

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: P400964

Luminaire Tested: **ENT-SA1A-740-U-SLR**

Issue Date: 5/20/2020

Test Information

Test Method: LM-79-08
Report Number: P400964
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2004-754-9)
Test Lab: INNOVATION CENTER
Issue Date: 5/20/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: ENT-SA1A-740-U-SLR
Description: ENTRI LED LUMINAIRE
(1) 70 CRI, 4000K, 350mA LIGHTSQUARE WITH 16 LEDS AND SPILL LIGHT ELIMINATOR RIGHT OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2417 lumens
Efficiency: N/A
Efficacy: 120.2 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type IV - Short - Non-Cutoff
BUG Rating: B1 - U0 - G1

Input Watts (W): 20.1
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

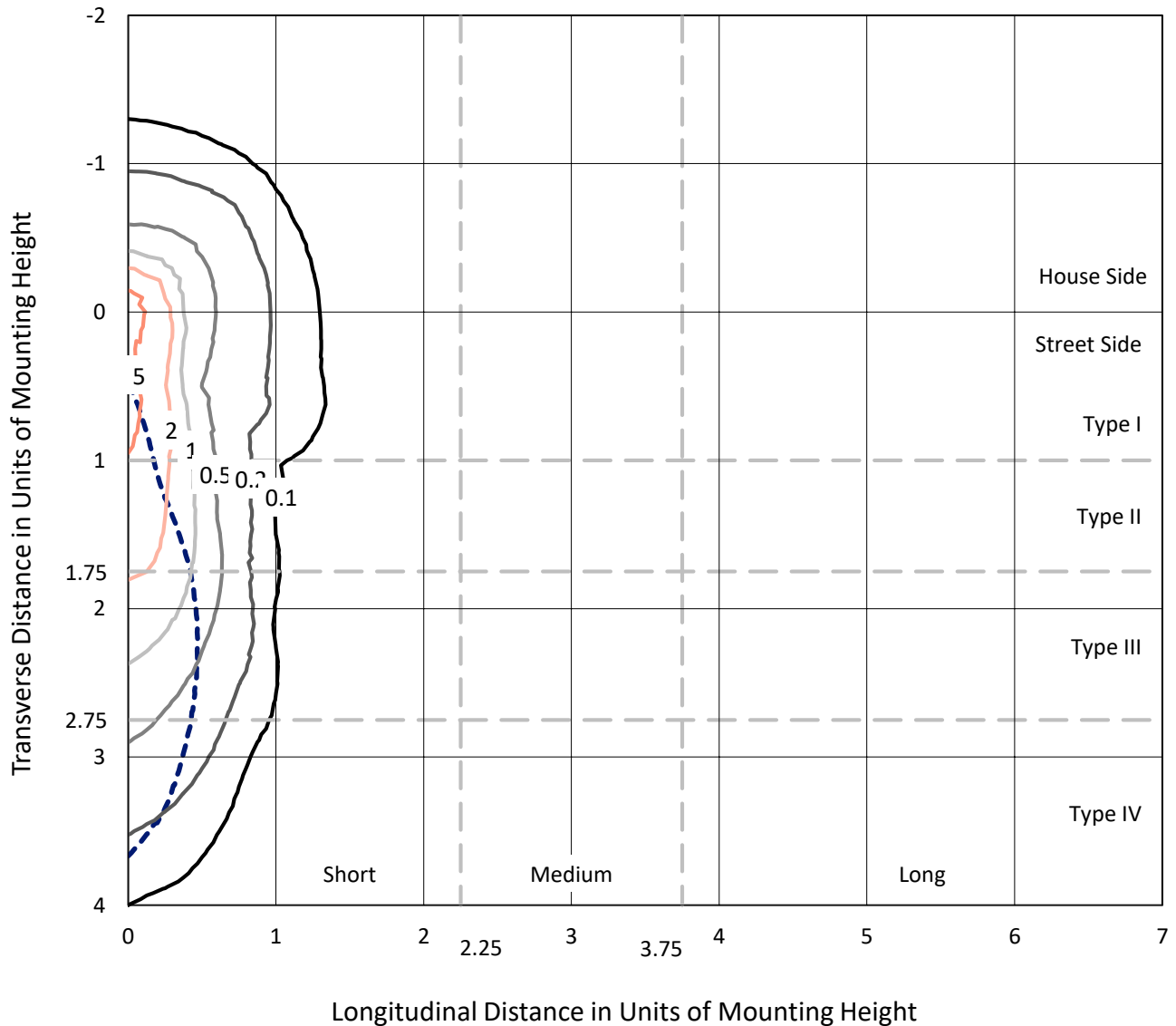


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

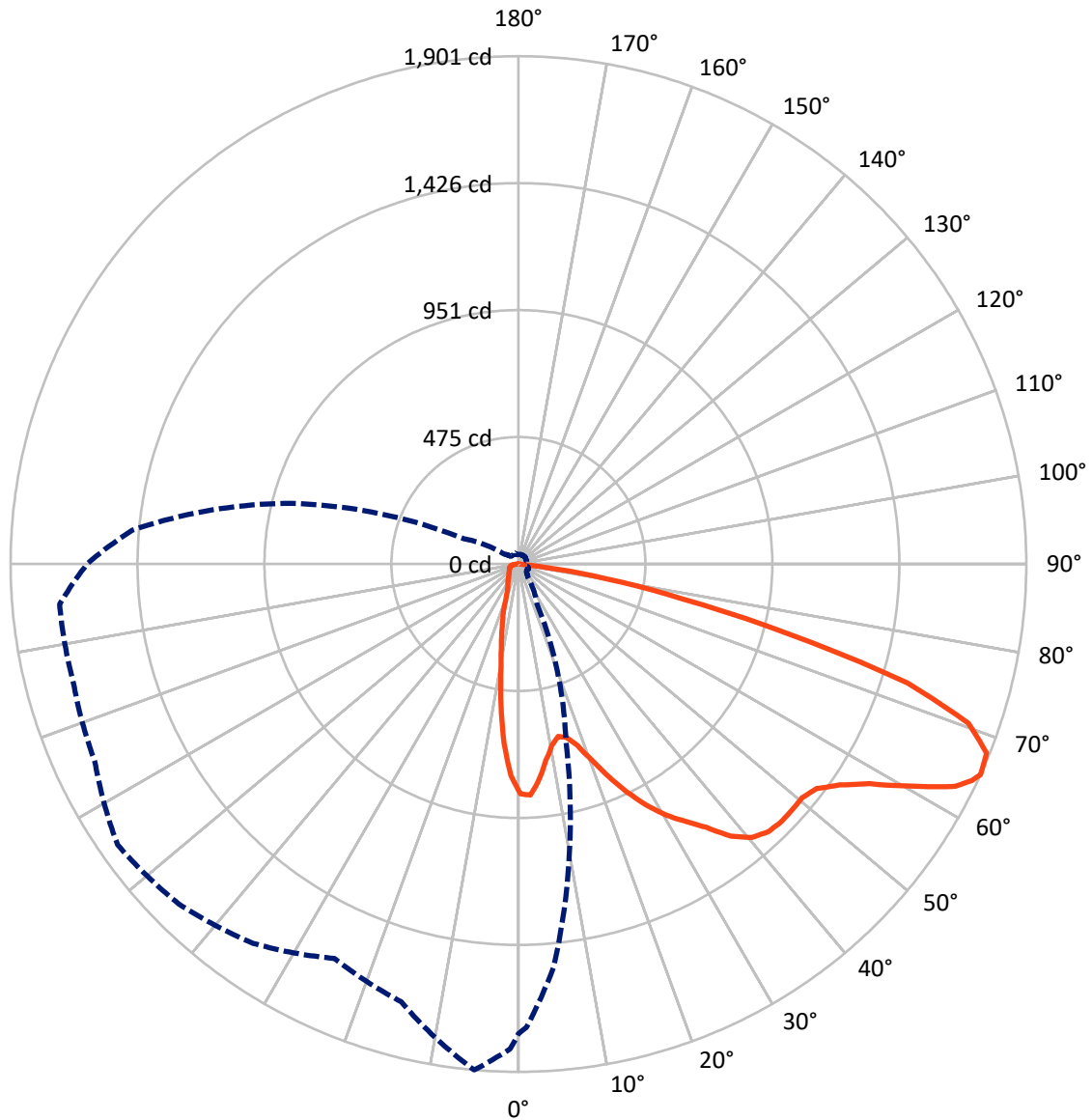


Based on 10 foot mounting height. Maximum calculated value = 8.6 fc
 Type IV - Short - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 355-Deg Lateral - - - Horizontal Cone Through 65-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	495.9	0.0	495.9
	% Fixture	20.5	0.0	20.5
Street Side	Lumens	1921.1	0.0	1921.1
	% Fixture	79.5	0.0	79.5
Total	Lumens	2417.0	0.0	2417.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	65.6	2.7
10°-20°	130.7	5.4
20°-30°	181.2	7.5
30°-40°	253.3	10.5
40°-50°	344.7	14.3
50°-60°	471.4	19.5
60°-70°	576.3	23.8
70°-80°	347.9	14.4
80°-90°	45.9	1.9
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°	2417.0	100.0
0°-180°	2417.0	100.0



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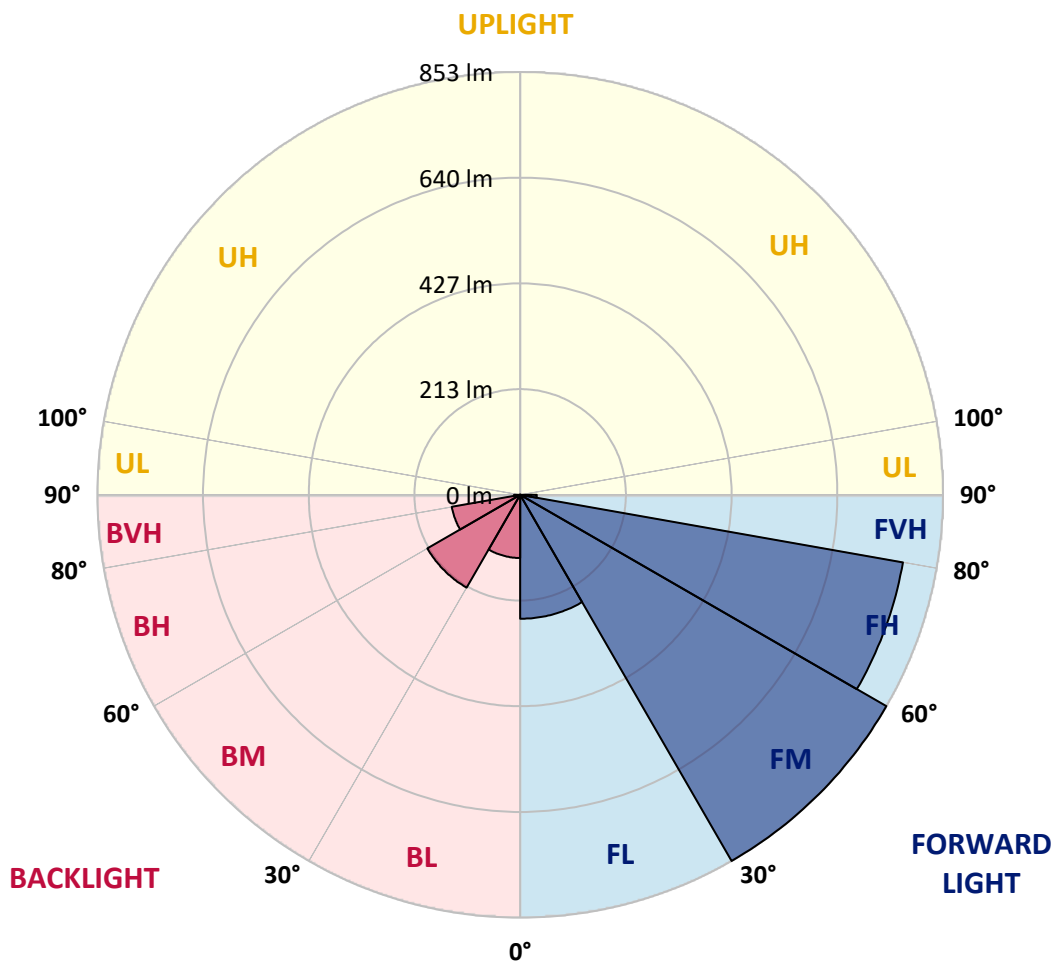
CATALOG NUMBER: ENT-SA1A-740-U-SLR

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	250.1	10.3			
FM	(30°-60°)	853.2	35.3			
FH	(60°-80°)	784.3	32.4			G1/1800
FVH	(80°-90°)	33.5	1.4			G1/100
BL	(0°-30°)	127.4	5.3	B1/500		
BM	(30°-60°)	216.2	8.9	B0/220		
BH	(60°-80°)	140.0	5.8	B1/500		G1/500
BVH	(80°-90°)	12.4	0.5			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 IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	1°	5°	15°	25°	35°	45°	55°	65°	75°	85°
0°	860.1	860.1	860.1	860.1	860.1	860.1	860.1	860.1	860.1	860.1	860.1
2.5°	858.1	855.6	849.6	833.4	816.0	795.4	791.8	769.6	772.0	765.5	767.1
5°	783.7	780.5	763.9	731.6	687.5	662.0	642.2	630.5	620.8	616.0	622.0
7.5°	711.4	706.9	687.1	630.1	581.2	540.8	508.5	488.7	469.3	453.9	446.6
10°	652.7	651.1	624.9	560.6	499.2	449.9	428.8	407.8	391.2	369.4	351.6
12.5°	623.2	618.4	587.3	512.5	452.7	422.4	402.6	375.9	353.3	326.6	303.5
15°	624.5	618.8	580.0	501.6	436.5	399.7	369.4	337.5	304.3	277.3	253.8
17.5°	659.2	655.2	607.9	511.7	422.8	371.8	324.6	283.3	247.0	213.0	192.0
20°	717.8	711.8	646.3	523.8	405.4	339.9	275.7	219.1	179.9	150.0	133.4
22.5°	794.2	782.9	700.8	538.8	388.0	303.5	222.7	159.7	124.9	109.9	105.5
25°	875.9	867.0	766.7	557.8	369.4	263.9	164.9	116.0	103.9	97.8	94.6
27.5°	951.0	936.5	837.5	578.8	344.8	224.3	125.3	99.8	91.7	88.9	86.9
30°	1004.8	992.3	886.4	603.0	323.3	183.1	107.1	90.5	84.1	79.6	78.8
32.5°	1056.1	1038.3	921.9	614.4	305.6	160.9	99.0	84.1	78.0	73.6	71.9
35°	1116.7	1099.0	962.8	616.0	292.2	151.6	91.3	79.2	72.8	68.7	66.7
37.5°	1188.3	1164.0	1008.8	617.2	278.9	147.9	84.9	75.2	68.7	64.3	62.6
40°	1256.2	1237.6	1056.1	615.2	270.0	142.7	80.8	70.7	64.7	60.6	58.6
42.5°	1307.5	1287.7	1096.5	609.1	264.7	133.8	82.5	67.5	61.8	57.4	55.0
45°	1333.8	1316.0	1133.3	603.4	261.9	126.1	80.8	66.3	59.8	54.6	52.1
47.5°	1353.6	1336.2	1170.9	601.0	257.1	120.4	74.4	70.7	57.8	51.7	49.3
50°	1385.5	1370.6	1221.8	614.8	249.4	116.8	68.3	75.6	57.0	49.3	46.5
52.5°	1442.9	1433.2	1305.9	646.7	241.3	110.7	62.2	72.3	57.8	47.7	44.5
55°	1550.0	1544.0	1421.5	688.7	233.6	103.1	55.8	65.5	57.4	44.9	42.4
57.5°	1665.6	1664.0	1561.7	725.5	222.3	90.1	51.7	55.4	54.6	42.4	39.6
60°	1743.2	1738.0	1626.4	746.1	207.7	74.4	48.5	46.9	55.8	40.0	36.8
62.5°	1769.9	1752.5	1607.0	738.4	185.9	64.3	44.9	42.8	51.7	37.6	34.0
64°	1768.3	1742.8	1556.5	709.3	171.8	62.2	42.8	40.0	45.7	36.0	32.7
65°	1759.0	1734.7	1514.5	686.7	164.1	62.2	41.6	38.8	41.6	35.2	31.9
67.5°	1699.6	1667.6	1371.0	581.6	144.3	63.1	38.8	35.6	34.8	32.3	29.9
70°	1564.2	1522.5	1174.1	457.5	133.8	63.5	35.6	32.3	31.1	29.5	27.5
72.5°	1256.2	1200.4	934.5	327.0	122.9	62.2	32.3	29.5	28.3	26.7	24.7
75°	842.3	781.3	688.7	215.4	100.6	55.8	27.9	25.5	25.1	23.4	21.8
77.5°	474.9	449.4	406.6	118.4	69.5	38.4	22.2	20.6	21.0	20.2	18.6
80°	248.2	236.4	217.4	57.4	33.5	18.6	14.1	14.1	16.2	16.2	15.4
82.5°	87.7	88.1	85.3	12.9	6.9	5.7	4.9	6.9	9.3	11.3	11.3
85°	0.4	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.8	1.6	2.8
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°	860.1	860.1	860.1	860.1	860.1	860.1	860.1	860.1	860.1	860.1	860.1
2.5°	753.4	755.8	762.3	761.1	767.5	764.7	773.2	777.6	780.1	792.6	798.7
5°	617.2	618.0	641.0	645.9	658.0	651.5	666.5	660.8	673.0	674.6	694.8
7.5°	453.5	455.1	466.4	493.1	519.4	530.3	534.7	541.6	535.9	533.9	536.8
10°	344.8	346.0	347.2	366.2	389.2	412.3	412.3	412.7	402.6	392.5	390.4
12.5°	294.6	287.0	274.8	275.2	291.4	302.3	310.8	301.9	300.3	305.2	310.4
15°	242.5	234.8	226.7	217.0	217.4	225.1	229.6	229.2	237.3	240.9	251.8
17.5°	188.3	177.4	177.8	172.2	164.5	169.4	170.6	177.8	188.3	193.2	195.2
20°	126.5	126.5	129.7	136.6	133.0	136.2	136.6	142.3	147.1	144.3	147.1
22.5°	104.7	104.3	105.5	109.9	113.6	116.4	117.2	116.8	112.0	109.9	114.0
25°	95.0	94.6	95.0	97.4	101.4	105.1	103.5	101.0	95.4	95.0	95.8
27.5°	86.9	87.3	88.1	89.7	92.2	96.6	95.0	90.1	87.3	86.5	86.5
30°	80.0	80.0	81.6	83.3	86.1	90.1	87.3	83.3	80.4	79.6	79.2
32.5°	73.2	74.4	75.6	77.2	79.6	83.7	81.2	77.6	74.8	73.2	71.9
35°	66.3	67.1	69.5	71.9	74.0	77.2	75.6	72.3	69.5	65.9	64.3
37.5°	62.2	62.2	63.5	67.1	68.7	71.1	70.3	67.5	63.1	60.2	59.8
40°	58.6	58.6	59.0	61.0	63.9	66.7	65.1	60.6	57.8	56.6	56.2
42.5°	55.0	55.0	55.4	55.4	59.0	63.9	59.8	55.4	54.2	53.4	52.9
45°	51.7	51.7	51.7	51.3	53.4	59.4	55.0	51.3	50.5	50.5	50.1
47.5°	49.3	48.9	48.5	47.7	48.9	53.8	50.1	48.1	47.7	48.1	47.7
50°	46.1	45.7	45.3	44.9	45.7	47.7	46.9	44.9	45.3	45.3	45.7
52.5°	43.2	42.8	42.4	42.0	42.8	44.5	44.5	42.8	42.8	43.2	43.7
55°	41.6	40.8	40.4	40.4	40.8	42.8	42.4	41.2	41.2	42.0	42.4
57.5°	39.2	38.4	38.4	38.0	38.8	41.2	40.8	39.6	39.6	40.0	40.8
60°	36.8	36.4	36.0	36.8	37.2	39.6	39.2	38.4	38.0	39.2	39.2
62.5°	34.0	34.0	34.0	34.8	35.2	38.0	37.6	37.2	37.2	37.6	37.2
64°	32.3	32.3	32.7	33.1	34.0	36.4	36.4	36.4	36.4	36.4	36.0
65°	31.5	31.5	32.3	32.7	33.1	36.0	35.6	36.0	36.4	36.0	35.2
67.5°	29.5	29.5	30.7	30.7	31.1	34.4	34.0	34.8	35.6	34.8	34.0
70°	27.1	27.5	28.7	28.3	29.1	32.7	31.5	33.1	34.8	33.5	32.7
72.5°	24.7	25.1	26.7	25.9	26.3	30.7	29.1	30.7	33.1	32.3	31.5
75°	22.2	22.6	23.8	23.4	24.3	28.3	26.7	28.3	30.7	30.7	30.3
77.5°	19.0	19.8	20.6	20.2	21.8	25.5	23.8	25.1	27.1	28.7	27.9
80°	15.4	16.6	17.0	17.4	19.0	21.8	20.6	21.0	23.0	24.3	24.7
82.5°	10.5	12.5	13.3	13.7	16.2	17.0	17.4	17.0	18.2	19.8	18.6
85°	3.2	4.0	7.7	9.7	12.1	12.1	14.1	13.3	14.1	12.5	10.5
87.5°	0.0	0.0	0.0	2.8	7.3	7.3	10.1	9.3	9.7	7.3	6.5
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°	860.1	860.1	860.1	860.1	860.1	860.1	860.1	860.1	860.1	860.1	860.1
2.5°	799.9	806.7	822.1	839.9	849.6	870.6	883.5	897.3	911.0	913.8	918.3
5°	698.8	706.9	724.3	748.1	772.0	799.9	832.2	866.6	904.6	920.7	936.5
7.5°	544.4	546.0	570.7	613.9	635.0	674.6	720.7	773.6	832.2	862.5	894.9
10°	402.2	418.7	437.3	473.3	526.2	571.9	628.9	690.7	751.8	795.8	829.4
12.5°	316.1	337.1	367.8	407.4	447.4	490.7	556.6	622.8	698.0	737.6	778.9
15°	260.3	287.0	327.0	368.6	405.8	444.2	502.8	584.0	680.2	720.7	757.4
17.5°	206.1	235.6	278.5	322.1	366.6	413.5	481.4	582.0	699.2	746.1	784.1
20°	158.0	181.1	217.0	261.1	313.2	377.5	464.4	597.4	755.4	814.0	839.1
22.5°	117.2	130.5	158.8	204.9	266.4	345.6	447.4	619.2	824.9	893.6	912.6
25°	97.0	100.6	113.6	153.6	217.0	309.6	434.5	647.5	894.4	971.6	985.4
27.5°	87.3	89.3	95.4	110.3	169.8	280.1	417.5	680.2	967.6	1048.8	1047.6
30°	78.8	79.2	82.9	93.4	137.8	253.8	397.7	716.6	1032.7	1104.2	1100.6
32.5°	71.1	71.1	76.0	84.1	117.6	230.0	373.9	742.9	1089.3	1149.5	1137.8
35°	64.3	65.5	69.9	78.0	104.3	203.3	351.6	752.6	1137.8	1204.1	1170.9
37.5°	59.4	61.0	65.5	73.2	93.0	183.5	333.4	763.9	1197.6	1269.9	1208.1
40°	56.2	57.4	61.4	67.9	84.1	166.9	313.6	771.6	1257.0	1340.3	1247.3
42.5°	52.9	54.2	58.2	64.3	80.0	147.5	294.6	776.0	1318.8	1401.3	1280.0
45°	50.1	51.7	55.8	61.4	80.4	130.1	278.9	774.4	1356.0	1445.3	1305.5
47.5°	48.1	49.7	54.2	61.4	78.0	120.0	265.5	768.7	1383.5	1474.0	1317.2
50°	46.1	47.7	52.9	67.9	74.0	117.2	255.4	767.9	1412.2	1479.7	1317.2
52.5°	44.1	46.9	53.4	68.3	67.9	116.0	247.4	789.4	1451.8	1489.4	1328.9
55°	42.8	45.3	55.0	63.1	59.4	112.0	242.5	818.9	1518.5	1542.8	1388.0
57.5°	41.2	43.2	54.2	59.0	52.9	102.7	238.5	847.2	1606.2	1641.8	1505.6
60°	39.2	41.6	52.5	50.5	48.1	87.3	236.0	870.6	1638.9	1705.6	1632.1
62.5°	37.2	40.0	57.4	44.1	44.5	72.8	231.6	893.2	1569.8	1690.3	1713.3
64°	36.0	38.8	53.4	41.2	42.4	66.3	227.1	894.4	1508.8	1653.9	1728.7
65°	35.2	37.6	49.7	39.6	40.8	64.7	223.1	877.5	1451.4	1615.1	1724.2
67.5°	34.0	35.6	38.4	36.8	38.0	61.8	195.6	802.7	1329.3	1515.3	1655.1
70°	32.3	33.5	34.0	33.5	35.6	59.8	165.3	696.4	1196.0	1410.6	1547.6
72.5°	30.7	30.7	30.7	30.3	32.7	57.0	148.7	562.6	1033.5	1273.2	1413.8
75°	29.5	28.3	27.9	27.1	29.9	55.4	134.2	422.4	798.7	1060.6	1184.6
77.5°	27.1	25.9	24.7	23.8	26.7	49.3	112.0	298.3	588.9	771.6	914.3
80°	23.4	22.6	21.0	19.8	22.2	38.8	84.9	184.3	430.9	521.0	599.8
82.5°	19.0	18.6	17.0	15.4	16.2	27.9	57.8	93.8	287.4	282.9	335.1
85°	11.7	14.6	12.5	10.1	10.9	16.2	23.4	29.9	88.1	52.9	82.0
87.5°	6.9	9.3	7.7	5.3	4.0	7.3	6.5	6.1	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°	860.1	860.1	860.1	860.1	860.1	860.1	860.1	860.1	860.1	860.1
2.5°	928.8	934.1	936.9	926.4	915.1	905.0	885.6	866.2	856.1	858.1
5°	966.8	975.7	978.1	962.8	930.8	898.1	850.8	810.0	785.3	783.7
7.5°	952.2	981.3	986.2	969.6	924.0	862.9	798.7	741.7	717.0	711.4
10°	900.5	945.0	959.5	953.9	909.4	839.5	761.5	689.1	664.5	652.7
12.5°	847.6	894.0	902.9	908.6	881.5	822.5	736.8	662.4	632.9	623.2
15°	812.8	844.7	847.2	852.4	846.8	814.4	748.1	673.4	637.8	624.5
17.5°	808.0	796.6	789.0	799.9	806.7	814.8	777.6	714.2	676.2	659.2
20°	808.8	773.6	751.8	751.0	780.5	825.3	837.5	782.9	733.6	717.8
22.5°	838.3	761.5	725.1	720.7	756.6	843.1	898.5	864.5	815.2	794.2
25°	882.3	754.2	706.1	707.3	743.3	854.8	950.6	946.2	902.9	875.9
27.5°	924.8	766.3	703.7	706.9	747.7	862.5	993.9	1023.0	974.5	951.0
30°	958.7	793.4	711.0	713.8	761.5	873.0	1015.3	1091.3	1032.7	1004.8
32.5°	988.2	818.9	721.9	723.9	783.3	888.0	1035.5	1148.7	1089.3	1056.1
35°	1014.9	840.7	738.4	745.3	811.2	909.4	1056.1	1210.9	1158.4	1116.7
37.5°	1038.3	867.4	771.2	782.5	852.0	940.5	1082.8	1293.0	1235.6	1188.3
40°	1051.7	891.2	819.7	836.7	905.0	980.9	1116.7	1346.3	1309.5	1256.2
42.5°	1061.8	924.0	897.7	928.4	987.0	1018.9	1132.9	1370.2	1353.2	1307.5
45°	1067.0	988.6	1014.9	1043.6	1079.6	1060.6	1124.0	1378.3	1373.0	1333.8
47.5°	1090.9	1086.0	1150.7	1190.3	1188.3	1123.2	1107.0	1377.4	1385.9	1353.6
50°	1139.4	1199.6	1290.1	1328.9	1314.0	1181.8	1103.8	1376.2	1411.8	1385.5
52.5°	1197.2	1313.2	1440.9	1457.1	1425.5	1241.2	1128.1	1397.2	1460.3	1442.9
55°	1273.2	1419.9	1559.3	1564.6	1520.1	1299.0	1179.8	1459.1	1550.8	1550.0
57.5°	1379.1	1515.7	1658.8	1652.3	1589.6	1379.1	1263.1	1551.6	1651.5	1665.6
60°	1494.3	1616.7	1739.2	1735.5	1668.9	1471.2	1377.4	1688.7	1739.6	1743.2
62.5°	1604.6	1710.5	1816.8	1799.4	1724.2	1566.6	1535.9	1834.2	1797.0	1769.9
64°	1676.5	1742.0	1836.6	1809.1	1737.6	1612.3	1627.2	1881.5	1813.1	1768.3
65°	1724.2	1749.7	1832.1	1799.0	1733.1	1629.2	1696.3	1901.3	1816.0	1759.0
67.5°	1809.9	1705.6	1711.7	1685.4	1626.4	1613.5	1809.5	1890.3	1784.9	1699.6
70°	1786.1	1528.2	1444.9	1428.4	1357.6	1430.4	1795.4	1787.7	1668.0	1564.2
72.5°	1582.4	1227.1	1107.5	1092.5	994.3	1084.0	1549.2	1522.5	1342.3	1256.2
75°	1303.9	930.0	791.0	803.5	728.7	811.6	1232.3	1043.2	893.6	842.3
77.5°	1012.1	657.2	546.5	531.5	516.5	525.4	847.2	626.5	522.2	474.9
80°	645.1	413.1	409.8	374.7	362.5	305.6	435.3	333.4	262.3	248.2
82.5°	342.7	238.1	270.4	216.6	174.2	125.3	147.5	99.0	83.7	87.7
85°	93.8	49.3	13.7	0.0	0.0	0.0	0.0	0.4	0.4	0.4
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	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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