

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: P401401

Luminaire Tested: **ENT-SA1C-830-U-SLL-HSS**

Issue Date: 5/20/2020

Test Information

Test Method: LM-79-08
Report Number: P401401
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2004-754-8)
Test Lab: INNOVATION CENTER
Issue Date: 5/20/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: ENT-SA1C-830-U-SLL-HSS
Description: ENTRI LED LUMINAIRE
(1) 80 CRI, 3000K, 615mA LIGHTSQUARE WITH 16 LEDS AND SPILL LIGHT
ELIMINATOR LEFT OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2695 lumens
Efficiency: N/A
Efficacy: 80.9 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type III - Short - Semi-Cutoff
BUG Rating: B1 - U0 - G1

Input Watts (W): 33.3
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

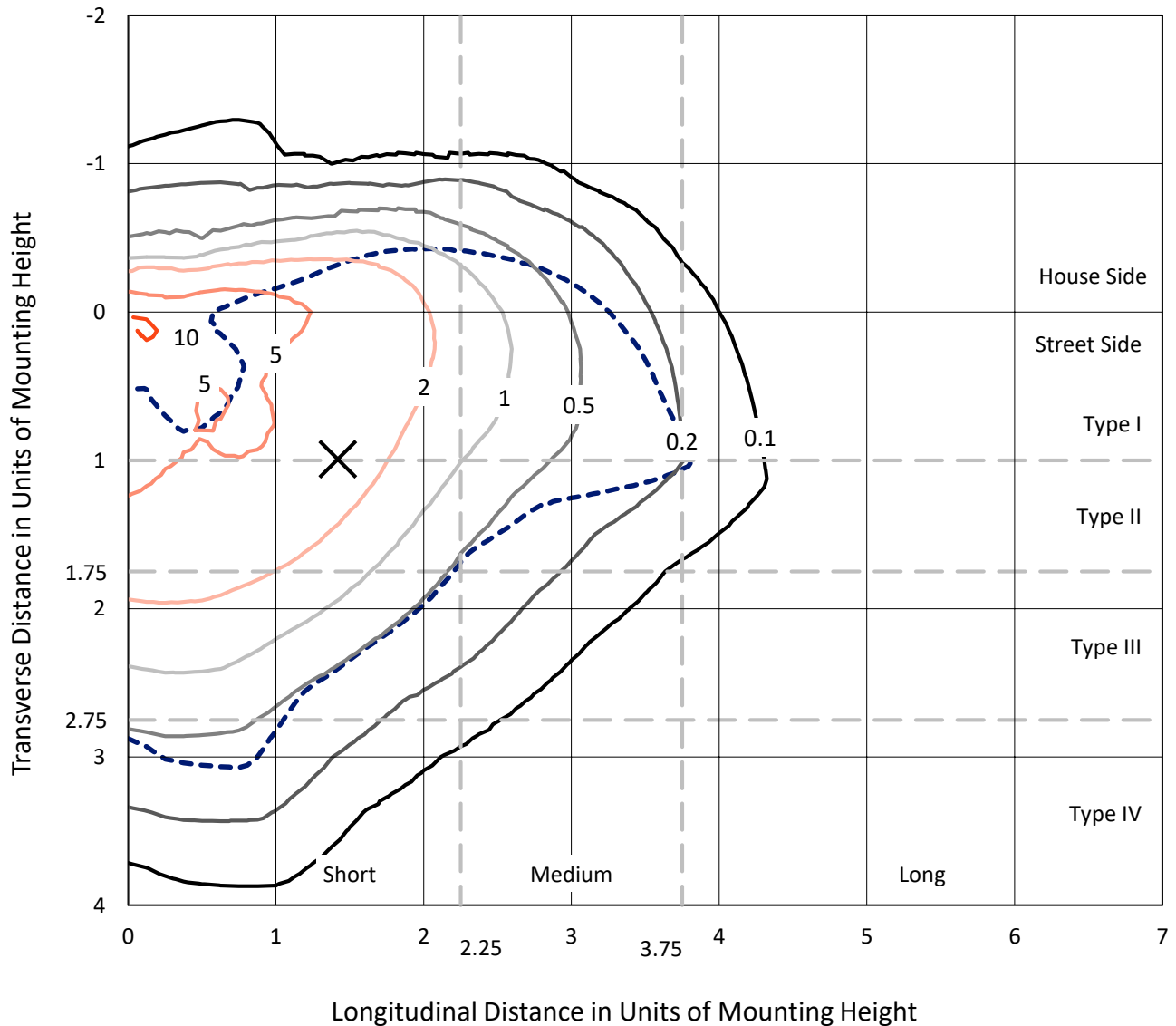


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

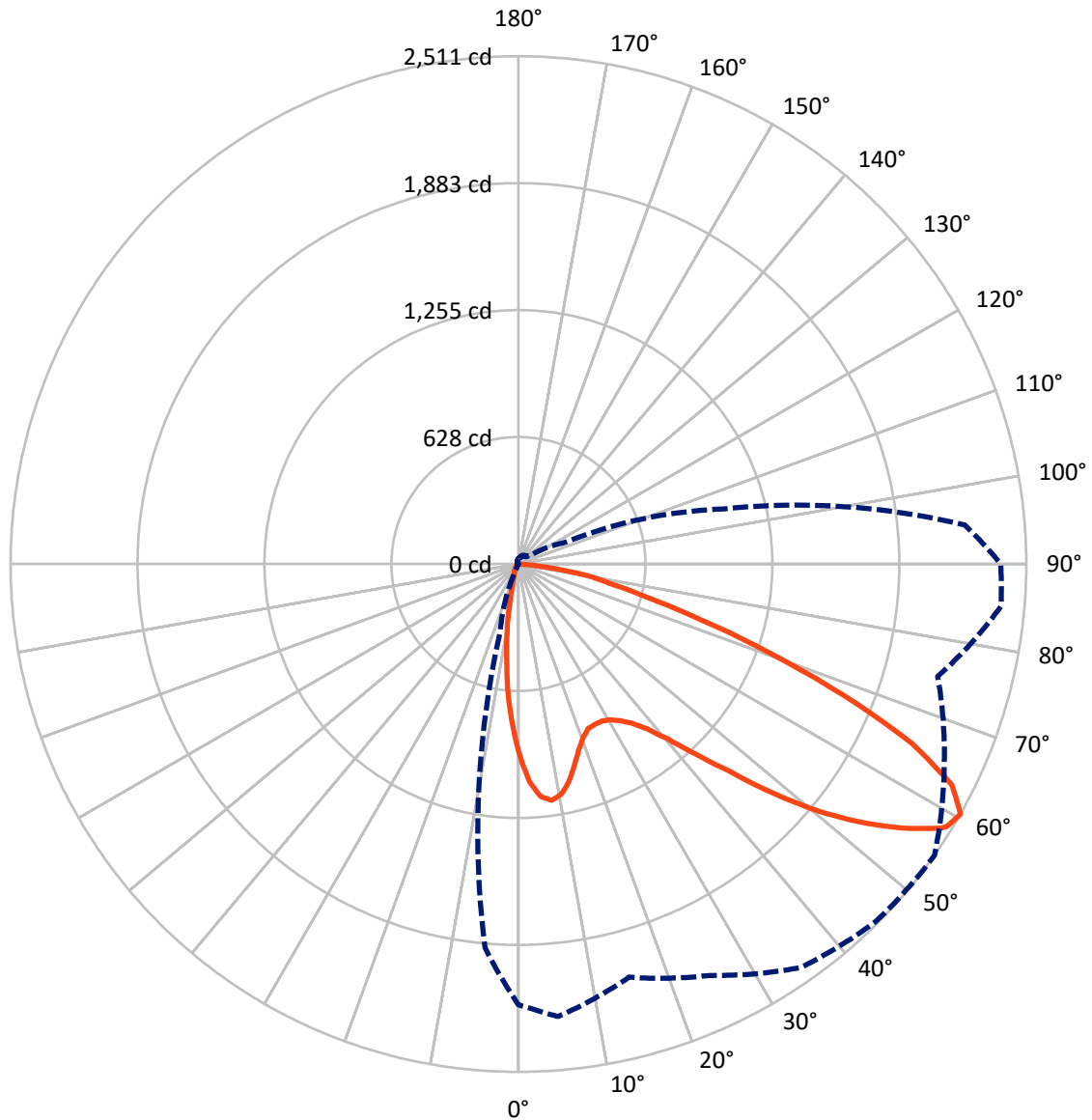


Based on 10 foot mounting height. Maximum calculated value = 11.2 fc
 Type III - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 55-Deg Lateral - - - Horizontal Cone Through 60-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	477.3	0.0	477.3
	% Fixture	17.7	0.0	17.7
Street Side	Lumens	2217.7	0.0	2217.7
	% Fixture	82.3	0.0	82.3
Total	Lumens	2695.0	0.0	2695.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	71.6	2.7
10°-20°	136.2	5.1
20°-30°	194.3	7.2
30°-40°	285.0	10.6
40°-50°	420.2	15.6
50°-60°	622.6	23.1
60°-70°	663.4	24.6
70°-80°	275.2	10.2
80°-90°	26.4	1.0
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°	2695.0	100.0
0°-180°	2695.0	100.0



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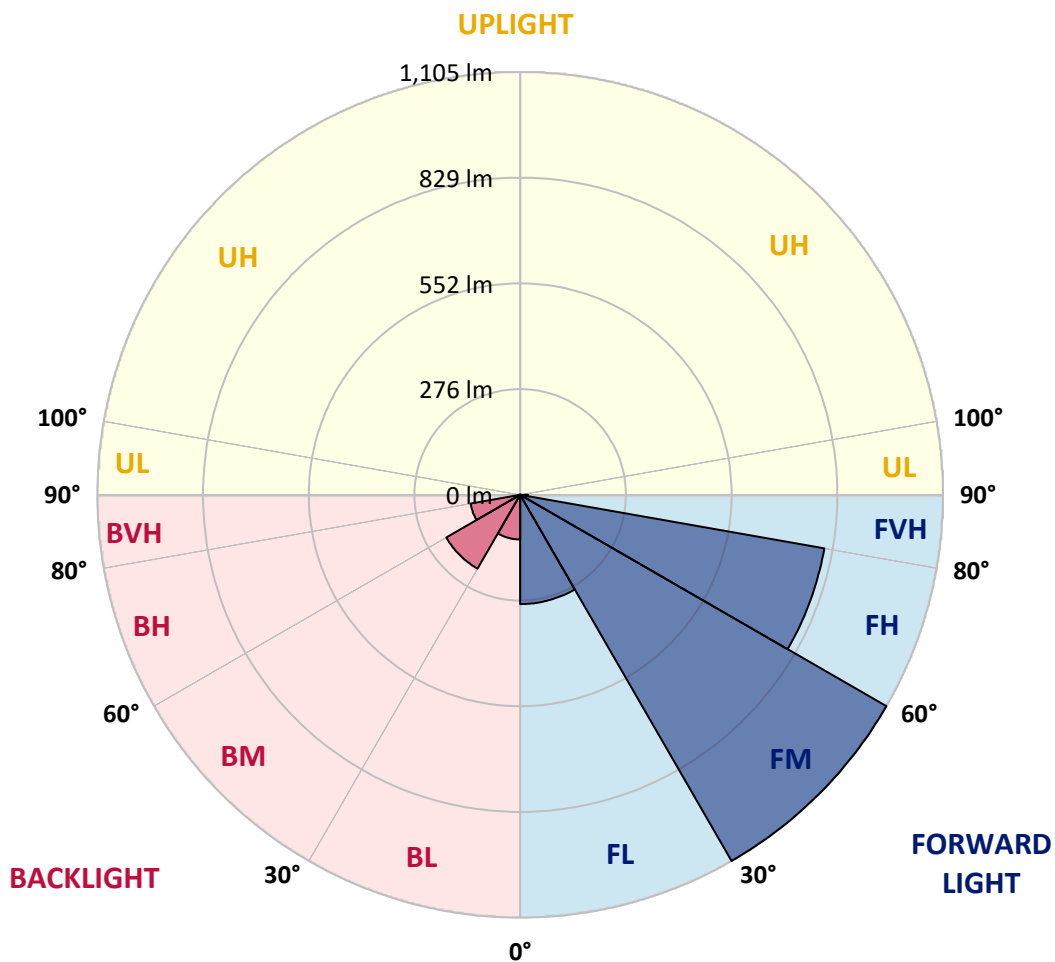
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	285.5	10.6			
FM	(30°-60°)	1105.0	41.0			
FH	(60°-80°)	807.1	29.9			G1/1800
FVH	(80°-90°)	20.3	0.8			G1/100
BL	(0°-30°)	116.7	4.3	B1/500		
BM	(30°-60°)	222.8	8.3	B1/1000		
BH	(60°-80°)	131.6	4.9	B1/500		G1/500
BVH	(80°-90°)	6.2	0.2			G0/10
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 Short





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CANDELA DISTRIBUTION (FULL):

	0°	1°	5°	15°	25°	35°	45°	55°	65°	75°	85°
0°	951.8	951.8	951.8	951.8	951.8	951.8	951.8	951.8	951.8	951.8	951.8
2.5°	994.0	992.5	1006.8	1036.3	1054.7	1065.9	1067.9	1079.6	1067.9	1061.8	1039.9
5°	965.0	964.5	992.0	1056.7	1109.7	1149.4	1168.8	1155.6	1135.2	1094.9	1046.0
7.5°	884.5	884.5	936.5	1023.1	1111.7	1180.5	1204.0	1179.5	1131.1	1050.1	962.5
10°	818.8	824.9	874.8	978.2	1076.6	1152.0	1178.0	1159.1	1095.9	991.0	888.1
12.5°	779.5	783.1	838.6	942.6	1034.3	1095.4	1111.2	1105.6	1059.8	945.6	836.6
15°	783.1	788.2	851.9	937.0	996.6	1021.0	1026.6	1033.8	1014.9	927.3	819.8
17.5°	839.2	842.7	906.9	961.9	959.4	951.8	953.8	965.5	987.9	942.6	853.9
20°	928.8	938.0	1002.7	1003.7	940.0	904.4	895.2	914.6	975.2	982.8	926.8
22.5°	1044.0	1047.5	1113.3	1074.0	942.1	871.8	861.1	883.0	979.3	1048.0	1027.7
25°	1177.5	1190.2	1225.9	1165.2	971.6	867.2	860.0	878.4	994.0	1117.3	1131.6
27.5°	1267.6	1277.8	1312.0	1227.4	998.1	869.7	856.5	878.9	1011.9	1182.6	1242.7
30°	1348.1	1355.3	1368.0	1260.0	1028.2	882.5	861.1	893.2	1021.6	1196.3	1314.5
32.5°	1424.1	1432.7	1425.1	1299.2	1061.3	906.4	869.7	923.2	1042.4	1223.8	1377.2
35°	1521.9	1522.4	1496.4	1338.5	1099.0	934.9	895.2	966.0	1083.2	1266.6	1444.4
37.5°	1638.1	1639.1	1573.3	1378.7	1141.8	982.8	955.3	1032.3	1142.3	1316.0	1540.7
40°	1739.4	1743.5	1656.4	1425.1	1194.3	1076.1	1073.5	1137.2	1218.2	1381.8	1644.2
42.5°	1827.6	1839.3	1732.8	1463.8	1268.7	1219.2	1225.4	1283.4	1310.4	1436.8	1708.4
45°	1916.8	1916.2	1795.5	1502.5	1393.0	1403.7	1461.8	1459.2	1414.9	1466.4	1758.8
47.5°	1972.3	1969.7	1833.7	1565.7	1560.6	1663.0	1724.7	1691.0	1530.5	1497.9	1822.0
50°	1993.7	1992.7	1863.8	1646.2	1731.3	1897.9	1986.0	1918.8	1672.2	1550.9	1897.4
52.5°	2054.3	2049.2	1933.1	1737.9	1885.7	2124.1	2197.0	2122.1	1813.3	1646.2	1985.0
55°	2149.1	2150.6	2052.3	1845.4	2009.5	2283.6	2372.8	2306.0	1957.5	1777.1	2105.3
57.5°	2212.8	2217.4	2184.2	1965.2	2142.0	2395.2	2481.8	2462.9	2149.6	1933.6	2246.4
58°	2218.9	2222.5	2205.1	1988.1	2161.8	2407.9	2496.6	2483.3	2191.9	1983.5	2280.0
60°	2179.7	2190.4	2245.9	2114.4	2243.9	2434.9	2499.1	2510.8	2322.8	2145.5	2395.2
62.5°	2073.2	2076.7	2177.6	2256.1	2299.9	2368.2	2374.3	2404.9	2376.8	2335.6	2498.1
65°	1942.7	1942.7	2051.8	2262.7	2154.7	2143.5	2107.8	2138.4	2219.4	2454.8	2491.0
67.5°	1716.0	1717.5	1856.6	2015.6	1786.3	1747.6	1724.7	1735.9	1908.6	2355.4	2352.4
70°	1386.9	1385.8	1529.0	1631.9	1325.7	1292.6	1320.1	1316.6	1550.4	2093.0	2053.8
72.5°	980.8	989.5	1136.7	1260.5	900.3	776.0	897.2	944.1	1166.3	1764.4	1589.1
75°	552.3	564.0	684.3	875.8	568.1	524.8	586.9	653.7	843.2	1404.7	1067.4
77.5°	277.2	281.8	350.5	421.4	344.4	400.0	396.4	460.1	578.3	947.7	610.4
80°	160.0	169.2	192.6	217.6	192.6	253.7	294.5	346.5	356.1	490.1	340.3
82.5°	64.2	71.8	90.2	102.4	80.0	75.4	51.5	162.0	214.5	236.9	130.4
85°	0.0	0.0	0.5	1.0	1.5	1.5	2.5	28.5	52.5	11.7	21.4
87.5°	0.0	0.0	0.5	0.5	1.0	1.5	2.0	3.6	4.6	5.6	19.4
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):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	951.8	951.8	951.8	951.8	951.8	951.8	951.8	951.8	951.8	951.8	951.8
2.5°	1031.7	1026.1	1007.3	978.8	960.9	933.4	922.2	896.2	883.0	861.1	861.1
5°	1021.6	998.6	951.2	889.6	845.8	799.9	785.1	754.6	732.7	706.7	696.0
7.5°	928.8	896.7	822.8	751.0	681.2	634.8	589.0	557.9	528.4	507.0	510.0
10°	843.7	797.9	716.9	625.7	553.3	504.9	463.6	427.5	396.9	366.8	362.3
12.5°	788.2	735.7	638.9	541.1	487.1	451.4	413.2	373.5	335.8	302.6	289.4
15°	764.8	707.7	599.7	507.5	458.0	412.2	367.9	318.9	275.6	235.9	225.2
17.5°	790.2	722.0	596.1	485.0	416.3	358.7	297.0	243.5	192.6	164.1	155.4
20°	859.5	770.9	607.8	462.6	369.9	295.5	220.1	159.5	130.9	113.6	108.0
22.5°	959.9	851.9	627.7	440.7	323.0	220.1	151.8	115.1	98.3	89.2	86.6
25°	1068.9	956.3	664.4	422.4	276.2	163.6	112.6	94.3	84.1	77.4	74.9
27.5°	1191.7	1059.8	709.2	408.6	232.8	130.9	96.8	83.0	74.9	70.3	68.3
30°	1268.7	1134.2	743.4	384.2	203.3	119.2	92.2	78.5	69.8	66.2	64.7
32.5°	1339.5	1192.7	776.0	356.1	180.9	105.5	89.7	82.5	72.3	65.2	62.2
35°	1417.4	1252.9	791.8	339.3	166.1	91.7	73.9	64.2	58.6	57.6	56.0
37.5°	1533.6	1324.2	802.0	330.2	156.9	83.6	68.8	58.1	51.5	45.3	42.8
40°	1643.7	1398.1	807.1	321.5	152.3	78.5	65.7	55.0	47.9	42.3	39.7
42.5°	1729.8	1465.3	810.1	315.4	144.2	75.4	63.2	53.0	45.3	39.7	37.2
45°	1800.1	1543.3	807.6	313.3	137.6	77.4	62.2	51.5	43.3	37.7	35.2
47.5°	1868.9	1627.9	817.2	310.8	130.9	74.4	62.7	51.0	41.8	36.2	33.6
50°	1959.0	1730.3	852.4	303.7	126.4	69.8	67.8	51.5	41.3	35.2	33.1
52.5°	2075.7	1871.9	916.1	296.0	120.8	65.7	70.8	51.5	40.3	34.1	31.6
55°	2217.4	2030.9	986.4	284.8	111.1	60.6	67.8	51.5	39.2	33.6	30.6
57.5°	2333.0	2172.5	1041.9	271.6	93.2	54.5	62.2	49.4	36.7	31.6	29.0
58°	2343.2	2188.8	1049.6	268.0	91.2	53.5	60.6	48.9	35.7	31.1	28.5
60°	2384.5	2215.3	1052.6	248.6	75.9	51.0	52.5	47.4	33.6	29.0	27.0
62.5°	2370.2	2127.7	987.9	214.5	67.8	46.4	43.8	48.4	31.1	26.5	24.5
65°	2299.4	1955.5	865.6	192.1	68.3	41.3	37.7	42.3	28.5	23.9	21.9
67.5°	2130.7	1694.1	703.1	179.9	71.3	36.7	32.6	31.6	25.5	21.4	19.9
70°	1817.4	1388.4	532.9	169.2	75.4	32.6	30.1	28.0	23.4	19.9	17.8
72.5°	1338.5	1028.2	387.7	158.5	73.4	29.0	28.0	25.5	21.4	17.8	16.8
75°	835.1	597.1	265.5	129.4	65.7	25.5	26.0	23.9	19.4	16.8	15.3
77.5°	487.6	419.3	130.9	96.3	45.3	22.4	22.9	21.9	19.9	15.8	14.8
80°	291.9	260.9	56.0	41.3	25.0	19.9	19.4	20.4	18.9	14.8	13.8
82.5°	126.4	113.1	27.0	22.9	20.4	17.3	16.8	17.3	16.3	12.2	11.7
85°	7.1	18.9	12.7	16.8	15.3	12.7	12.7	13.2	11.7	9.7	9.7
87.5°	6.6	14.3	8.2	10.2	11.2	9.7	10.2	10.2	9.7	8.7	8.2
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):

	185°	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°
0°	951.8	951.8	951.8	951.8	951.8	951.8	951.8	951.8	951.8	951.8	951.8
2.5°	849.3	843.7	826.9	820.8	794.3	800.9	803.0	800.4	801.4	803.5	811.1
5°	703.6	694.5	672.5	658.3	650.6	645.5	621.6	622.1	625.7	611.9	629.7
7.5°	499.8	510.0	512.1	498.8	490.7	473.3	451.4	439.2	418.3	430.0	432.6
10°	357.7	352.6	362.3	357.7	344.9	338.3	314.9	312.8	310.8	309.3	324.0
12.5°	272.6	257.3	246.1	248.6	239.0	222.7	218.6	219.1	221.1	221.1	225.2
15°	216.0	192.6	174.8	164.1	165.6	149.3	144.7	129.4	127.4	122.8	123.8
17.5°	151.3	141.6	130.9	118.7	113.6	98.8	81.0	72.9	66.7	67.8	70.8
20°	104.4	100.4	97.3	91.2	86.1	68.8	57.6	54.0	53.5	54.5	55.5
22.5°	84.1	80.0	76.9	74.9	68.3	55.5	49.4	46.9	46.9	46.9	47.4
25°	72.3	68.3	64.2	64.2	58.1	48.4	43.8	41.8	41.3	40.8	41.8
27.5°	67.3	61.6	57.6	55.0	50.4	42.8	38.7	36.7	36.2	36.2	36.7
30°	62.2	56.6	52.5	48.9	43.8	38.2	34.1	32.6	31.6	31.6	32.1
32.5°	59.1	53.5	48.4	43.8	38.2	33.6	30.1	28.0	27.0	27.5	28.0
35°	52.5	47.9	43.3	38.7	33.6	29.6	26.0	23.9	23.4	23.4	23.9
37.5°	41.3	37.7	36.7	34.1	29.6	25.5	21.9	19.9	19.4	19.4	19.9
40°	37.2	32.6	30.6	29.6	27.0	21.9	17.8	15.8	15.8	15.3	16.3
42.5°	34.1	29.6	26.0	25.0	23.4	18.9	14.3	12.7	12.2	12.2	12.7
45°	32.1	27.0	22.4	19.9	19.9	15.3	11.7	9.7	9.2	9.2	9.7
47.5°	31.1	25.5	19.9	16.3	15.8	12.7	9.2	7.1	6.6	6.6	6.6
50°	30.1	23.4	17.8	13.8	12.2	10.7	7.1	5.6	5.1	5.1	5.1
52.5°	28.5	22.4	16.3	12.2	9.7	8.2	5.6	4.1	3.6	3.1	3.6
55°	27.5	20.9	15.8	11.2	8.2	6.1	4.1	3.1	2.5	2.5	2.5
57.5°	26.0	19.4	14.3	10.7	7.6	4.6	3.1	2.0	1.5	1.5	2.0
58°	25.5	19.4	13.8	10.2	7.1	4.6	3.1	2.0	1.5	1.5	2.0
60°	23.9	17.8	13.2	9.2	6.6	4.1	2.5	1.5	1.0	1.0	1.5
62.5°	22.4	16.3	11.7	8.2	5.6	3.6	2.0	1.0	0.5	0.5	0.5
65°	19.9	14.8	10.2	7.6	4.6	2.5	1.5	0.5	0.0	0.0	0.0
67.5°	17.8	13.8	9.2	6.6	4.1	2.0	1.0	0.0	0.0	0.0	0.0
70°	16.3	12.7	8.2	5.6	3.6	1.5	0.5	0.0	0.0	0.0	0.0
72.5°	15.3	11.7	7.6	5.1	2.5	1.5	0.5	0.0	0.0	0.0	0.0
75°	14.8	11.2	7.6	4.6	2.5	1.5	1.0	0.5	0.0	0.0	0.5
77.5°	14.3	11.2	7.6	4.6	3.1	1.5	1.5	1.0	1.0	0.5	1.5
80°	13.2	10.2	6.6	4.1	2.5	2.0	1.5	1.0	0.0	0.0	0.0
82.5°	11.2	8.2	5.6	4.1	2.5	1.5	0.5	0.0	0.0	0.0	0.0
85°	9.2	6.6	4.6	2.5	1.5	0.5	0.0	0.0	0.0	0.0	0.0
87.5°	8.2	5.1	3.6	2.0	1.0	0.5	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):

	285°	295°	305°	315°	325°	335°	345°	355°	359°	360°
0°	951.8	951.8	951.8	951.8	951.8	951.8	951.8	951.8	951.8	951.8
2.5°	817.8	841.2	850.9	883.5	897.7	927.3	952.8	974.7	985.4	994.0
5°	634.3	656.7	680.7	729.1	770.9	815.7	871.8	929.8	946.7	965.0
7.5°	442.8	475.9	516.1	559.4	619.0	686.8	767.3	839.2	875.3	884.5
10°	343.9	383.1	425.9	468.7	518.2	590.5	671.5	764.3	803.0	818.8
12.5°	258.3	310.8	361.7	412.2	455.0	517.7	605.8	716.4	759.2	779.5
15°	155.4	214.5	277.2	344.9	404.5	477.9	577.3	706.2	760.2	783.1
17.5°	77.4	106.0	163.6	265.5	353.6	444.8	576.8	742.9	809.6	839.2
20°	57.6	65.2	87.1	165.6	294.0	417.3	582.9	805.5	903.9	928.8
22.5°	49.4	55.0	62.7	96.8	220.1	391.8	604.3	888.6	1010.9	1044.0
25°	43.3	47.9	54.0	66.7	150.8	361.7	644.5	1005.8	1132.1	1177.5
27.5°	38.2	42.3	47.4	56.0	100.9	305.2	667.4	1104.1	1229.9	1267.6
30°	33.6	36.7	41.8	47.9	74.4	235.9	688.8	1190.7	1318.6	1348.1
32.5°	29.6	32.1	36.2	40.8	56.6	178.8	689.9	1265.1	1396.0	1424.1
35°	25.0	28.0	31.1	35.2	44.8	139.6	669.0	1339.0	1487.7	1521.9
37.5°	20.9	23.4	27.0	30.6	40.8	108.0	625.7	1425.6	1599.3	1638.1
40°	17.8	20.4	23.4	27.5	36.2	78.5	556.4	1504.1	1703.8	1739.4
42.5°	14.3	16.8	20.4	27.0	30.1	56.6	486.6	1579.5	1794.5	1827.6
45°	11.2	14.3	18.9	26.0	25.0	39.7	426.5	1646.2	1872.4	1916.8
47.5°	8.2	11.7	18.9	23.4	20.4	28.5	395.9	1710.4	1942.2	1972.3
50°	6.1	9.7	20.4	19.9	17.3	24.5	400.5	1781.7	1974.3	1993.7
52.5°	4.6	8.2	15.8	14.3	14.8	21.4	418.3	1876.0	2040.6	2054.3
55°	4.1	6.1	9.7	10.7	13.2	20.4	413.7	1965.2	2125.1	2149.1
57.5°	3.6	5.1	7.6	8.7	11.7	19.4	387.7	2004.4	2179.7	2212.8
58°	3.1	5.1	7.1	8.7	11.7	18.9	381.1	1993.7	2177.1	2218.9
60°	2.5	4.6	6.6	7.6	10.2	16.8	349.0	1903.0	2121.1	2179.7
62.5°	2.0	3.1	5.1	5.6	8.2	13.8	287.4	1756.3	2000.8	2073.2
65°	1.0	2.0	3.1	4.1	5.6	10.2	204.3	1582.5	1871.9	1942.7
67.5°	0.0	1.0	2.0	2.5	3.6	7.6	117.7	1343.1	1660.0	1716.0
70°	0.0	0.5	1.0	1.5	2.0	5.1	62.2	985.9	1286.0	1386.9
72.5°	0.5	0.5	0.5	0.0	1.0	4.1	27.5	584.9	876.9	980.8
75°	0.5	0.5	0.0	0.0	0.0	2.0	11.7	308.2	502.9	552.3
77.5°	2.0	1.0	0.0	0.0	0.0	0.5	5.6	166.1	260.9	277.2
80°	0.5	0.0	0.0	0.0	0.0	0.0	2.0	55.5	156.4	160.0
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	67.3	64.2
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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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