

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: P401457

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

Issue Date: 5/20/2020

Test Information

Test Method: LM-79-08
Report Number: P401457
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2004-754-10)
Test Lab: INNOVATION CENTER
Issue Date: 5/20/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: ENT-SA1D-730-U-SLR-HSS
Description: ENTRI LED LUMINAIRE
(1) 70 CRI, 3000K, 800mA LIGHTSQUARE WITH 16 LEDS AND SPILL LIGHT
ELIMINATOR RIGHT 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 IV - 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

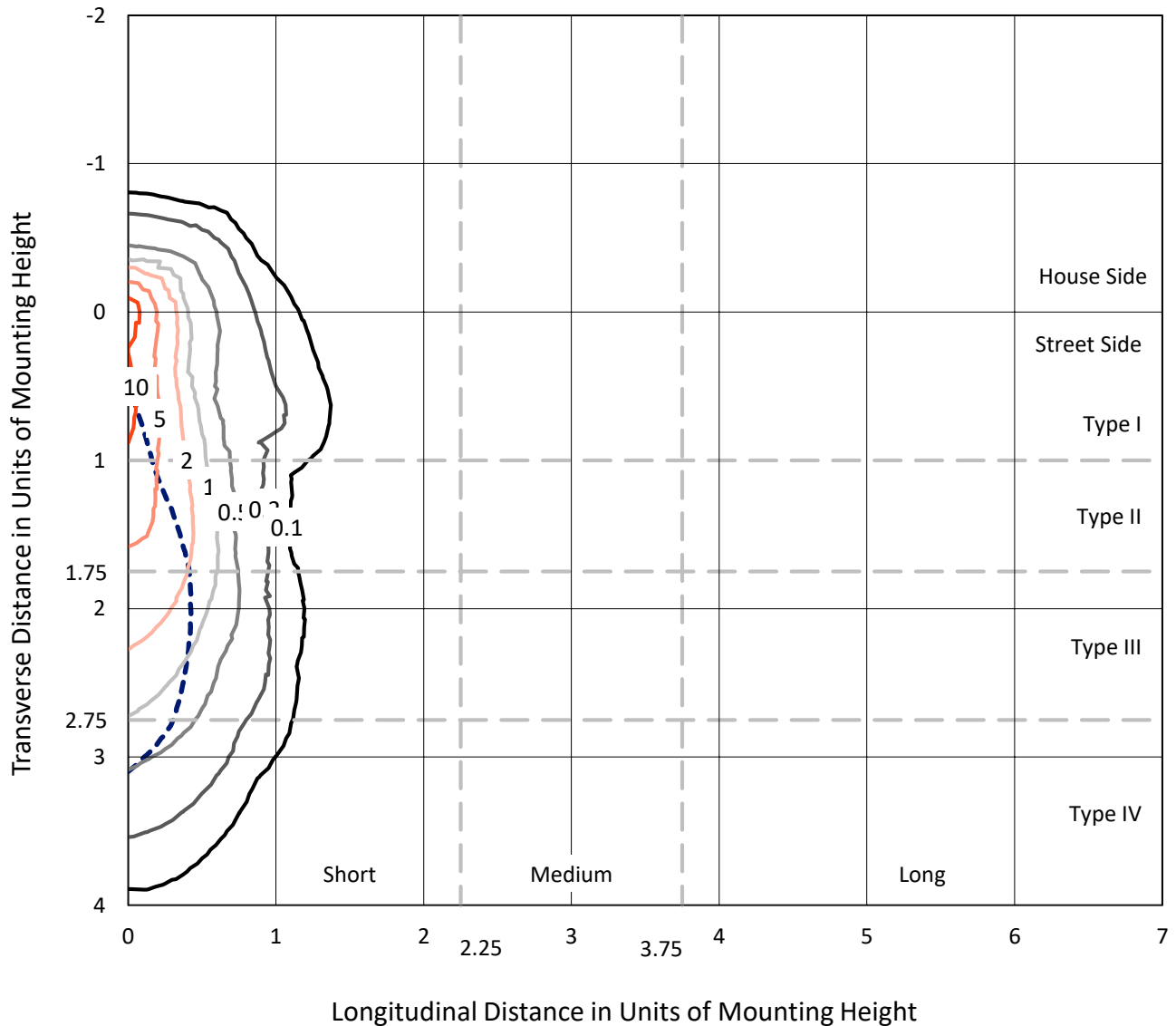


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Iso-Footcandle Lines of Horizontal Illumination

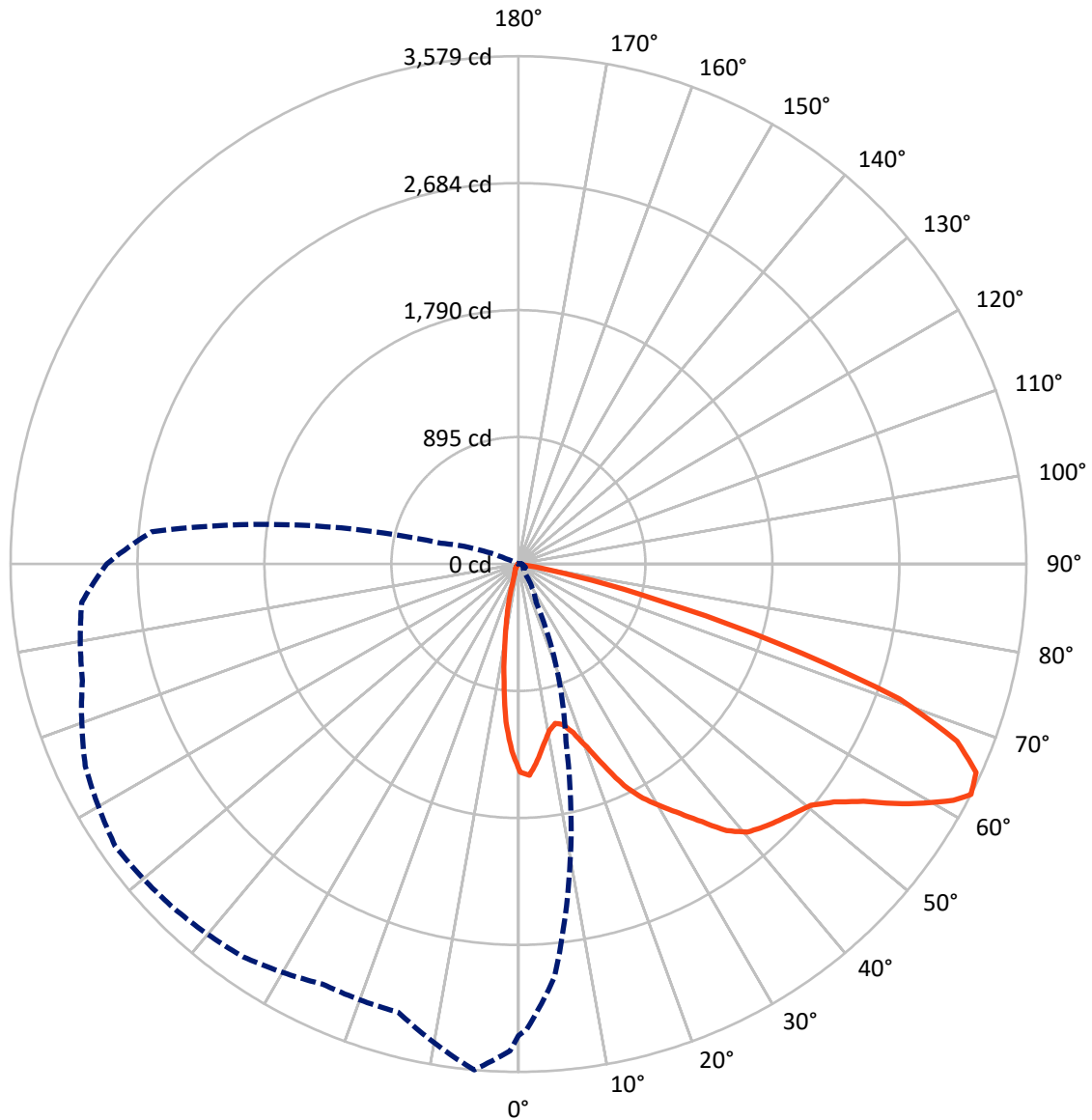
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 14.7 fc
 Type IV - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 355-Deg Lateral - - - Horizontal Cone Through 62.5-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	543.8	0.0	543.8
	% Fixture	14.1	0.0	14.1
Street Side	Lumens	3322.2	0.0	3322.2
	% Fixture	85.9	0.0	85.9
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°	110.0	2.8
10°-20°	209.0	5.4
20°-30°	290.9	7.5
30°-40°	420.6	10.9
40°-50°	603.1	15.6
50°-60°	875.0	22.6
60°-70°	946.7	24.5
70°-80°	382.3	9.9
80°-90°	28.3	0.7
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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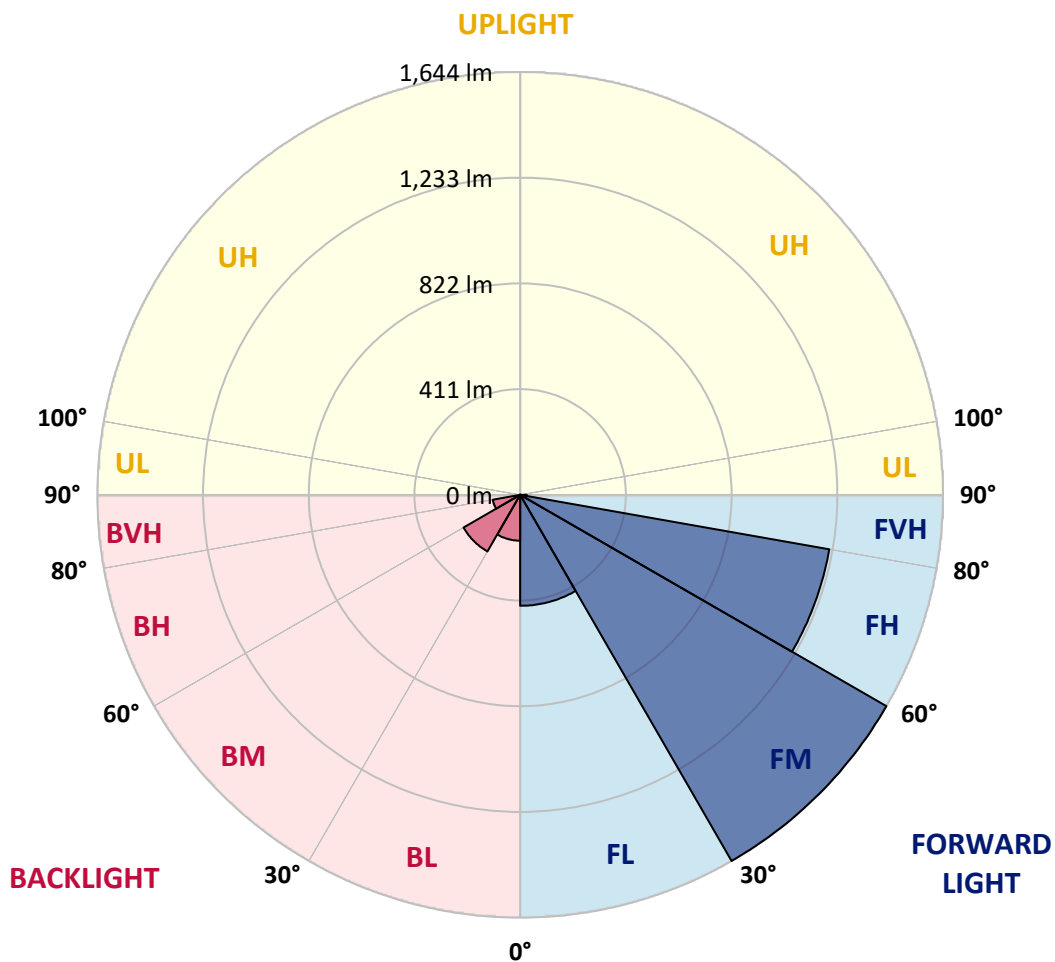
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	431.6	11.2			
FM	(30°-60°)	1644.3	42.5			
FH	(60°-80°)	1220.9	31.6			G1/1800
FVH	(80°-90°)	25.4	0.7			G1/100
BL	(0°-30°)	178.3	4.6	B1/500		
BM	(30°-60°)	254.5	6.6	B1/1000		
BH	(60°-80°)	108.2	2.8	B0/110		G0/110
BVH	(80°-90°)	2.9	0.1			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 IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	1°	5°	15°	25°	35°	45°	55°	65°	75°	85°
0°	1466.5	1466.5	1466.5	1466.5	1466.5	1466.5	1466.5	1466.5	1466.5	1466.5	1466.5
2.5°	1472.6	1466.5	1452.7	1422.9	1380.0	1352.5	1334.9	1311.9	1288.2	1280.6	1265.3
5°	1344.1	1334.1	1315.0	1240.0	1172.7	1105.4	1057.2	1011.3	996.0	965.4	983.8
7.5°	1220.1	1215.5	1171.2	1074.0	966.9	880.5	825.4	758.1	738.2	706.8	681.6
10°	1123.0	1119.2	1065.6	938.6	823.1	751.2	707.6	664.0	620.4	576.0	540.8
12.5°	1074.0	1065.6	1003.6	866.7	759.6	700.0	654.1	595.9	549.3	489.6	446.7
15°	1081.7	1074.0	1002.9	855.2	729.0	646.4	578.3	509.5	443.7	384.8	342.7
17.5°	1142.9	1139.8	1053.4	865.2	692.3	582.9	491.9	399.3	321.3	257.8	221.8
20°	1262.2	1253.0	1127.6	886.6	654.1	509.5	384.8	270.8	205.8	162.2	146.9
22.5°	1409.8	1389.2	1244.6	918.0	617.3	430.7	278.5	182.1	146.9	130.0	119.3
25°	1583.5	1584.3	1390.0	960.0	580.6	357.2	195.1	144.6	123.9	111.7	102.5
27.5°	1724.3	1713.5	1520.8	1002.1	540.8	293.0	163.7	126.2	108.6	95.6	90.3
30°	1828.3	1812.2	1607.2	1031.2	489.6	247.9	146.9	120.1	102.5	88.0	81.1
32.5°	1935.4	1915.5	1685.2	1047.2	459.0	226.4	130.0	104.8	91.8	85.7	76.5
35°	2060.8	2043.2	1771.7	1045.7	442.9	214.2	117.8	94.9	78.0	68.1	62.0
37.5°	2200.8	2164.9	1861.2	1038.8	431.4	208.1	107.1	88.0	72.7	62.0	54.3
40°	2320.9	2285.0	1943.8	1029.7	423.8	202.0	101.0	83.4	68.8	57.4	49.7
42.5°	2415.0	2380.6	2021.1	1018.2	420.0	188.9	104.0	80.3	65.8	54.3	45.9
45°	2496.1	2460.9	2112.9	1016.6	418.4	179.8	102.5	79.6	64.3	50.5	42.8
47.5°	2590.2	2571.8	2233.7	1041.9	412.3	172.9	94.1	85.7	63.5	49.0	40.5
50°	2729.4	2713.4	2392.1	1116.9	403.1	166.0	85.7	94.1	63.5	47.4	38.2
52.5°	2924.5	2906.1	2641.5	1214.8	394.7	158.3	77.3	91.0	64.3	45.1	36.7
55°	3126.4	3123.4	2877.1	1318.8	387.1	141.5	68.1	81.9	62.7	42.1	34.4
57.5°	3284.8	3282.5	3053.8	1389.2	372.5	114.0	62.0	68.1	58.1	38.2	31.4
60°	3349.8	3330.7	3072.9	1389.2	338.9	94.1	56.6	53.5	58.9	34.4	27.5
61°	3349.8	3325.3	3038.5	1368.5	322.1	89.5	53.5	49.7	60.4	32.9	26.0
62.5°	3323.8	3283.3	2920.7	1294.3	295.3	89.5	49.0	44.4	55.1	31.4	23.7
65°	3208.3	3141.7	2644.5	1125.3	267.7	91.8	42.1	37.5	39.8	26.8	20.7
67.5°	2923.0	2848.0	2286.5	890.4	245.6	97.2	35.2	32.9	30.6	23.7	18.4
70°	2408.1	2344.6	1865.8	667.1	228.0	98.7	30.6	27.5	26.0	20.7	16.1
72.5°	1539.1	1434.3	1165.1	452.1	182.8	85.7	25.2	26.0	23.7	16.8	13.0
75°	743.6	772.6	677.8	228.0	123.2	55.8	19.9	21.4	19.1	15.3	11.5
77.5°	332.8	326.6	323.6	58.1	31.4	19.1	12.2	14.5	15.3	13.8	9.9
80°	34.4	46.7	27.5	17.6	11.5	8.4	6.9	7.6	9.2	9.9	5.4
82.5°	1.5	0.8	0.8	2.3	2.3	1.5	0.0	0.0	1.5	1.5	0.8
85°	0.0	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	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):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1466.5	1466.5	1466.5	1466.5	1466.5	1466.5	1466.5	1466.5	1466.5	1466.5	1466.5
2.5°	1251.5	1272.2	1263.0	1260.7	1272.9	1266.8	1285.2	1285.9	1299.7	1318.0	1329.5
5°	983.8	967.7	999.8	1021.2	1048.0	1039.6	1071.7	1067.9	1085.5	1114.6	1103.1
7.5°	683.1	685.4	702.2	721.4	793.3	807.8	818.5	826.9	826.2	833.1	845.3
10°	522.5	509.5	498.0	524.8	553.1	584.4	589.0	600.5	569.1	582.1	588.3
12.5°	427.6	412.3	387.1	373.3	380.2	398.6	406.2	413.1	394.7	395.5	409.3
15°	324.3	303.7	293.7	275.4	268.5	267.0	270.8	260.9	258.6	250.1	255.5
17.5°	211.1	205.0	199.7	195.8	190.5	188.9	175.2	151.5	137.7	134.6	134.6
20°	140.8	136.2	136.2	143.8	141.5	135.4	117.0	97.2	87.2	84.1	85.7
22.5°	115.5	112.5	107.9	107.9	110.9	106.3	89.5	75.0	68.1	68.1	68.1
25°	100.2	98.7	94.1	89.5	91.0	87.2	72.7	63.5	58.9	58.1	58.9
27.5°	88.0	87.2	81.9	77.3	77.3	74.2	62.7	54.3	51.3	49.7	50.5
30°	79.6	78.0	71.9	68.1	67.3	64.3	53.5	47.4	44.4	43.6	43.6
32.5°	73.4	70.4	65.0	61.2	58.9	54.3	46.7	40.5	37.5	36.7	36.7
35°	58.9	58.9	56.6	54.3	51.3	44.4	39.0	33.7	30.6	29.8	29.8
37.5°	51.3	48.2	44.4	45.1	43.6	37.5	32.1	26.8	24.5	23.7	23.7
40°	46.7	42.8	37.5	35.2	36.0	32.9	26.8	20.7	17.6	18.4	17.6
42.5°	42.1	39.0	32.9	27.5	26.8	27.5	20.7	14.5	12.2	12.2	12.2
45°	39.0	36.0	29.1	22.9	19.1	21.4	16.1	9.9	7.6	7.6	7.6
47.5°	36.7	33.7	26.0	19.1	13.8	14.5	11.5	6.1	4.6	3.1	3.8
50°	35.2	31.4	23.7	15.3	9.9	8.4	7.6	3.1	0.8	0.8	0.0
52.5°	32.9	29.8	21.4	13.0	7.6	5.4	3.8	0.8	0.0	0.0	0.0
55°	31.4	27.5	19.1	11.5	6.1	3.1	0.8	0.0	0.0	0.0	0.0
57.5°	28.3	25.2	16.8	9.2	4.6	1.5	0.0	0.0	0.0	0.0	0.0
60°	25.2	22.9	14.5	6.9	3.1	0.0	0.0	0.0	0.0	0.0	0.0
61°	23.7	21.4	13.8	6.1	2.3	0.0	0.0	0.0	0.0	0.0	0.0
62.5°	22.2	19.9	12.2	4.6	1.5	0.0	0.0	0.0	0.0	0.0	0.0
65°	19.1	16.8	10.7	3.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
67.5°	16.8	15.3	9.2	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70°	14.5	13.0	6.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
72.5°	12.2	11.5	5.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75°	10.7	9.2	4.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	8.4	7.6	3.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	4.6	3.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	0.0	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	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):

	185°	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°
0°	1466.5	1466.5	1466.5	1466.5	1466.5	1466.5	1466.5	1466.5	1466.5	1466.5	1466.5
2.5°	1340.2	1367.0	1392.3	1424.4	1442.0	1490.2	1524.6	1553.7	1576.6	1581.2	1599.6
5°	1133.7	1171.2	1195.7	1263.0	1300.5	1380.8	1442.7	1516.2	1582.0	1617.9	1650.8
7.5°	853.7	872.1	914.1	981.5	1070.2	1139.8	1244.6	1337.2	1455.7	1520.8	1582.0
10°	602.8	619.6	681.6	752.0	833.1	950.1	1077.1	1198.7	1318.8	1402.2	1474.1
12.5°	423.8	478.9	540.1	629.6	709.1	794.8	930.2	1072.5	1222.4	1302.0	1380.0
15°	278.5	327.4	412.3	524.8	624.2	707.6	833.8	1000.6	1191.1	1279.8	1354.0
17.5°	137.7	173.6	248.6	369.5	501.8	633.4	785.6	987.6	1231.6	1331.8	1401.4
20°	86.4	97.2	124.7	208.8	361.1	555.4	749.7	1013.6	1341.8	1452.7	1497.8
22.5°	69.6	72.7	83.4	110.9	220.3	459.0	718.3	1048.8	1462.6	1598.0	1644.7
25°	59.7	62.0	68.1	81.9	127.8	344.2	680.1	1110.7	1603.4	1767.1	1778.6
27.5°	51.3	53.5	58.9	69.6	91.0	231.8	625.0	1183.4	1771.7	1915.5	1907.8
30°	43.6	46.7	52.0	59.7	71.9	156.8	522.5	1256.9	1895.6	2011.1	1998.9
32.5°	37.5	39.8	44.4	51.3	59.7	107.9	392.4	1305.0	1998.9	2101.4	2074.6
35°	30.6	32.9	36.7	42.8	48.2	76.5	296.8	1306.6	2105.2	2213.1	2145.8
37.5°	24.5	26.0	29.8	35.2	39.8	59.7	218.0	1281.3	2236.8	2358.4	2226.8
40°	18.4	20.7	24.5	29.1	33.7	50.5	162.9	1220.1	2365.3	2503.8	2324.8
42.5°	12.2	15.3	19.1	23.7	32.1	40.5	114.7	1118.4	2469.3	2633.0	2420.4
45°	7.6	9.9	14.5	19.9	32.9	32.1	76.5	996.8	2543.5	2731.7	2485.4
47.5°	3.8	6.1	10.7	19.1	29.1	23.7	47.4	880.5	2610.9	2789.1	2515.2
50°	0.8	2.3	7.6	23.7	24.5	17.6	31.4	807.8	2646.0	2774.6	2512.2
52.5°	0.0	0.0	5.4	22.9	17.6	13.8	24.5	797.1	2701.1	2793.7	2565.0
55°	0.0	0.0	2.3	9.9	9.9	11.5	21.4	782.6	2799.0	2907.7	2724.1
57.5°	0.0	0.0	0.0	4.6	6.1	9.2	19.9	744.3	2902.3	3028.5	2917.6
60°	0.0	0.0	0.0	2.3	3.8	7.6	17.6	657.1	2807.5	3029.3	3078.3
61°	0.0	0.0	0.0	2.3	3.1	6.9	16.1	626.5	2722.5	2980.3	3098.1
62.5°	0.0	0.0	0.0	0.8	2.3	5.4	13.8	566.1	2595.6	2901.5	3089.0
65°	0.0	0.0	0.0	0.0	0.8	3.1	10.7	457.5	2383.7	2703.4	2983.4
67.5°	0.0	0.0	0.0	0.0	0.0	0.8	6.9	322.1	2079.2	2479.3	2757.7
70°	0.0	0.0	0.0	0.0	0.0	0.0	3.1	186.7	1675.3	2099.1	2362.2
72.5°	0.0	0.0	0.0	0.0	0.0	0.0	1.5	84.9	1087.0	1621.0	1863.5
75°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36.0	669.4	1171.2	1392.3
77.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	16.1	453.6	779.5	937.1
80°	0.0	1.5	0.8	0.0	0.0	0.0	0.0	6.1	279.2	486.5	528.6
82.5°	0.0	0.8	0.8	0.0	0.0	0.0	0.0	0.0	144.6	343.5	350.4
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	60.4	72.7
87.5°	0.0	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	0.0



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CANDELA DISTRIBUTION (continued):

	285°	295°	305°	315°	325°	335°	345°	355°	359°	360°
0°	1466.5	1466.5	1466.5	1466.5	1466.5	1466.5	1466.5	1466.5	1466.5	1466.5
2.5°	1616.4	1621.0	1624.0	1618.7	1585.8	1567.4	1530.7	1490.2	1476.4	1472.6
5°	1710.5	1736.5	1731.9	1696.7	1639.3	1569.0	1481.8	1391.5	1357.1	1344.1
7.5°	1692.1	1760.2	1773.2	1736.5	1639.3	1516.2	1390.0	1282.9	1233.1	1220.1
10°	1598.8	1684.5	1725.8	1714.3	1623.3	1481.0	1325.7	1194.1	1139.8	1123.0
12.5°	1508.5	1591.1	1617.2	1626.3	1576.6	1453.4	1293.6	1152.1	1095.4	1074.0
15°	1448.1	1499.3	1497.8	1514.6	1510.8	1442.7	1314.2	1173.5	1110.0	1081.7
17.5°	1428.2	1412.9	1393.0	1406.8	1433.6	1445.8	1381.5	1250.0	1175.8	1142.9
20°	1440.4	1365.5	1321.9	1321.1	1377.7	1471.0	1480.2	1376.2	1306.6	1262.2
22.5°	1503.2	1341.8	1274.4	1276.0	1345.6	1508.5	1594.2	1541.4	1464.9	1409.8
25°	1595.7	1346.4	1256.1	1265.3	1342.5	1541.4	1717.4	1729.6	1631.7	1583.5
27.5°	1689.8	1386.1	1256.9	1266.8	1355.5	1559.0	1787.7	1868.1	1783.9	1724.3
30°	1755.6	1435.1	1270.6	1281.3	1376.2	1572.8	1814.5	1982.0	1894.8	1828.3
32.5°	1817.6	1485.6	1292.8	1303.5	1417.5	1601.1	1865.0	2096.8	2001.2	1935.4
35°	1878.0	1535.3	1334.1	1353.2	1484.0	1652.3	1916.3	2231.4	2151.9	2060.8
37.5°	1930.0	1590.4	1405.3	1445.8	1574.3	1731.1	1985.9	2384.4	2302.6	2200.8
40°	1973.6	1655.4	1552.1	1597.3	1712.0	1814.5	2063.1	2484.6	2430.3	2320.9
42.5°	2008.8	1770.1	1762.5	1826.0	1906.3	1910.1	2085.3	2532.8	2512.2	2415.0
45°	2067.7	1975.9	2038.7	2142.7	2137.3	2024.9	2079.2	2577.2	2578.7	2496.1
47.5°	2164.1	2233.7	2415.0	2485.4	2449.4	2181.7	2085.3	2620.8	2655.2	2590.2
50°	2301.8	2525.9	2763.1	2856.4	2751.6	2339.3	2139.6	2672.8	2776.9	2729.4
52.5°	2419.6	2747.0	3084.4	3167.8	3024.7	2507.6	2266.6	2785.3	2939.8	2924.5
55°	2587.9	2937.5	3313.1	3377.4	3262.6	2698.1	2437.2	2950.5	3118.8	3126.4
57.5°	2760.0	3109.6	3462.3	3527.3	3440.1	2935.2	2679.7	3187.6	3287.1	3284.8
60°	2951.3	3270.3	3529.6	3565.5	3515.8	3172.3	2940.6	3404.9	3402.6	3349.8
61°	3060.7	3321.5	3525.0	3535.7	3487.5	3242.0	3075.2	3488.3	3419.4	3349.8
62.5°	3181.5	3368.2	3468.4	3432.4	3380.4	3266.4	3270.3	3579.3	3430.9	3323.8
65°	3303.9	3251.1	3207.5	3035.4	2986.5	3041.5	3434.7	3544.9	3361.3	3208.3
67.5°	3094.3	2786.0	2691.9	2519.1	2325.5	2550.4	3278.7	3334.5	3126.4	2923.0
70°	2529.0	2047.1	1935.4	1929.3	1790.0	2037.1	2891.6	2851.1	2594.8	2408.1
72.5°	1982.0	1396.8	1244.6	1279.8	1252.3	1518.5	2365.3	1913.2	1663.8	1539.1
75°	1553.7	992.9	856.8	850.7	820.8	1034.2	1731.9	1008.2	832.3	743.6
77.5°	1025.1	715.3	713.0	658.6	635.7	560.7	777.2	403.9	329.7	332.8
80°	590.6	438.3	514.1	407.7	408.5	328.9	314.4	58.9	47.4	34.4
82.5°	338.9	210.4	159.1	62.7	131.6	131.6	25.2	0.8	0.8	1.5
85°	32.9	9.9	0.0	0.0	0.0	0.0	0.0	0.0	0.8	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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