

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: P401455

Luminaire Tested: **ENT-SA1D-730-U-SLL-HSS**

Issue Date: 5/20/2020

Test Information

Test Method: LM-79-08
Report Number: P401455
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-SA1D-730-U-SLL-HSS
Description: ENTRI LED LUMINAIRE
(1) 70 CRI, 3000K, 800mA 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: 3866 lumens
Efficiency: N/A
Efficacy: 89.7 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

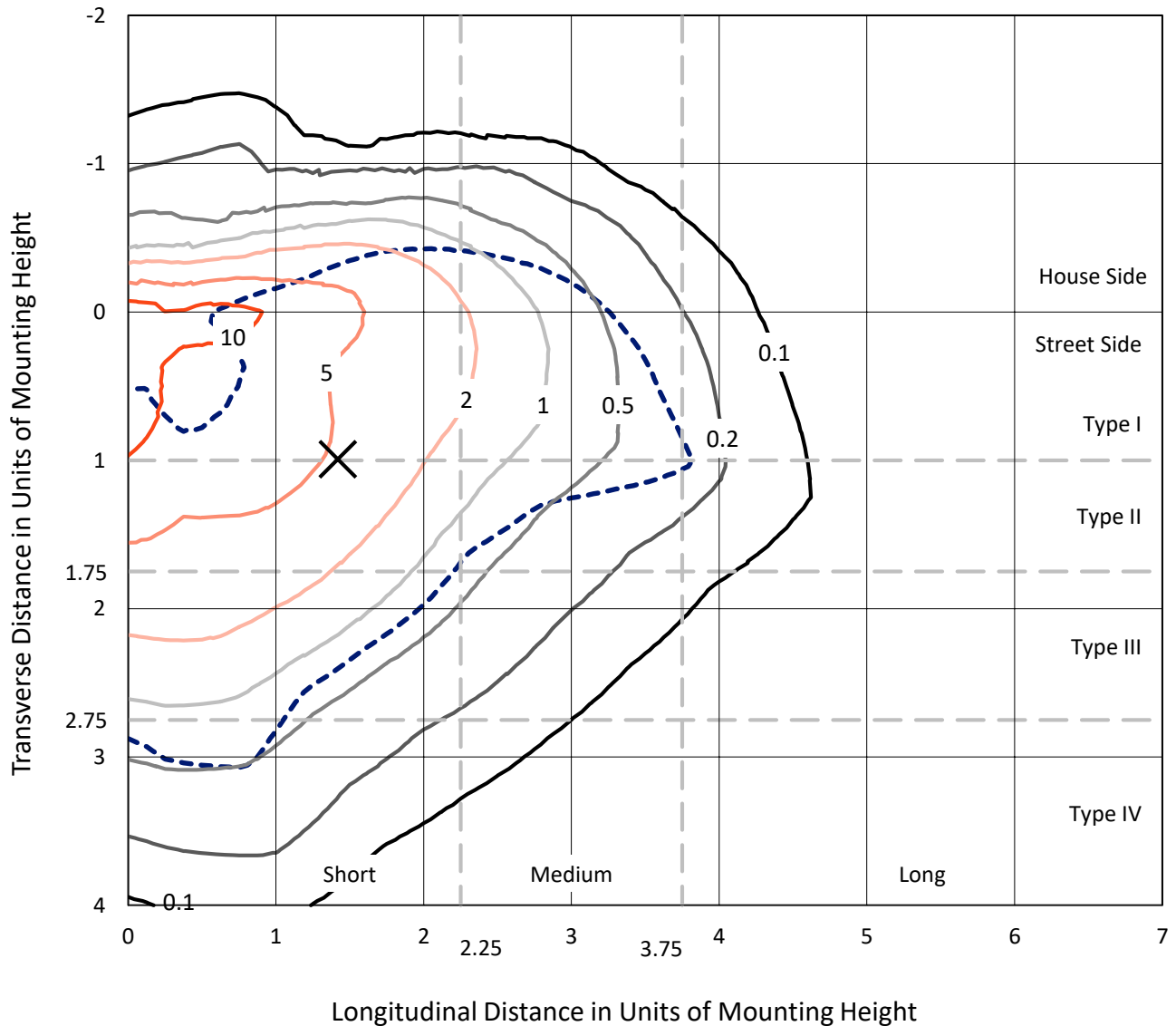
Input Watts (W): 43.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

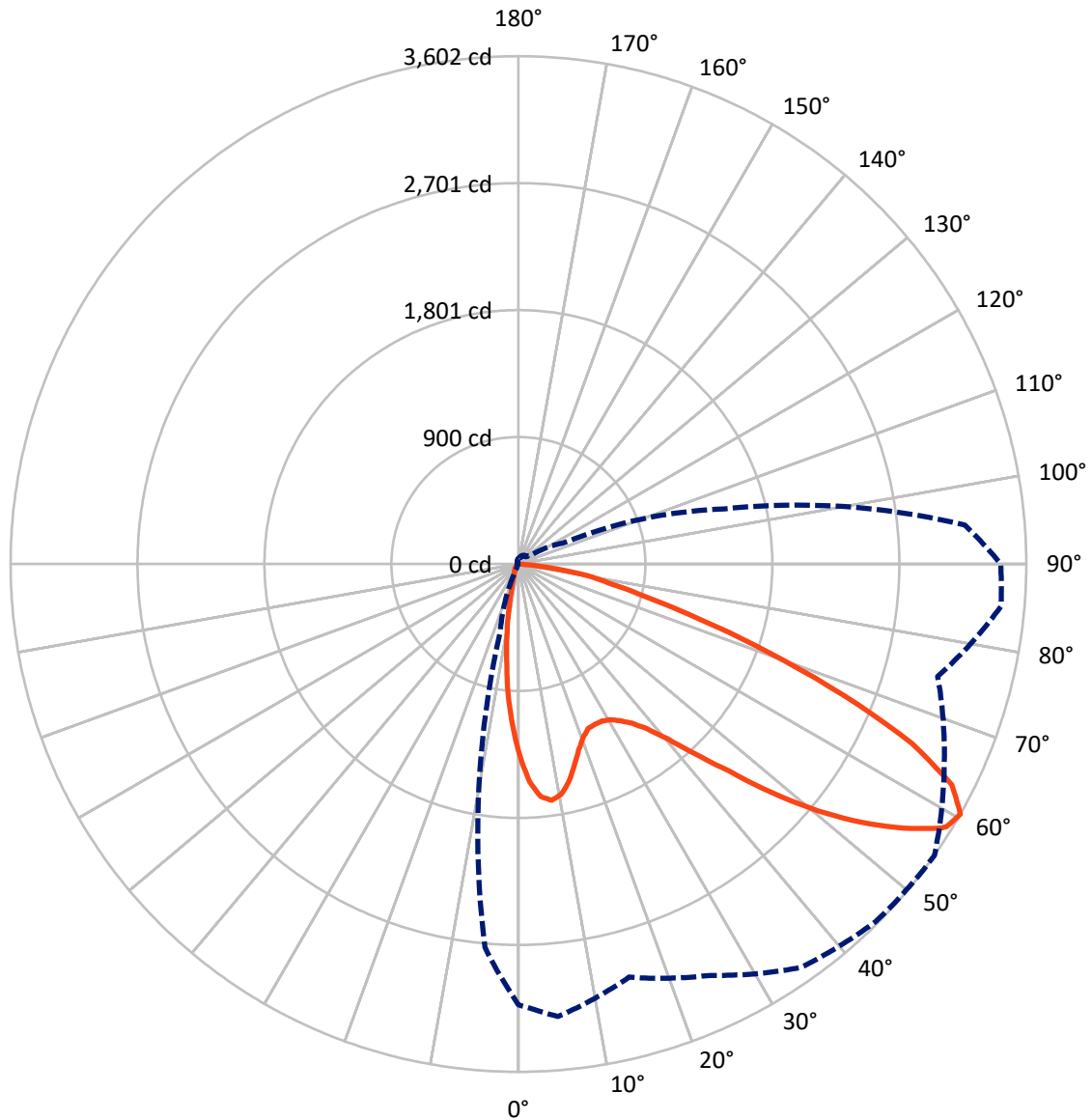
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 16.1 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	684.6	0.0	684.6
	% Fixture	17.7	0.0	17.7
Street Side	Lumens	3181.4	0.0	3181.4
	% Fixture	82.3	0.0	82.3
Total	Lumens	3866.0	0.0	3866.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	102.7	2.7
10°-20°	195.4	5.1
20°-30°	278.7	7.2
30°-40°	408.9	10.6
40°-50°	602.8	15.6
50°-60°	893.1	23.1
60°-70°	951.7	24.6
70°-80°	394.8	10.2
80°-90°	37.9	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°	3866.0	100.0
0°-180°	3866.0	100.0



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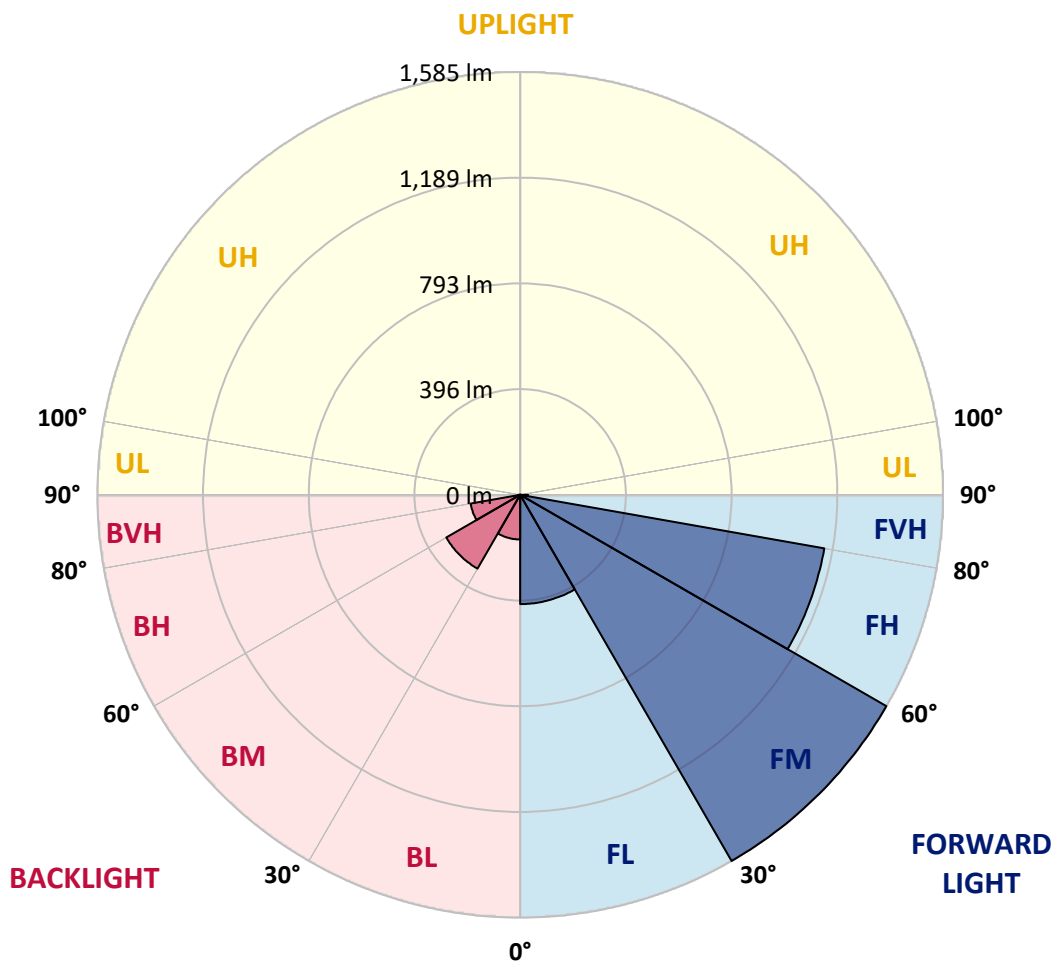
CATALOG NUMBER: ENT-SA1D-730-U-SLL-HSS

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	409.5	10.6			
FM	(30°-60°)	1585.1	41.0			
FH	(60°-80°)	1157.7	29.9			G1/1800
FVH	(80°-90°)	29.1	0.8			G1/100
BL	(0°-30°)	167.4	4.3	B1/500		
BM	(30°-60°)	319.6	8.3	B1/1000		
BH	(60°-80°)	188.7	4.9	B1/500		G1/500
BVH	(80°-90°)	8.9	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°	1365.3	1365.3	1365.3	1365.3	1365.3	1365.3	1365.3	1365.3	1365.3	1365.3	1365.3
2.5°	1426.0	1423.8	1444.2	1486.6	1512.9	1529.0	1531.9	1548.7	1531.9	1523.2	1491.7
5°	1384.3	1383.6	1423.0	1515.9	1591.9	1648.9	1676.7	1657.7	1628.4	1570.7	1500.5
7.5°	1268.8	1268.8	1343.4	1467.6	1594.8	1693.5	1727.1	1692.0	1622.6	1506.4	1380.6
10°	1174.5	1183.3	1254.9	1403.3	1544.4	1652.5	1689.8	1662.8	1572.1	1421.6	1273.9
12.5°	1118.3	1123.4	1203.0	1352.1	1483.7	1571.4	1594.1	1586.0	1520.2	1356.5	1200.1
15°	1123.4	1130.7	1222.0	1344.1	1429.6	1464.7	1472.7	1483.0	1455.9	1330.2	1176.0
17.5°	1203.8	1208.9	1301.0	1379.9	1376.3	1365.3	1368.2	1385.0	1417.2	1352.1	1225.0
20°	1332.4	1345.6	1438.4	1439.8	1348.5	1297.3	1284.2	1311.9	1398.9	1409.9	1329.5
22.5°	1497.6	1502.7	1597.0	1540.7	1351.4	1250.5	1235.2	1266.6	1404.8	1503.4	1474.2
25°	1689.1	1707.4	1758.5	1671.5	1393.8	1244.0	1233.7	1260.0	1426.0	1602.8	1623.3
27.5°	1818.4	1833.1	1882.0	1760.7	1431.8	1247.6	1228.6	1260.8	1451.5	1696.4	1782.6
30°	1933.9	1944.2	1962.4	1807.5	1474.9	1265.9	1235.2	1281.2	1465.4	1716.1	1885.7
32.5°	2042.8	2055.3	2044.3	1863.8	1522.4	1300.2	1247.6	1324.4	1495.4	1755.6	1975.6
35°	2183.2	2183.9	2146.6	1920.0	1576.5	1341.2	1284.2	1385.8	1553.9	1817.0	2072.1
37.5°	2349.8	2351.3	2257.0	1977.8	1637.9	1409.9	1370.4	1480.8	1638.6	1887.9	2210.2
40°	2495.2	2501.1	2376.1	2044.3	1713.2	1543.6	1540.0	1631.3	1747.5	1982.2	2358.6
42.5°	2621.7	2638.5	2485.7	2099.8	1819.9	1749.0	1757.8	1841.1	1879.8	2061.1	2450.7
45°	2749.6	2748.9	2575.6	2155.4	1998.2	2013.6	2096.9	2093.3	2029.7	2103.5	2523.0
47.5°	2829.3	2825.6	2630.5	2246.0	2238.7	2385.6	2474.1	2425.8	2195.6	2148.8	2613.7
50°	2860.0	2858.5	2673.6	2361.5	2483.6	2722.6	2849.0	2752.5	2398.8	2224.8	2721.8
52.5°	2946.9	2939.6	2773.0	2493.1	2705.0	3047.1	3151.6	3044.1	2601.2	2361.5	2847.5
55°	3082.9	3085.1	2944.0	2647.3	2882.6	3275.8	3403.7	3308.0	2808.1	2549.3	3020.0
57.5°	3174.2	3180.8	3133.3	2819.0	3072.6	3435.9	3560.1	3533.1	3083.6	2773.7	3222.5
58°	3183.0	3188.1	3163.3	2851.9	3101.2	3454.2	3581.3	3562.3	3144.3	2845.3	3270.7
60°	3126.7	3142.1	3221.7	3033.2	3218.8	3492.9	3585.0	3601.8	3332.1	3077.8	3435.9
62.5°	2974.0	2979.1	3123.8	3236.4	3299.2	3397.2	3405.9	3449.8	3409.6	3350.4	3583.5
65°	2786.9	2786.9	2943.3	3245.9	3090.9	3074.8	3023.7	3067.5	3183.7	3521.4	3573.3
67.5°	2461.6	2463.8	2663.4	2891.4	2562.5	2506.9	2474.1	2490.1	2737.9	3378.9	3374.5
70°	1989.5	1988.0	2193.4	2341.0	1901.8	1854.3	1893.7	1888.6	2224.1	3002.5	2946.2
72.5°	1407.0	1419.4	1630.6	1808.2	1291.5	1113.1	1287.1	1354.3	1673.0	2531.1	2279.6
75°	792.3	809.1	981.6	1256.4	814.9	752.8	842.0	937.7	1209.6	2015.1	1531.2
77.5°	397.6	404.2	502.8	604.4	494.1	573.7	568.6	660.0	829.6	1359.4	875.6
80°	229.5	242.7	276.3	312.1	276.3	364.0	422.5	497.0	510.9	703.1	488.2
82.5°	92.1	103.1	129.4	146.9	114.7	108.2	73.8	232.4	307.7	339.9	187.1
85°	0.0	0.0	0.7	1.5	2.2	2.2	3.7	40.9	75.3	16.8	30.7
87.5°	0.0	0.0	0.7	0.7	1.5	2.2	2.9	5.1	6.6	8.0	27.8
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°	1365.3	1365.3	1365.3	1365.3	1365.3	1365.3	1365.3	1365.3	1365.3	1365.3	1365.3
2.5°	1480.0	1472.0	1445.0	1404.0	1378.5	1339.0	1322.9	1285.6	1266.6	1235.2	1235.2
5°	1465.4	1432.5	1364.6	1276.1	1213.3	1147.5	1126.3	1082.4	1051.0	1013.7	998.4
7.5°	1332.4	1286.4	1180.4	1077.3	977.2	910.7	844.9	800.3	757.9	727.2	731.6
10°	1210.3	1144.6	1028.4	897.5	793.7	724.3	665.1	613.2	569.4	526.2	519.7
12.5°	1130.7	1055.4	916.5	776.2	698.7	647.6	592.7	535.7	481.7	434.1	415.1
15°	1097.1	1015.2	860.3	728.0	657.1	591.3	527.7	457.5	395.4	338.4	323.1
17.5°	1133.6	1035.7	855.1	695.8	597.1	514.5	426.1	349.4	276.3	235.3	222.9
20°	1233.0	1105.8	871.9	663.6	530.6	423.9	315.7	228.8	187.8	163.0	154.9
22.5°	1377.0	1222.0	900.5	632.2	463.4	315.7	217.8	165.2	141.1	127.9	124.3
25°	1533.4	1371.9	953.1	605.9	396.1	234.6	161.5	135.2	120.6	111.1	107.4
27.5°	1709.5	1520.2	1017.4	586.2	334.0	187.8	138.9	119.1	107.4	100.9	97.9
30°	1819.9	1627.0	1066.4	551.1	291.6	171.0	132.3	112.6	100.1	95.0	92.8
32.5°	1921.5	1711.0	1113.1	510.9	259.5	151.3	128.6	118.4	103.8	93.6	89.2
35°	2033.3	1797.2	1135.8	486.8	238.3	131.6	106.0	92.1	84.1	82.6	80.4
37.5°	2200.0	1899.6	1150.4	473.6	225.1	119.9	98.7	83.3	73.8	65.0	61.4
40°	2357.8	2005.6	1157.7	461.2	218.5	112.6	94.3	78.9	68.7	60.7	57.0
42.5°	2481.4	2102.0	1162.1	452.4	206.8	108.2	90.6	76.0	65.0	57.0	53.4
45°	2582.2	2213.9	1158.5	449.5	197.3	111.1	89.2	73.8	62.1	54.1	50.4
47.5°	2680.9	2335.2	1172.3	445.8	187.8	106.7	89.9	73.1	59.9	51.9	48.2
50°	2810.3	2482.1	1222.8	435.6	181.3	100.1	97.2	73.8	59.2	50.4	47.5
52.5°	2977.6	2685.3	1314.1	424.6	173.2	94.3	101.6	73.8	57.7	49.0	45.3
55°	3180.8	2913.3	1415.0	408.6	159.3	87.0	97.2	73.8	56.3	48.2	43.9
57.5°	3346.7	3116.5	1494.7	389.6	133.8	78.2	89.2	70.9	52.6	45.3	41.7
58°	3361.3	3139.9	1505.6	384.4	130.8	76.7	87.0	70.2	51.2	44.6	40.9
60°	3420.5	3177.9	1510.0	356.7	108.9	73.1	75.3	68.0	48.2	41.7	38.7
62.5°	3400.1	3052.2	1417.2	307.7	97.2	66.5	62.9	69.4	44.6	38.0	35.1
65°	3298.5	2805.1	1241.8	275.5	97.9	59.2	54.1	60.7	40.9	34.4	31.4
67.5°	3056.6	2430.2	1008.6	258.0	102.3	52.6	46.8	45.3	36.5	30.7	28.5
70°	2607.1	1991.7	764.5	242.7	108.2	46.8	43.1	40.2	33.6	28.5	25.6
72.5°	1920.0	1474.9	556.2	227.3	105.2	41.7	40.2	36.5	30.7	25.6	24.1
75°	1197.9	856.6	380.8	185.6	94.3	36.5	37.3	34.4	27.8	24.1	21.9
77.5°	699.5	601.5	187.8	138.1	65.0	32.2	32.9	31.4	28.5	22.7	21.2
80°	418.8	374.2	80.4	59.2	35.8	28.5	27.8	29.2	27.0	21.2	19.7
82.5°	181.3	162.3	38.7	32.9	29.2	24.9	24.1	24.9	23.4	17.5	16.8
85°	10.2	27.0	18.3	24.1	21.9	18.3	18.3	19.0	16.8	13.9	13.9
87.5°	9.5	20.5	11.7	14.6	16.1	13.9	14.6	14.6	13.9	12.4	11.7
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°	1365.3	1365.3	1365.3	1365.3	1365.3	1365.3	1365.3	1365.3	1365.3	1365.3	1365.3
2.5°	1218.4	1210.3	1186.2	1177.5	1139.5	1149.0	1151.9	1148.2	1149.7	1152.6	1163.6
5°	1009.4	996.2	964.8	944.3	933.3	926.0	891.7	892.4	897.5	877.8	903.4
7.5°	717.0	731.6	734.5	715.5	703.8	679.0	647.6	630.0	600.1	616.9	620.5
10°	513.1	505.8	519.7	513.1	494.8	485.3	451.7	448.8	445.8	443.6	464.8
12.5°	391.0	369.1	353.0	356.7	342.8	319.4	313.6	314.3	317.2	317.2	323.1
15°	309.9	276.3	250.7	235.3	237.5	214.1	207.6	185.6	182.7	176.1	177.6
17.5°	217.1	203.2	187.8	170.3	163.0	141.8	116.2	104.5	95.7	97.2	101.6
20°	149.8	144.0	139.6	130.8	123.5	98.7	82.6	77.5	76.7	78.2	79.7
22.5°	120.6	114.7	110.4	107.4	97.9	79.7	70.9	67.2	67.2	67.2	68.0
25°	103.8	97.9	92.1	92.1	83.3	69.4	62.9	59.9	59.2	58.5	59.9
27.5°	96.5	88.4	82.6	78.9	72.4	61.4	55.5	52.6	51.9	51.9	52.6
30°	89.2	81.1	75.3	70.2	62.9	54.8	49.0	46.8	45.3	45.3	46.0
32.5°	84.8	76.7	69.4	62.9	54.8	48.2	43.1	40.2	38.7	39.5	40.2
35°	75.3	68.7	62.1	55.5	48.2	42.4	37.3	34.4	33.6	33.6	34.4
37.5°	59.2	54.1	52.6	49.0	42.4	36.5	31.4	28.5	27.8	27.8	28.5
40°	53.4	46.8	43.9	42.4	38.7	31.4	25.6	22.7	22.7	21.9	23.4
42.5°	49.0	42.4	37.3	35.8	33.6	27.0	20.5	18.3	17.5	17.5	18.3
45°	46.0	38.7	32.2	28.5	28.5	21.9	16.8	13.9	13.2	13.2	13.9
47.5°	44.6	36.5	28.5	23.4	22.7	18.3	13.2	10.2	9.5	9.5	9.5
50°	43.1	33.6	25.6	19.7	17.5	15.3	10.2	8.0	7.3	7.3	7.3
52.5°	40.9	32.2	23.4	17.5	13.9	11.7	8.0	5.8	5.1	4.4	5.1
55°	39.5	30.0	22.7	16.1	11.7	8.8	5.8	4.4	3.7	3.7	3.7
57.5°	37.3	27.8	20.5	15.3	11.0	6.6	4.4	2.9	2.2	2.2	2.9
58°	36.5	27.8	19.7	14.6	10.2	6.6	4.4	2.9	2.2	2.2	2.9
60°	34.4	25.6	19.0	13.2	9.5	5.8	3.7	2.2	1.5	1.5	2.2
62.5°	32.2	23.4	16.8	11.7	8.0	5.1	2.9	1.5	0.7	0.7	0.7
65°	28.5	21.2	14.6	11.0	6.6	3.7	2.2	0.7	0.0	0.0	0.0
67.5°	25.6	19.7	13.2	9.5	5.8	2.9	1.5	0.0	0.0	0.0	0.0
70°	23.4	18.3	11.7	8.0	5.1	2.2	0.7	0.0	0.0	0.0	0.0
72.5°	21.9	16.8	11.0	7.3	3.7	2.2	0.7	0.0	0.0	0.0	0.0
75°	21.2	16.1	11.0	6.6	3.7	2.2	1.5	0.7	0.0	0.0	0.7
77.5°	20.5	16.1	11.0	6.6	4.4	2.2	2.2	1.5	1.5	0.7	2.2
80°	19.0	14.6	9.5	5.8	3.7	2.9	2.2	1.5	0.0	0.0	0.0
82.5°	16.1	11.7	8.0	5.8	3.7	2.2	0.7	0.0	0.0	0.0	0.0
85°	13.2	9.5	6.6	3.7	2.2	0.7	0.0	0.0	0.0	0.0	0.0
87.5°	11.7	7.3	5.1	2.9	1.5	0.7	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°	1365.3	1365.3	1365.3	1365.3	1365.3	1365.3	1365.3	1365.3	1365.3	1365.3
2.5°	1173.1	1206.7	1220.6	1267.4	1287.8	1330.2	1366.8	1398.2	1413.5	1426.0
5°	910.0	942.1	976.5	1045.9	1105.8	1170.1	1250.5	1333.9	1358.0	1384.3
7.5°	635.1	682.6	740.4	802.5	888.0	985.2	1100.7	1203.8	1255.7	1268.8
10°	493.3	549.6	611.0	672.4	743.3	847.1	963.3	1096.3	1151.9	1174.5
12.5°	370.6	445.8	518.9	591.3	652.7	742.6	869.0	1027.6	1089.0	1118.3
15°	222.9	307.7	397.6	494.8	580.3	685.6	828.1	1013.0	1090.5	1123.4
17.5°	111.1	152.0	234.6	380.8	507.2	638.1	827.4	1065.6	1161.4	1203.8
20°	82.6	93.6	125.0	237.5	421.7	598.6	836.1	1155.5	1296.6	1332.4
22.5°	70.9	78.9	89.9	138.9	315.7	562.1	866.8	1274.7	1450.1	1497.6
25°	62.1	68.7	77.5	95.7	216.3	518.9	924.6	1442.8	1624.0	1689.1
27.5°	54.8	60.7	68.0	80.4	144.7	437.8	957.5	1583.8	1764.4	1818.4
30°	48.2	52.6	59.9	68.7	106.7	338.4	988.2	1708.1	1891.5	1933.9
32.5°	42.4	46.0	51.9	58.5	81.1	256.5	989.6	1814.8	2002.6	2042.8
35°	35.8	40.2	44.6	50.4	64.3	200.3	959.7	1920.8	2134.2	2183.2
37.5°	30.0	33.6	38.7	43.9	58.5	154.9	897.5	2045.0	2294.3	2349.8
40°	25.6	29.2	33.6	39.5	51.9	112.6	798.1	2157.6	2444.1	2495.2
42.5°	20.5	24.1	29.2	38.7	43.1	81.1	698.0	2265.7	2574.2	2621.7
45°	16.1	20.5	27.0	37.3	35.8	57.0	611.8	2361.5	2686.0	2749.6
47.5°	11.7	16.8	27.0	33.6	29.2	40.9	567.9	2453.6	2786.1	2829.3
50°	8.8	13.9	29.2	28.5	24.9	35.1	574.5	2555.9	2832.2	2860.0
52.5°	6.6	11.7	22.7	20.5	21.2	30.7	600.1	2691.1	2927.2	2946.9
55°	5.8	8.8	13.9	15.3	19.0	29.2	593.5	2819.0	3048.5	3082.9
57.5°	5.1	7.3	11.0	12.4	16.8	27.8	556.2	2875.3	3126.7	3174.2
58°	4.4	7.3	10.2	12.4	16.8	27.0	546.7	2860.0	3123.1	3183.0
60°	3.7	6.6	9.5	11.0	14.6	24.1	500.7	2729.9	3042.7	3126.7
62.5°	2.9	4.4	7.3	8.0	11.7	19.7	412.2	2519.4	2870.2	2974.0
65°	1.5	2.9	4.4	5.8	8.0	14.6	293.1	2270.1	2685.3	2786.9
67.5°	0.0	1.5	2.9	3.7	5.1	11.0	168.8	1926.6	2381.2	2461.6
70°	0.0	0.7	1.5	2.2	2.9	7.3	89.2	1414.3	1844.8	1989.5
72.5°	0.7	0.7	0.7	0.0	1.5	5.8	39.5	839.1	1257.9	1407.0
75°	0.7	0.7	0.0	0.0	0.0	2.9	16.8	442.2	721.4	792.3
77.5°	2.9	1.5	0.0	0.0	0.0	0.7	8.0	238.3	374.2	397.6
80°	0.7	0.0	0.0	0.0	0.0	0.0	2.9	79.7	224.4	229.5
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	96.5	92.1
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

(END OF REPORT)