

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: P401618

Luminaire Tested: **ENV-SA1E-727-U-SLL**

Issue Date: 5/20/2020

Test Information

Test Method: LM-79-08
Report Number: P401618
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: ENV-SA1E-727-U-SLL
Description: ENTRI LED LUMINAIRE
(1) 70 CRI, 2700K, 1050mA LIGHTSQUARE WITH 16 LEDS AND SPILL LIGHT ELIMINATOR LEFT 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 III - Medium - Non-Cutoff
BUG Rating: B1 - U0 - G1

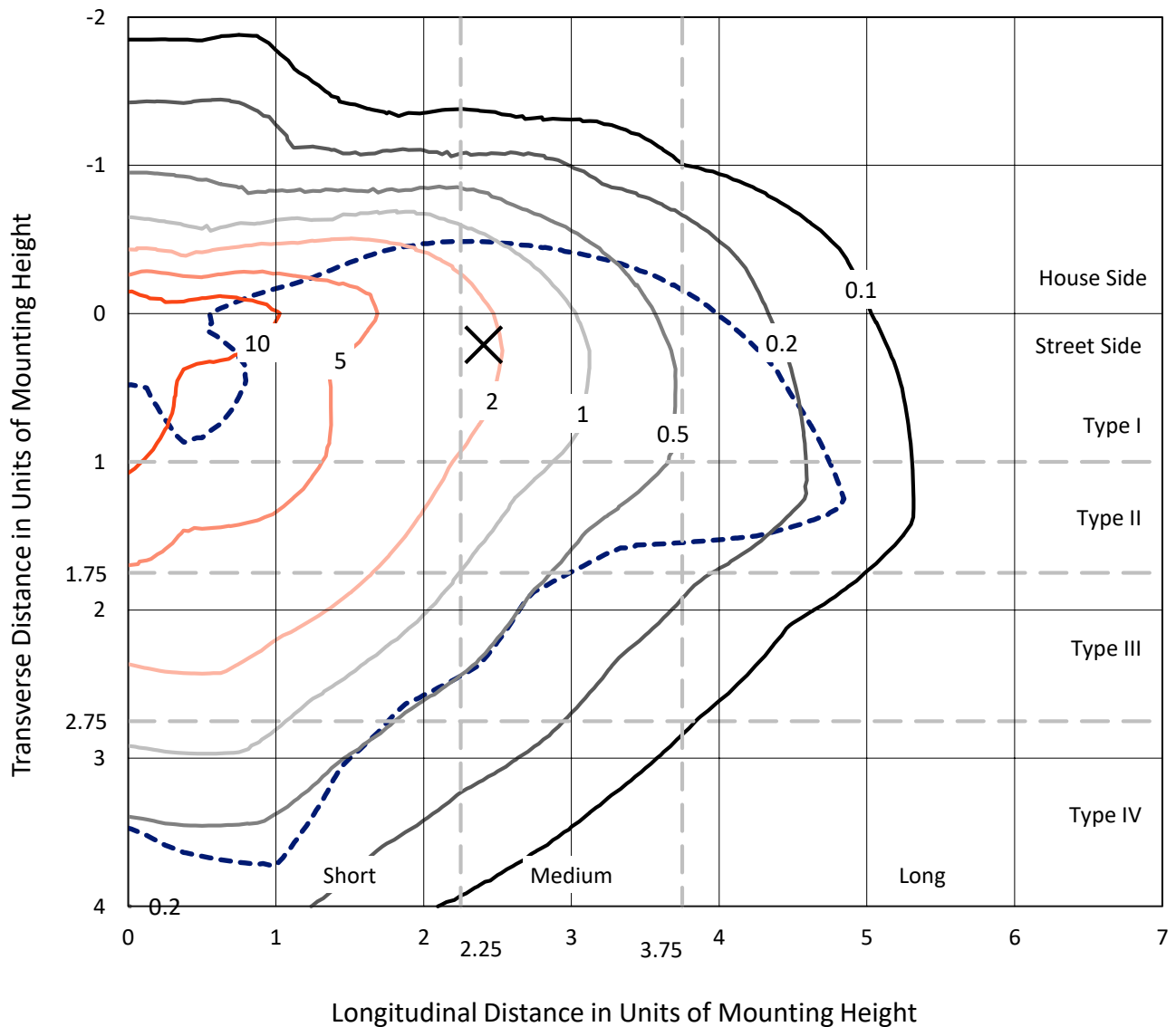
Input Watts (W): 57.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

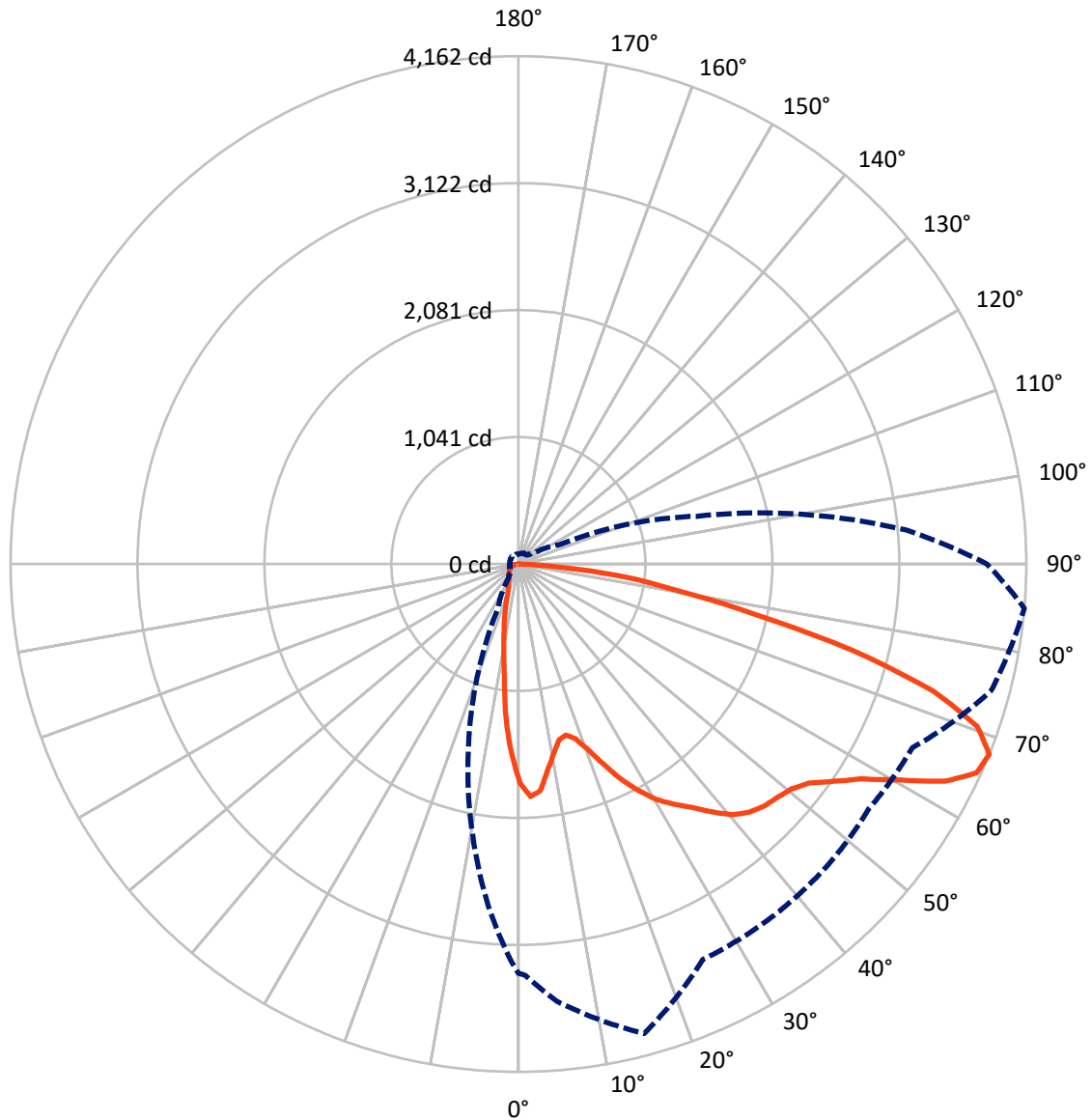
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 19.2 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	1048.1	0.0	1048.1
	% Fixture	20.1	0.0	20.1
Street Side	Lumens	4153.9	0.0	4153.9
	% Fixture	79.9	0.0	79.9
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°	136.7	2.6
10°-20°	269.5	5.2
20°-30°	376.5	7.2
30°-40°	530.8	10.2
40°-50°	735.5	14.1
50°-60°	1033.5	19.9
60°-70°	1263.4	24.3
70°-80°	742.5	14.3
80°-90°	113.7	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°	5202.0	100.0
0°-180°	5202.0	100.0



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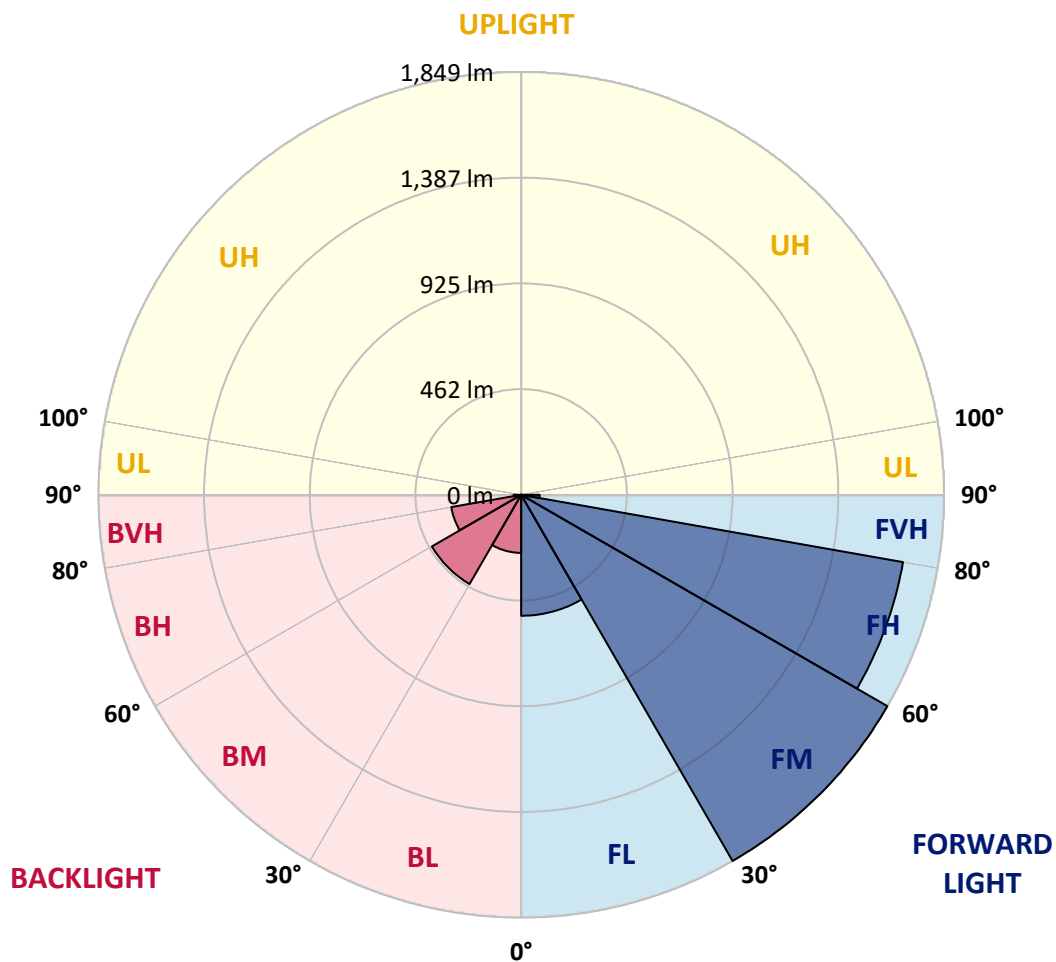
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	528.8	10.2			
FM	(30°-60°)	1849.1	35.5			
FH	(60°-80°)	1695.5	32.6			G1/1800
FVH	(80°-90°)	80.5	1.5			G1/100
BL	(0°-30°)	253.8	4.9	B1/500		
BM	(30°-60°)	450.6	8.7	B1/1000		
BH	(60°-80°)	310.5	6.0	B1/500		G1/500
BVH	(80°-90°)	33.2	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°	1797.2	1797.2	1797.2	1797.2	1797.2	1797.2	1797.2	1797.2	1797.2	1797.2	1797.2
2.5°	1846.5	1838.2	1866.6	1908.4	1936.9	1956.9	1963.6	1962.8	1956.9	1941.0	1907.6
5°	1764.6	1757.1	1814.8	1907.6	1988.7	2047.2	2064.0	2040.6	2011.3	1949.4	1867.4
7.5°	1609.0	1620.7	1694.3	1824.8	1955.3	2048.1	2070.7	2033.9	1973.7	1847.4	1709.4
10°	1491.1	1497.0	1579.8	1737.0	1875.8	1971.1	2010.4	1977.8	1899.2	1739.5	1579.8
12.5°	1418.4	1424.2	1504.5	1650.0	1798.0	1872.5	1884.2	1883.3	1818.1	1663.4	1478.6
15°	1428.4	1435.9	1516.2	1636.6	1720.3	1752.9	1753.7	1762.9	1743.7	1625.8	1454.3
17.5°	1525.4	1525.4	1602.3	1675.1	1655.9	1632.4	1650.0	1666.7	1700.2	1648.3	1503.7
20°	1678.4	1685.1	1756.2	1743.7	1626.6	1568.0	1547.1	1576.4	1680.1	1716.1	1619.9
22.5°	1844.0	1861.6	1936.0	1844.0	1621.6	1507.8	1484.4	1516.2	1682.6	1823.1	1779.6
25°	2027.2	2048.9	2099.1	1961.1	1636.6	1474.4	1458.5	1488.6	1689.3	1921.8	1951.9
27.5°	2194.4	2196.1	2245.4	2059.8	1675.9	1477.7	1451.0	1490.3	1707.7	1999.6	2104.1
30°	2313.2	2313.2	2334.9	2110.0	1724.4	1498.6	1457.7	1515.4	1733.6	2042.2	2242.1
32.5°	2421.9	2427.8	2416.9	2162.7	1770.4	1528.7	1473.5	1565.5	1774.6	2077.4	2348.3
35°	2559.9	2559.1	2510.6	2204.5	1813.1	1561.4	1512.9	1629.1	1834.0	2129.2	2449.5
37.5°	2730.5	2722.1	2619.3	2242.1	1864.9	1617.4	1587.3	1716.1	1913.4	2190.3	2577.5
40°	2885.2	2871.8	2718.8	2277.2	1905.9	1726.1	1708.5	1824.0	2013.8	2266.4	2702.1
42.5°	3005.6	2985.6	2803.3	2302.3	1967.8	1896.7	1911.8	2018.0	2115.0	2334.1	2779.8
45°	3106.8	3085.9	2866.8	2314.9	2117.5	2140.1	2169.3	2258.0	2222.9	2352.5	2827.5
47.5°	3179.6	3145.3	2894.4	2351.7	2319.9	2424.4	2514.7	2520.6	2375.1	2351.7	2856.8
50°	3222.2	3184.6	2920.3	2442.8	2554.9	2747.2	2843.4	2798.2	2533.1	2366.7	2898.6
52.5°	3308.4	3269.1	3028.2	2590.8	2795.7	3074.2	3126.1	3053.3	2697.0	2444.5	2982.2
55°	3525.0	3507.4	3237.3	2789.9	3032.4	3338.5	3361.9	3289.1	2868.5	2579.1	3142.0
57.5°	3770.0	3731.5	3520.0	3039.9	3259.0	3545.0	3582.7	3482.3	3048.3	2768.1	3320.1
60°	3838.6	3831.1	3759.1	3331.8	3493.2	3765.8	3768.3	3640.4	3258.2	2993.1	3591.9
62.5°	3738.2	3762.5	3858.7	3601.9	3689.7	3913.8	3892.9	3760.0	3478.1	3351.0	3922.2
65°	3563.4	3597.7	3790.9	3857.0	3734.9	3884.6	3840.3	3755.8	3617.0	3736.6	4127.1
67.5°	3353.5	3371.9	3596.9	3984.1	3576.8	3562.6	3541.7	3503.2	3561.8	4010.9	4162.2
70°	3135.3	3151.2	3358.6	3809.3	3102.6	2939.6	2922.0	2888.6	3116.9	4007.5	3990.0
72.5°	2642.7	2632.6	2824.2	3179.6	2369.2	2147.6	2296.5	2223.7	2521.4	3600.2	3554.2
75°	1641.6	1696.8	1936.9	2229.6	1623.2	1471.0	1676.8	1658.4	2047.2	3100.1	2830.0
77.5°	1000.2	1011.1	1146.6	1389.9	977.6	1019.4	1078.0	1191.7	1517.9	2513.1	1972.8
80°	523.5	486.7	586.2	762.7	580.4	684.1	790.3	915.7	963.4	1638.3	1318.8
82.5°	151.4	150.5	198.2	319.5	275.1	336.2	398.9	575.4	631.4	974.3	903.2
85°	0.8	0.8	0.8	1.7	2.5	4.2	17.6	148.0	195.7	451.6	371.3
87.5°	0.0	0.0	0.8	1.7	1.7	3.3	5.0	6.7	8.4	10.0	36.8
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°	1797.2	1797.2	1797.2	1797.2	1797.2	1797.2	1797.2	1797.2	1797.2	1797.2	1797.2
2.5°	1896.7	1884.2	1857.4	1821.4	1796.4	1752.9	1743.7	1716.1	1688.5	1665.9	1666.7
5°	1828.1	1785.5	1720.3	1645.0	1573.1	1508.7	1496.1	1458.5	1447.6	1436.8	1406.6
7.5°	1648.3	1598.2	1507.0	1395.8	1305.5	1244.4	1179.2	1139.9	1104.7	1064.6	1074.6
10°	1510.3	1438.4	1313.0	1182.5	1069.6	987.7	915.7	878.9	827.9	791.1	786.1
12.5°	1404.1	1326.4	1175.8	1022.8	916.6	868.9	822.9	765.2	708.3	659.8	634.7
15°	1369.0	1281.2	1106.4	954.2	870.6	812.9	748.5	682.4	613.0	561.2	541.1
17.5°	1410.0	1306.3	1105.6	924.9	820.4	735.9	655.7	581.2	499.3	447.4	431.5
20°	1522.9	1393.3	1129.0	897.3	759.4	644.8	531.9	451.6	368.0	331.2	314.4
22.5°	1680.1	1511.2	1165.0	863.9	691.6	533.6	406.4	305.2	264.3	245.9	241.7
25°	1841.5	1660.9	1216.0	835.5	617.2	424.8	291.9	244.2	225.0	216.6	216.6
27.5°	2018.8	1810.6	1271.2	801.2	540.2	316.1	237.5	214.9	204.9	199.9	199.0
30°	2162.7	1932.7	1333.9	761.0	470.8	259.3	210.7	195.7	186.5	184.0	184.0
32.5°	2266.4	2023.8	1400.0	720.9	407.3	234.2	195.7	182.3	172.3	170.6	170.6
35°	2387.6	2110.8	1430.1	698.3	368.8	218.3	184.8	171.4	162.2	158.1	158.1
37.5°	2533.1	2214.5	1446.8	676.6	352.1	203.2	177.3	162.2	153.0	148.0	148.0
40°	2718.0	2332.4	1464.3	654.8	342.0	190.7	168.9	153.9	146.4	140.5	140.5
42.5°	2850.1	2441.1	1477.7	636.4	324.5	184.8	162.2	148.0	138.8	133.8	133.0
45°	2919.5	2542.3	1483.6	625.5	304.4	189.8	157.2	143.0	132.1	127.1	126.3
47.5°	2966.3	2626.0	1491.1	617.2	288.5	180.6	156.4	138.0	127.1	120.4	120.4
50°	3040.8	2736.3	1510.3	601.3	279.3	168.9	168.9	135.5	121.3	115.4	114.6
52.5°	3173.7	2894.4	1562.2	583.7	269.3	157.2	173.9	136.3	117.1	110.4	108.7
55°	3374.4	3146.1	1648.3	558.6	255.1	143.0	162.2	137.2	112.9	107.0	104.5
57.5°	3635.4	3450.5	1748.7	538.6	230.8	131.3	148.0	133.0	107.9	102.9	101.2
60°	3811.0	3653.8	1812.2	512.6	196.5	123.8	127.1	128.8	102.9	97.0	96.2
62.5°	3905.5	3657.1	1813.1	476.7	164.7	117.1	113.7	131.3	98.7	91.2	90.3
65°	3912.2	3479.0	1721.9	430.7	153.9	109.6	104.5	116.2	94.5	87.0	86.1
67.5°	3839.4	3188.8	1513.7	378.0	158.1	103.7	97.0	97.8	89.5	82.8	82.0
70°	3578.5	2813.3	1214.3	336.2	158.9	96.2	91.2	88.6	84.5	78.6	76.9
72.5°	3087.6	2350.8	919.9	322.8	161.4	90.3	84.5	82.0	78.6	73.6	71.9
75°	2329.9	1834.0	690.8	301.1	163.1	83.6	76.9	75.3	71.9	66.9	66.1
77.5°	1609.9	1359.8	480.0	254.2	145.5	76.1	69.4	67.7	65.2	60.2	59.4
80°	1087.2	932.5	294.4	190.7	110.4	66.9	60.2	60.2	57.7	52.7	52.7
82.5°	756.8	696.6	169.8	124.6	80.3	55.2	52.7	52.7	50.2	45.2	44.3
85°	316.1	421.5	76.1	67.7	56.0	43.5	43.5	44.3	41.8	37.6	36.8
87.5°	10.9	45.2	30.1	31.8	33.5	30.1	33.5	33.5	32.6	29.3	28.4
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°	1797.2	1797.2	1797.2	1797.2	1797.2	1797.2	1797.2	1797.2	1797.2	1797.2	1797.2
2.5°	1642.5	1631.6	1598.2	1594.0	1568.9	1567.2	1578.1	1559.7	1561.4	1583.9	1580.6
5°	1413.3	1388.2	1387.4	1359.8	1328.9	1321.3	1294.6	1284.5	1280.4	1271.2	1304.6
7.5°	1105.6	1093.9	1103.9	1100.6	1072.1	1056.2	999.4	955.9	934.1	943.3	945.8
10°	786.1	803.7	830.4	856.4	836.3	783.6	759.4	724.2	720.0	717.5	734.3
12.5°	623.0	603.0	615.5	624.7	605.5	582.9	572.9	557.8	566.2	585.4	596.3
15°	517.7	482.5	466.7	455.8	460.8	447.4	452.4	447.4	453.3	459.1	479.2
17.5°	408.9	396.4	366.3	352.1	352.9	347.1	348.7	347.9	344.6	357.9	373.8
20°	307.8	304.4	297.7	287.7	289.4	285.2	282.7	268.4	262.6	266.8	280.2
22.5°	240.0	244.2	248.4	247.5	251.7	240.9	230.8	218.3	216.6	217.4	220.8
25°	214.9	216.6	219.9	224.1	226.6	216.6	202.4	194.9	194.0	195.7	195.7
27.5°	199.9	198.2	202.4	207.4	210.7	198.2	186.5	179.8	178.1	176.5	175.6
30°	184.0	184.0	187.3	192.3	194.9	184.0	173.9	167.3	163.1	160.6	159.7
32.5°	172.3	173.1	174.8	178.1	182.3	171.4	163.1	157.2	149.7	147.2	145.5
35°	158.9	162.2	164.7	165.6	168.9	161.4	153.0	143.8	137.2	134.6	134.6
37.5°	148.0	150.5	154.7	153.9	156.4	151.4	142.2	132.1	128.8	128.0	127.1
40°	139.7	139.7	143.0	146.4	149.7	140.5	129.6	124.6	122.1	120.4	121.3
42.5°	132.1	131.3	131.3	137.2	143.0	129.6	120.4	117.1	116.2	114.6	115.4
45°	125.4	124.6	122.1	124.6	133.0	118.8	112.9	110.4	109.6	109.6	109.6
47.5°	119.6	117.9	114.6	115.4	121.3	110.4	105.4	104.5	103.7	103.7	104.5
50°	112.9	111.2	108.7	107.9	109.6	104.5	100.4	98.7	98.7	98.7	100.4
52.5°	107.0	106.2	102.9	102.0	102.9	99.5	95.3	94.5	94.5	94.5	97.0
55°	102.9	101.2	99.5	97.8	99.5	95.3	92.0	90.3	90.3	92.0	93.7
57.5°	98.7	97.0	96.2	94.5	96.2	92.0	88.6	87.0	87.8	88.6	88.6
60°	94.5	92.8	92.0	90.3	92.8	88.6	85.3	84.5	84.5	83.6	83.6
62.5°	90.3	89.5	87.8	86.1	89.5	84.5	82.0	80.3	79.4	79.4	79.4
65°	85.3	84.5	83.6	82.8	84.5	80.3	77.8	76.9	75.3	74.4	75.3
67.5°	81.1	81.1	79.4	77.8	80.3	75.3	73.6	72.8	70.2	69.4	70.2
70°	76.1	76.1	74.4	73.6	76.9	70.2	68.6	67.7	66.1	65.2	65.2
72.5°	71.1	71.1	69.4	68.6	72.8	65.2	63.6	62.7	60.2	59.4	59.4
75°	66.1	65.2	64.4	63.6	68.6	60.2	57.7	56.0	53.5	52.7	51.9
77.5°	60.2	59.4	57.7	58.5	61.9	53.5	50.2	49.3	46.8	46.0	45.2
80°	52.7	51.9	51.0	52.7	52.7	46.8	42.7	41.0	38.5	36.8	36.0
82.5°	45.2	44.3	44.3	46.0	43.5	41.0	36.0	32.6	28.4	25.9	25.1
85°	36.8	38.5	36.8	38.5	32.6	32.6	25.1	19.2	13.4	10.9	10.0
87.5°	28.4	29.3	28.4	29.3	22.6	21.7	11.7	6.7	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°	1797.2	1797.2	1797.2	1797.2	1797.2	1797.2	1797.2	1797.2	1797.2	1797.2
2.5°	1605.7	1607.4	1643.3	1679.3	1701.0	1755.4	1782.1	1812.2	1828.1	1846.5
5°	1288.7	1320.5	1349.8	1421.7	1458.5	1544.6	1607.4	1707.7	1739.5	1764.6
7.5°	973.4	1021.1	1057.1	1146.6	1216.0	1323.0	1432.6	1552.2	1586.4	1609.0
10°	773.6	817.1	884.8	955.0	1032.8	1162.4	1281.2	1405.0	1465.2	1491.1
12.5°	649.8	719.2	798.7	863.9	925.8	1021.1	1171.6	1328.0	1390.8	1418.4
15°	536.1	613.8	695.0	775.2	852.2	960.1	1118.1	1321.3	1400.8	1428.4
17.5°	425.7	489.2	571.2	668.2	780.3	917.4	1128.2	1392.4	1489.4	1525.4
20°	302.7	364.6	448.3	567.8	700.8	873.1	1151.6	1499.5	1637.5	1678.4
22.5°	228.3	262.6	339.5	457.5	629.7	838.0	1188.4	1645.8	1807.2	1844.0
25°	200.7	212.4	251.7	365.5	558.6	806.2	1236.9	1791.3	1987.0	2027.2
27.5°	178.1	184.8	204.9	293.5	506.0	773.6	1294.6	1948.6	2141.7	2194.4
30°	160.6	168.9	185.7	245.9	454.9	726.7	1347.3	2089.9	2273.0	2313.2
32.5°	147.2	156.4	171.4	222.5	411.5	691.6	1377.4	2195.3	2385.1	2421.9
35°	138.0	146.4	161.4	201.5	373.0	667.4	1386.6	2299.8	2522.3	2559.9
37.5°	129.6	138.0	151.4	180.6	346.2	635.6	1400.8	2424.4	2681.2	2730.5
40°	123.8	130.5	143.0	166.4	309.4	601.3	1417.5	2569.9	2835.9	2885.2
42.5°	117.9	125.4	136.3	167.3	272.6	572.0	1428.4	2682.0	2958.8	3005.6
45°	112.9	121.3	133.8	163.9	245.0	545.3	1423.4	2775.7	3070.9	3106.8
47.5°	107.9	117.9	140.5	157.2	236.7	521.0	1427.6	2866.0	3151.2	3179.6
50°	104.5	117.1	150.5	147.2	238.3	510.1	1467.7	2973.9	3211.4	3222.2
52.5°	102.0	119.6	142.2	133.0	238.3	505.1	1544.6	3147.8	3315.9	3308.4
55°	97.8	118.8	133.0	120.4	228.3	507.6	1617.4	3377.8	3566.8	3525.0
57.5°	94.5	113.7	119.6	111.2	204.9	508.5	1725.3	3571.8	3764.2	3770.0
60°	90.3	122.1	103.7	103.7	175.6	504.3	1820.6	3568.5	3800.1	3838.6
62.5°	86.1	119.6	92.8	96.2	155.6	488.4	1878.3	3360.2	3667.1	3738.2
65°	81.1	94.5	85.3	89.5	147.2	449.1	1796.4	3101.8	3487.3	3563.4
67.5°	75.3	77.8	77.8	82.8	143.8	389.7	1589.8	2816.6	3261.5	3353.5
70°	68.6	69.4	71.1	78.6	133.8	335.4	1294.6	2513.1	3019.0	3135.3
72.5°	61.9	62.7	62.7	71.1	125.4	289.4	916.6	1991.2	2520.6	2642.7
75°	54.4	55.2	54.4	61.9	109.6	216.6	544.4	1259.5	1503.7	1641.6
77.5°	46.0	46.0	44.3	48.5	75.3	137.2	297.7	765.2	914.9	1000.2
80°	37.6	34.3	28.4	29.3	41.0	78.6	133.0	439.1	501.8	523.5
82.5°	25.1	19.2	11.7	10.9	13.4	21.7	30.9	173.9	159.7	151.4
85°	5.0	1.7	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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