

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: P401762

Luminaire Tested: **ENT-SA1E-830-U-SLL**

Issue Date: 5/20/2020

Test Information

Test Method: LM-79-08
Report Number: P401762
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-SA1E-830-U-SLL
Description: ENTRI LED LUMINAIRE
(1) 80 CRI, 3000K, 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: 4943 lumens
Efficiency: N/A
Efficacy: 86.4 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

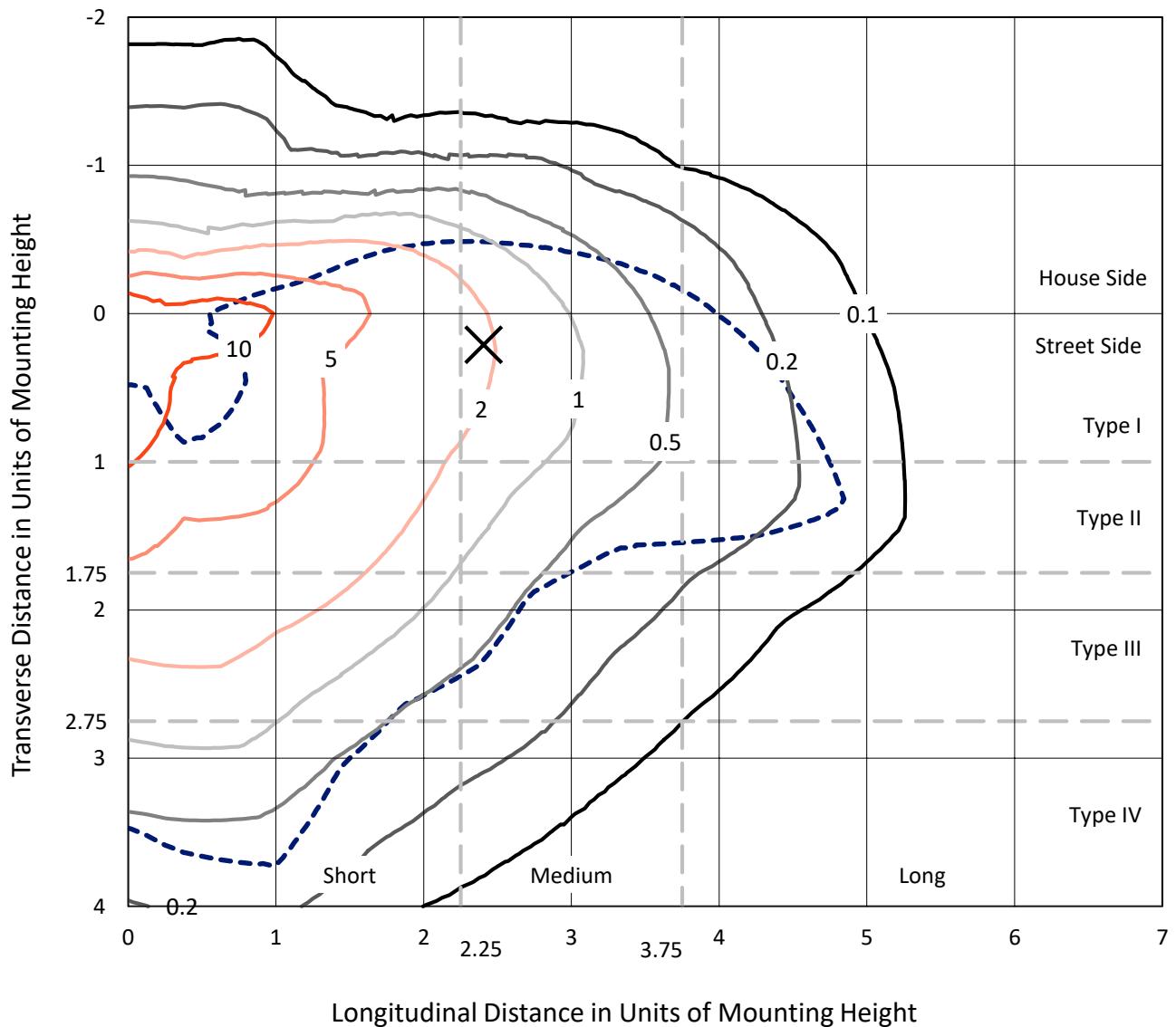
Input Watts (W): 57.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

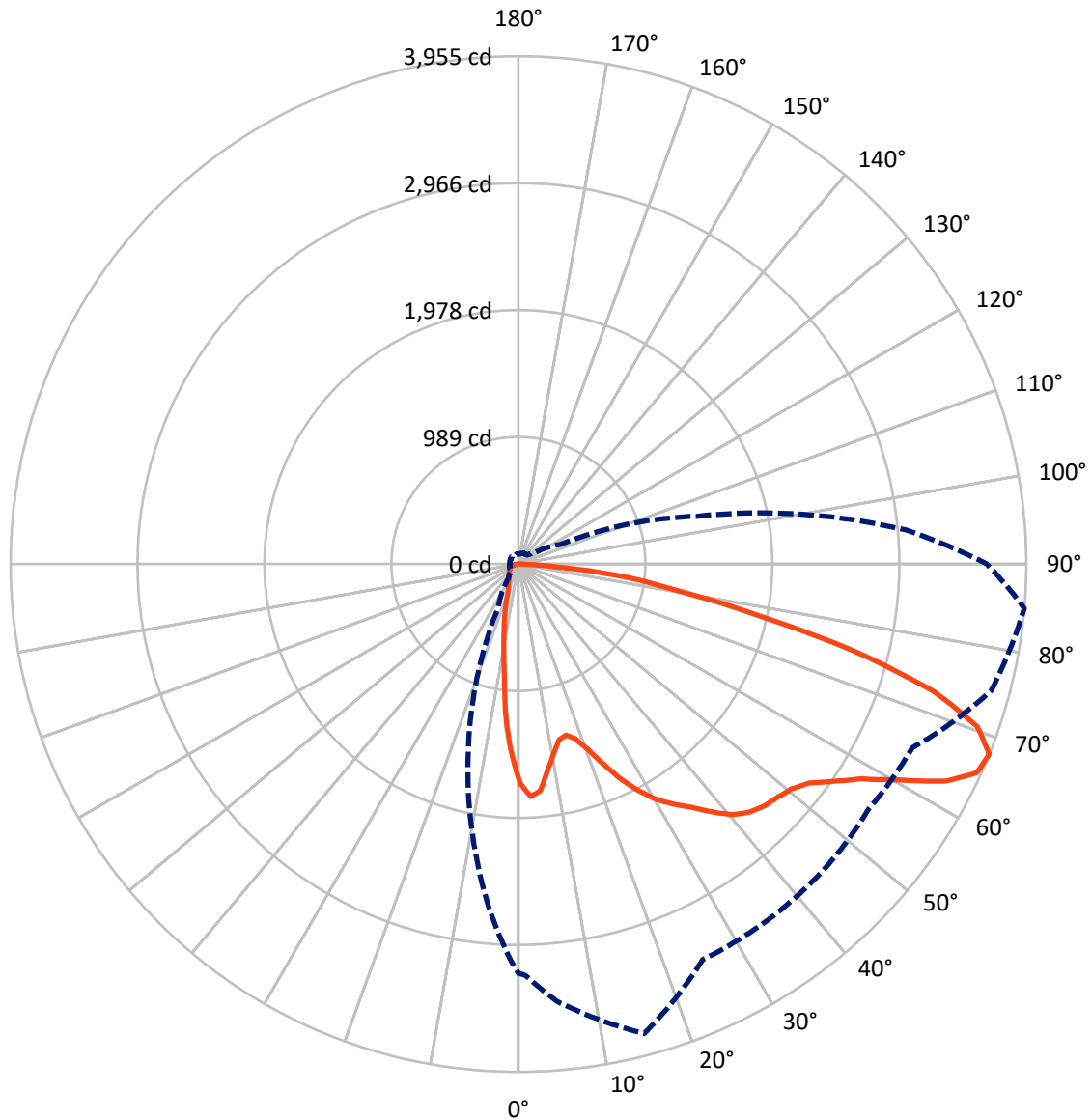
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 18.2 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	995.9	0.0	995.9
	% Fixture	20.1	0.0	20.1
Street Side	Lumens	3947.1	0.0	3947.1
	% Fixture	79.9	0.0	79.9
Total	Lumens	4943.0	0.0	4943.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	129.8	2.6
10°-20°	256.1	5.2
20°-30°	357.8	7.2
30°-40°	504.3	10.2
40°-50°	698.8	14.1
50°-60°	982.0	19.9
60°-70°	1200.5	24.3
70°-80°	705.6	14.3
80°-90°	108.0	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°	4943.0	100.0
0°-180°	4943.0	100.0



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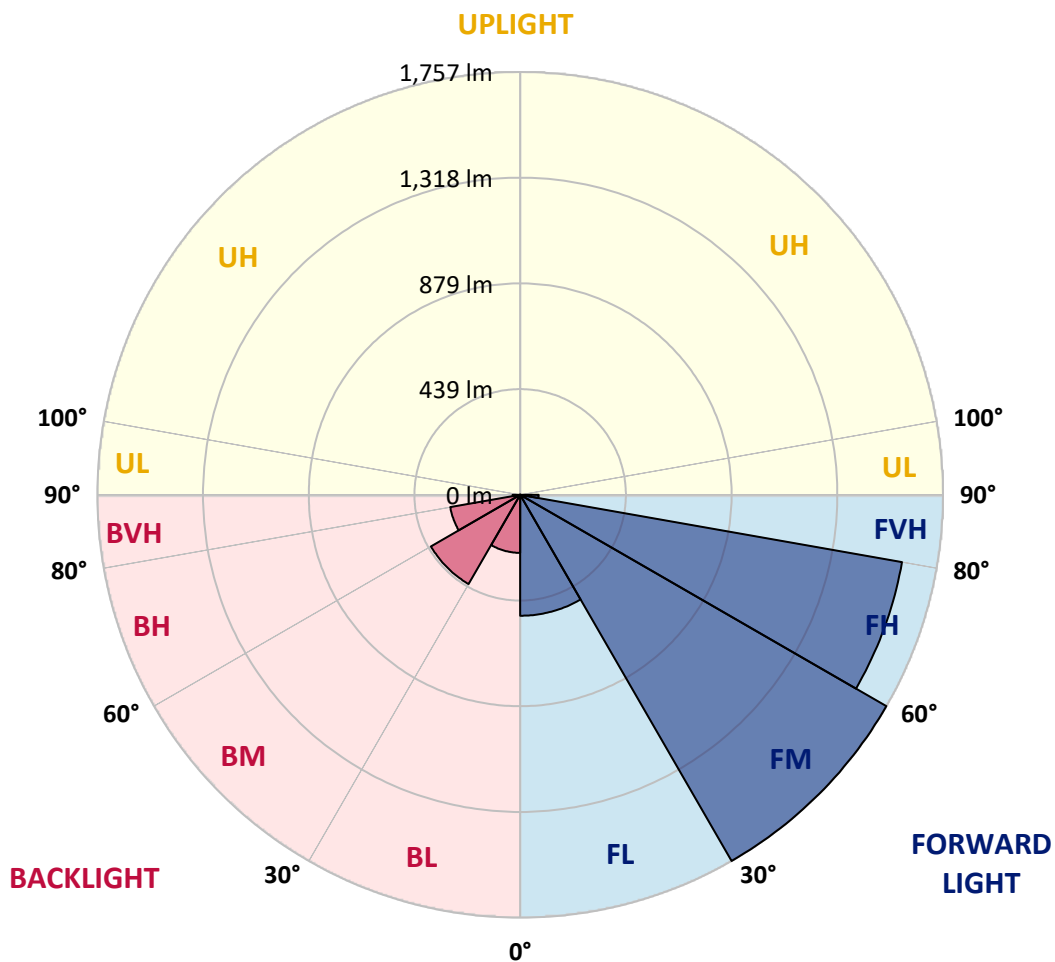
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	502.5	10.2			
FM	(30°-60°)	1757.0	35.5			
FH	(60°-80°)	1611.1	32.6			G1/1800
FVH	(80°-90°)	76.5	1.5			G1/100
BL	(0°-30°)	241.2	4.9	B1/500		
BM	(30°-60°)	428.1	8.7	B1/1000		
BH	(60°-80°)	295.0	6.0	B1/500		G1/500
BVH	(80°-90°)	31.6	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°	1707.7	1707.7	1707.7	1707.7	1707.7	1707.7	1707.7	1707.7	1707.7	1707.7	1707.7
2.5°	1754.6	1746.7	1773.7	1813.4	1840.4	1859.5	1865.8	1865.1	1859.5	1844.4	1812.6
5°	1676.7	1669.6	1724.4	1812.6	1889.7	1945.3	1961.2	1939.0	1911.1	1852.3	1774.5
7.5°	1528.9	1540.0	1610.0	1733.9	1857.9	1946.1	1967.6	1932.6	1875.4	1755.4	1624.3
10°	1416.9	1422.4	1501.1	1650.5	1782.4	1873.0	1910.4	1879.4	1804.7	1652.9	1501.1
12.5°	1347.7	1353.3	1429.6	1567.9	1708.5	1779.2	1790.4	1789.6	1727.6	1580.6	1404.9
15°	1357.3	1364.4	1440.7	1555.1	1634.6	1665.6	1666.4	1675.1	1656.9	1544.8	1381.9
17.5°	1449.5	1449.5	1522.6	1591.7	1573.4	1551.2	1567.9	1583.7	1615.5	1566.3	1428.8
20°	1594.9	1601.2	1668.8	1656.9	1545.6	1490.0	1470.1	1497.9	1596.5	1630.6	1539.2
22.5°	1752.2	1768.9	1839.6	1752.2	1540.8	1432.8	1410.5	1440.7	1598.8	1732.3	1691.0
25°	1926.2	1946.9	1994.6	1863.5	1555.1	1401.0	1385.9	1414.5	1605.2	1826.1	1854.7
27.5°	2085.2	2086.8	2133.6	1957.2	1592.5	1404.2	1378.7	1416.1	1622.7	1900.0	1999.4
30°	2198.0	2198.0	2218.7	2004.9	1638.6	1424.0	1385.1	1439.9	1647.3	1940.5	2130.5
32.5°	2301.3	2306.9	2296.6	2055.0	1682.3	1452.6	1400.2	1487.6	1686.3	1973.9	2231.4
35°	2432.4	2431.6	2385.6	2094.7	1722.8	1483.6	1437.5	1548.0	1742.7	2023.2	2327.5
37.5°	2594.5	2586.6	2488.9	2130.5	1772.1	1536.9	1508.3	1630.6	1818.2	2081.2	2449.1
40°	2741.6	2728.8	2583.4	2163.8	1811.0	1640.2	1623.5	1733.1	1913.5	2153.5	2567.5
42.5°	2856.0	2836.9	2663.7	2187.7	1869.8	1802.3	1816.6	1917.5	2009.7	2217.9	2641.4
45°	2952.1	2932.3	2724.1	2199.6	2012.1	2033.5	2061.3	2145.6	2112.2	2235.4	2686.7
47.5°	3021.3	2988.7	2750.3	2234.6	2204.4	2303.7	2389.5	2395.1	2256.8	2234.6	2714.5
50°	3061.8	3026.0	2774.9	2321.2	2427.7	2610.4	2701.8	2658.9	2407.0	2248.9	2754.3
52.5°	3143.7	3106.3	2877.4	2461.8	2656.5	2921.2	2970.4	2901.3	2562.8	2322.8	2833.7
55°	3349.5	3332.8	3076.1	2651.0	2881.4	3172.3	3194.5	3125.4	2725.7	2450.7	2985.5
57.5°	3582.3	3545.8	3344.7	2888.6	3096.8	3368.5	3404.3	3308.9	2896.5	2630.3	3154.8
60°	3647.5	3640.3	3572.0	3165.9	3319.3	3578.3	3580.7	3459.1	3096.0	2844.1	3413.0
62.5°	3552.1	3575.2	3666.5	3422.6	3506.0	3719.0	3699.1	3572.8	3305.0	3184.2	3726.9
65°	3386.0	3418.6	3602.2	3664.9	3548.9	3691.2	3649.1	3568.8	3436.9	3550.5	3921.6
67.5°	3186.6	3204.0	3417.8	3785.7	3398.7	3385.2	3365.4	3328.8	3384.4	3811.2	3955.0
70°	2979.2	2994.3	3191.3	3619.7	2948.2	2793.2	2776.5	2744.7	2961.7	3808.0	3791.3
72.5°	2511.1	2501.6	2683.5	3021.3	2251.3	2040.7	2182.1	2113.0	2395.9	3421.0	3377.3
75°	1559.9	1612.4	1840.4	2118.6	1542.4	1397.8	1593.3	1575.8	1945.3	2945.8	2689.1
77.5°	950.4	960.7	1089.5	1320.7	929.0	968.7	1024.3	1132.4	1442.3	2387.9	1874.6
80°	497.5	462.5	557.1	724.7	551.5	650.0	750.9	870.1	915.4	1556.7	1253.2
82.5°	143.8	143.0	188.3	303.6	261.4	319.5	379.1	546.7	600.0	925.8	858.2
85°	0.8	0.8	0.8	1.6	2.4	4.0	16.7	140.7	185.9	429.1	352.8
87.5°	0.0	0.0	0.8	1.6	1.6	3.2	4.8	6.4	7.9	9.5	35.0
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°	1707.7	1707.7	1707.7	1707.7	1707.7	1707.7	1707.7	1707.7	1707.7	1707.7	1707.7
2.5°	1802.3	1790.4	1764.9	1730.8	1706.9	1665.6	1656.9	1630.6	1604.4	1583.0	1583.7
5°	1737.1	1696.6	1634.6	1563.1	1494.7	1433.6	1421.6	1385.9	1375.5	1365.2	1336.6
7.5°	1566.3	1518.6	1432.0	1326.3	1240.5	1182.4	1120.5	1083.1	1049.7	1011.6	1021.1
10°	1435.1	1366.8	1247.6	1123.6	1016.4	938.5	870.1	835.2	786.7	751.7	747.0
12.5°	1334.2	1260.3	1117.3	971.9	870.9	825.6	781.9	727.1	673.1	627.0	603.1
15°	1300.9	1217.4	1051.3	906.7	827.2	772.4	711.2	648.4	582.5	533.2	514.1
17.5°	1339.8	1241.3	1050.5	878.9	779.6	699.3	623.0	552.3	474.4	425.1	410.0
20°	1447.1	1323.9	1072.8	852.7	721.5	612.7	505.4	429.1	349.6	314.7	298.8
22.5°	1596.5	1435.9	1107.0	820.9	657.2	507.0	386.2	290.0	251.1	233.6	229.7
25°	1749.8	1578.2	1155.4	793.9	586.5	403.7	277.3	232.0	213.8	205.8	205.8
27.5°	1918.3	1720.4	1207.9	761.3	513.3	300.4	225.7	204.2	194.7	189.9	189.1
30°	2055.0	1836.4	1267.5	723.1	447.4	246.3	200.3	185.9	177.2	174.8	174.8
32.5°	2153.5	1923.1	1330.3	685.0	387.0	222.5	185.9	173.2	163.7	162.1	162.1
35°	2268.7	2005.7	1358.9	663.5	350.4	207.4	175.6	162.9	154.2	150.2	150.2
37.5°	2407.0	2104.2	1374.8	642.9	334.5	193.1	168.5	154.2	145.4	140.7	140.7
40°	2582.6	2216.3	1391.4	622.2	325.0	181.2	160.5	146.2	139.1	133.5	133.5
42.5°	2708.2	2319.6	1404.2	604.7	308.3	175.6	154.2	140.7	131.9	127.1	126.4
45°	2774.1	2415.8	1409.7	594.4	289.3	180.4	149.4	135.9	125.6	120.8	120.0
47.5°	2818.6	2495.2	1416.9	586.5	274.2	171.6	148.6	131.1	120.8	114.4	114.4
50°	2889.4	2600.1	1435.1	571.4	265.4	160.5	160.5	128.7	115.2	109.7	108.9
52.5°	3015.7	2750.3	1484.4	554.7	255.9	149.4	165.3	129.5	111.3	104.9	103.3
55°	3206.4	2989.5	1566.3	530.8	242.4	135.9	154.2	130.3	107.3	101.7	99.3
57.5°	3454.4	3278.7	1661.6	511.8	219.3	124.8	140.7	126.4	102.5	97.7	96.2
60°	3621.2	3471.8	1722.0	487.1	186.7	117.6	120.8	122.4	97.7	92.2	91.4
62.5°	3711.0	3475.0	1722.8	453.0	156.5	111.3	108.1	124.8	93.8	86.6	85.8
65°	3717.4	3305.8	1636.2	409.2	146.2	104.1	99.3	110.5	89.8	82.6	81.8
67.5°	3648.3	3030.0	1438.3	359.2	150.2	98.5	92.2	93.0	85.0	78.7	77.9
70°	3400.3	2673.2	1153.8	319.5	151.0	91.4	86.6	84.2	80.3	74.7	73.1
72.5°	2933.9	2233.8	874.1	306.7	153.4	85.8	80.3	77.9	74.7	69.9	68.3
75°	2213.9	1742.7	656.4	286.1	155.0	79.5	73.1	71.5	68.3	63.6	62.8
77.5°	1529.7	1292.1	456.1	241.6	138.3	72.3	66.0	64.4	62.0	57.2	56.4
80°	1033.1	886.0	279.7	181.2	104.9	63.6	57.2	57.2	54.8	50.1	50.1
82.5°	719.2	661.9	161.3	118.4	76.3	52.4	50.1	50.1	47.7	42.9	42.1
85°	300.4	400.5	72.3	64.4	53.2	41.3	41.3	42.1	39.7	35.8	35.0
87.5°	10.3	42.9	28.6	30.2	31.8	28.6	31.8	31.8	31.0	27.8	27.0
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):

	185°	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°
0°	1707.7	1707.7	1707.7	1707.7	1707.7	1707.7	1707.7	1707.7	1707.7	1707.7	1707.7
2.5°	1560.7	1550.4	1518.6	1514.6	1490.8	1489.2	1499.5	1482.0	1483.6	1505.1	1501.9
5°	1343.0	1319.1	1318.3	1292.1	1262.7	1255.6	1230.1	1220.6	1216.6	1207.9	1239.7
7.5°	1050.5	1039.4	1048.9	1045.8	1018.7	1003.6	949.6	908.3	887.6	896.4	898.8
10°	747.0	763.7	789.1	813.7	794.7	744.6	721.5	688.2	684.2	681.8	697.7
12.5°	592.0	572.9	584.9	593.6	575.3	553.9	544.3	530.0	538.0	556.3	566.6
15°	491.9	458.5	443.4	433.1	437.9	425.1	429.9	425.1	430.7	436.3	455.3
17.5°	388.6	376.7	348.1	334.5	335.3	329.8	331.4	330.6	327.4	340.1	355.2
20°	292.4	289.3	282.9	273.4	275.0	271.0	268.6	255.1	249.5	253.5	266.2
22.5°	228.1	232.0	236.0	235.2	239.2	228.9	219.3	207.4	205.8	206.6	209.8
25°	204.2	205.8	209.0	213.0	215.4	205.8	192.3	185.2	184.4	185.9	185.9
27.5°	189.9	188.3	192.3	197.1	200.3	188.3	177.2	170.9	169.3	167.7	166.9
30°	174.8	174.8	178.0	182.8	185.2	174.8	165.3	158.9	155.0	152.6	151.8
32.5°	163.7	164.5	166.1	169.3	173.2	162.9	155.0	149.4	142.2	139.9	138.3
35°	151.0	154.2	156.5	157.3	160.5	153.4	145.4	136.7	130.3	127.9	127.9
37.5°	140.7	143.0	147.0	146.2	148.6	143.8	135.1	125.6	122.4	121.6	120.8
40°	132.7	132.7	135.9	139.1	142.2	133.5	123.2	118.4	116.0	114.4	115.2
42.5°	125.6	124.8	124.8	130.3	135.9	123.2	114.4	111.3	110.5	108.9	109.7
45°	119.2	118.4	116.0	118.4	126.4	112.8	107.3	104.9	104.1	104.1	104.1
47.5°	113.6	112.0	108.9	109.7	115.2	104.9	100.1	99.3	98.5	98.5	99.3
50°	107.3	105.7	103.3	102.5	104.1	99.3	95.4	93.8	93.8	93.8	95.4
52.5°	101.7	100.9	97.7	96.9	97.7	94.6	90.6	89.8	89.8	89.8	92.2
55°	97.7	96.2	94.6	93.0	94.6	90.6	87.4	85.8	85.8	87.4	89.0
57.5°	93.8	92.2	91.4	89.8	91.4	87.4	84.2	82.6	83.4	84.2	84.2
60°	89.8	88.2	87.4	85.8	88.2	84.2	81.1	80.3	80.3	79.5	79.5
62.5°	85.8	85.0	83.4	81.8	85.0	80.3	77.9	76.3	75.5	75.5	75.5
65°	81.1	80.3	79.5	78.7	80.3	76.3	73.9	73.1	71.5	70.7	71.5
67.5°	77.1	77.1	75.5	73.9	76.3	71.5	69.9	69.1	66.8	66.0	66.8
70°	72.3	72.3	70.7	69.9	73.1	66.8	65.2	64.4	62.8	62.0	62.0
72.5°	67.5	67.5	66.0	65.2	69.1	62.0	60.4	59.6	57.2	56.4	56.4
75°	62.8	62.0	61.2	60.4	65.2	57.2	54.8	53.2	50.9	50.1	49.3
77.5°	57.2	56.4	54.8	55.6	58.8	50.9	47.7	46.9	44.5	43.7	42.9
80°	50.1	49.3	48.5	50.1	50.1	44.5	40.5	38.9	36.6	35.0	34.2
82.5°	42.9	42.1	42.1	43.7	41.3	38.9	34.2	31.0	27.0	24.6	23.8
85°	35.0	36.6	35.0	36.6	31.0	31.0	23.8	18.3	12.7	10.3	9.5
87.5°	27.0	27.8	27.0	27.8	21.5	20.7	11.1	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°	1707.7	1707.7	1707.7	1707.7	1707.7	1707.7	1707.7	1707.7	1707.7	1707.7
2.5°	1525.7	1527.3	1561.5	1595.7	1616.3	1668.0	1693.4	1722.0	1737.1	1754.6
5°	1224.6	1254.8	1282.6	1350.9	1385.9	1467.7	1527.3	1622.7	1652.9	1676.7
7.5°	925.0	970.3	1004.4	1089.5	1155.4	1257.1	1361.2	1474.9	1507.5	1528.9
10°	735.1	776.4	840.7	907.5	981.4	1104.6	1217.4	1335.0	1392.2	1416.9
12.5°	617.4	683.4	758.9	820.9	879.7	970.3	1113.3	1261.9	1321.5	1347.7
15°	509.4	583.3	660.4	736.6	809.8	912.3	1062.5	1255.6	1331.0	1357.3
17.5°	404.5	464.9	542.7	634.9	741.4	871.7	1072.0	1323.1	1415.3	1449.5
20°	287.7	346.5	425.9	539.6	665.9	829.6	1094.2	1424.8	1555.9	1594.9
22.5°	216.9	249.5	322.6	434.7	598.4	796.2	1129.2	1563.9	1717.2	1752.2
25°	190.7	201.8	239.2	347.3	530.8	766.0	1175.3	1702.2	1888.1	1926.2
27.5°	169.3	175.6	194.7	278.9	480.8	735.1	1230.1	1851.5	2035.1	2085.2
30°	152.6	160.5	176.4	233.6	432.3	690.6	1280.2	1985.8	2159.9	2198.0
32.5°	139.9	148.6	162.9	211.4	391.0	657.2	1308.8	2086.0	2266.4	2301.3
35°	131.1	139.1	153.4	191.5	354.4	634.1	1317.5	2185.3	2396.7	2432.4
37.5°	123.2	131.1	143.8	171.6	329.0	603.9	1331.0	2303.7	2547.7	2594.5
40°	117.6	124.0	135.9	158.1	294.0	571.4	1346.9	2442.0	2694.7	2741.6
42.5°	112.0	119.2	129.5	158.9	259.1	543.5	1357.3	2548.5	2811.5	2856.0
45°	107.3	115.2	127.1	155.8	232.8	518.1	1352.5	2637.5	2918.0	2952.1
47.5°	102.5	112.0	133.5	149.4	224.9	495.1	1356.5	2723.3	2994.3	3021.3
50°	99.3	111.3	143.0	139.9	226.5	484.7	1394.6	2825.8	3051.5	3061.8
52.5°	96.9	113.6	135.1	126.4	226.5	480.0	1467.7	2991.1	3150.8	3143.7
55°	93.0	112.8	126.4	114.4	216.9	482.4	1536.9	3209.6	3389.2	3349.5
57.5°	89.8	108.1	113.6	105.7	194.7	483.2	1639.4	3394.0	3576.7	3582.3
60°	85.8	116.0	98.5	98.5	166.9	479.2	1730.0	3390.8	3610.9	3647.5
62.5°	81.8	113.6	88.2	91.4	147.8	464.1	1784.8	3192.9	3484.6	3552.1
65°	77.1	89.8	81.1	85.0	139.9	426.7	1706.9	2947.4	3313.7	3386.0
67.5°	71.5	73.9	73.9	78.7	136.7	370.3	1510.6	2676.4	3099.2	3186.6
70°	65.2	66.0	67.5	74.7	127.1	318.7	1230.1	2387.9	2868.7	2979.2
72.5°	58.8	59.6	59.6	67.5	119.2	275.0	870.9	1892.1	2395.1	2511.1
75°	51.7	52.4	51.7	58.8	104.1	205.8	517.3	1196.8	1428.8	1559.9
77.5°	43.7	43.7	42.1	46.1	71.5	130.3	282.9	727.1	869.4	950.4
80°	35.8	32.6	27.0	27.8	38.9	74.7	126.4	417.2	476.8	497.5
82.5°	23.8	18.3	11.1	10.3	12.7	20.7	29.4	165.3	151.8	143.8
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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