4	1795.2	2272.5	2382.6
75°	49.0	49.8	49.0	55.8	98.8	195.3	490.8	1135.5	1355.7	1480.1
77.5°	41.5	41.5	40.0	43.7	67.9	123.7	268.4	689.9	824.9	901.8
80°	33.9	30.9	25.6	26.4	36.9	70.9	119.9	395.8	452.4	472.0
82.5°	22.6	17.3	10.6	9.8	12.1	19.6	27.9	156.8	144.0	136.5
85°	4.5	1.5	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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