

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: P401458

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

Issue Date: 5/20/2020

Test Information

Test Method: LM-79-08
Report Number: P401458
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-SA1D-730-U-SLR
Description: ENTRI LED LUMINAIRE
(1) 70 CRI, 3000K, 800mA LIGHTSQUARE WITH 16 LEDS AND SPILL LIGHT ELIMINATOR RIGHT OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4547 lumens
Efficiency: N/A
Efficacy: 105.5 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): 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

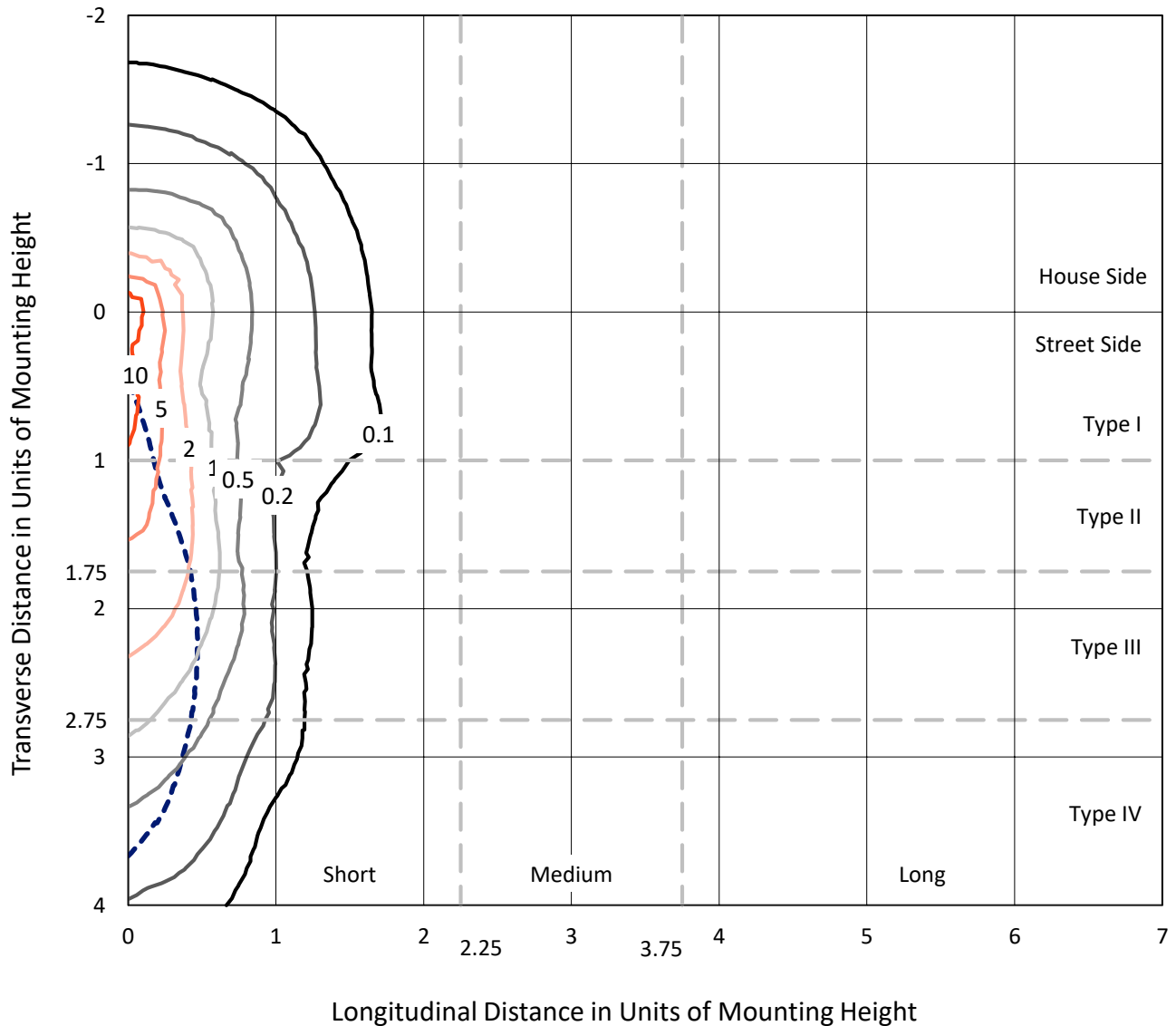


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

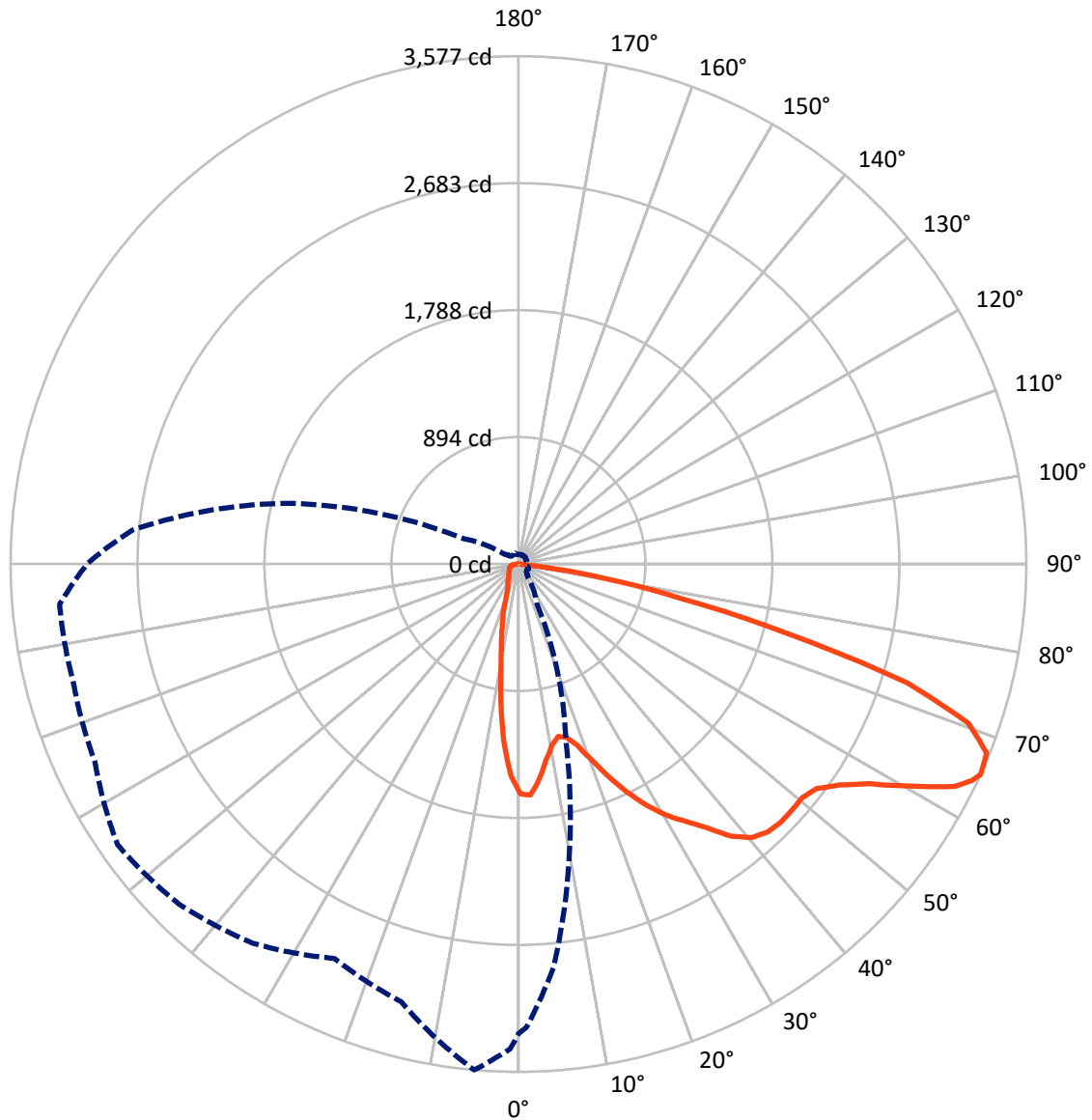


Based on 10 foot mounting height. Maximum calculated value = 16.2 fc
 Type IV - Short - Non-Cutoff

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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	933.0	0.0	933.0
	% Fixture	20.5	0.0	20.5
Street Side	Lumens	3614.0	0.0	3614.0
	% Fixture	79.5	0.0	79.5
Total	Lumens	4547.0	0.0	4547.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	123.4	2.7
10°-20°	245.9	5.4
20°-30°	340.9	7.5
30°-40°	476.5	10.5
40°-50°	648.4	14.3
50°-60°	886.7	19.5
60°-70°	1084.2	23.8
70°-80°	654.6	14.4
80°-90°	86.3	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°	4547.0	100.0
0°-180°	4547.0	100.0



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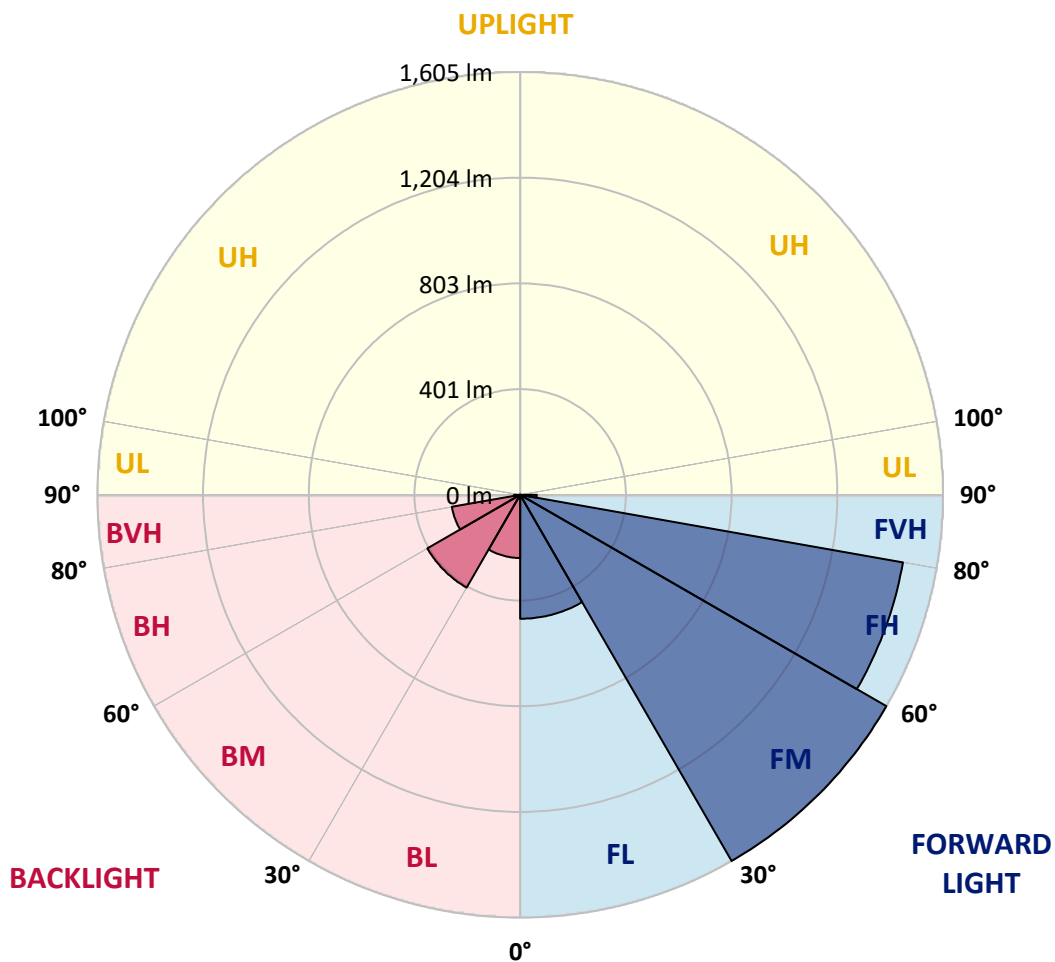
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	470.5	10.3			
FM	(30°-60°)	1605.0	35.3			
FH	(60°-80°)	1475.5	32.4			G1/1800
FVH	(80°-90°)	63.1	1.4			G1/100
BL	(0°-30°)	239.7	5.3	B1/500		
BM	(30°-60°)	406.7	8.9	B1/1000		
BH	(60°-80°)	263.3	5.8	B1/500		G1/500
BVH	(80°-90°)	23.2	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°	1618.1	1618.1	1618.1	1618.1	1618.1	1618.1	1618.1	1618.1	1618.1	1618.1	1618.1
2.5°	1614.3	1609.7	1598.3	1567.9	1535.2	1496.4	1489.6	1447.7	1452.3	1440.1	1443.2
5°	1474.3	1468.3	1437.1	1376.3	1293.4	1245.5	1208.2	1186.2	1167.9	1158.8	1170.2
7.5°	1338.2	1329.9	1292.6	1185.4	1093.4	1017.4	956.5	919.3	882.8	853.9	840.2
10°	1228.0	1224.9	1175.5	1054.6	939.1	846.3	806.7	767.2	736.0	695.0	661.5
12.5°	1172.5	1163.4	1104.8	964.1	851.6	794.6	757.3	707.1	664.6	614.4	571.0
15°	1174.8	1164.1	1091.1	943.6	821.2	752.0	695.0	634.9	572.6	521.6	477.5
17.5°	1240.2	1232.6	1143.6	962.6	795.3	699.5	610.6	533.0	464.6	400.7	361.2
20°	1350.4	1339.0	1215.8	985.4	762.6	639.5	518.6	412.1	338.4	282.1	250.9
22.5°	1494.1	1472.8	1318.5	1013.6	730.0	571.0	419.0	300.3	235.0	206.8	198.5
25°	1647.7	1631.0	1442.4	1049.3	695.0	496.5	310.2	218.2	195.4	184.0	177.9
27.5°	1789.1	1761.8	1575.5	1088.8	648.6	422.0	235.7	187.8	172.6	167.3	163.5
30°	1890.3	1866.7	1667.5	1134.5	608.3	344.4	201.5	170.3	158.2	149.8	148.3
32.5°	1986.8	1953.4	1734.4	1155.8	574.8	302.6	186.3	158.2	146.8	138.4	135.3
35°	2100.9	2067.4	1811.2	1158.8	549.7	285.1	171.8	149.0	136.9	129.3	125.5
37.5°	2235.5	2189.9	1897.9	1161.1	524.7	278.3	159.7	141.4	129.3	120.9	117.9
40°	2363.2	2328.2	1986.8	1157.3	507.9	268.4	152.1	133.1	121.7	114.1	110.3
42.5°	2459.8	2422.5	2062.9	1145.9	498.0	251.7	155.1	127.0	116.3	108.0	103.4
45°	2509.2	2475.8	2132.1	1135.2	492.7	237.2	152.1	124.7	112.5	102.6	98.1
47.5°	2546.5	2513.8	2202.8	1130.7	483.6	226.6	139.9	133.1	108.7	97.3	92.8
50°	2606.5	2578.4	2298.6	1156.5	469.1	219.7	128.5	142.2	107.2	92.8	87.4
52.5°	2714.5	2696.3	2456.7	1216.6	453.9	208.3	117.1	136.1	108.7	89.7	83.6
55°	2916.0	2904.6	2674.2	1295.7	439.5	193.9	104.9	123.2	108.0	84.4	79.8
57.5°	3133.5	3130.4	2938.1	1364.9	418.2	169.6	97.3	104.2	102.6	79.8	74.5
60°	3279.5	3269.6	3059.7	1403.6	390.8	139.9	91.2	88.2	104.9	75.3	69.2
62.5°	3329.6	3296.9	3023.2	1389.2	349.8	120.9	84.4	80.6	97.3	70.7	63.9
64°	3326.6	3278.7	2928.2	1334.4	323.2	117.1	80.6	75.3	85.9	67.7	61.6
65°	3309.1	3263.5	2849.1	1291.9	308.7	117.1	78.3	73.0	78.3	66.2	60.1
67.5°	3197.3	3137.3	2579.2	1094.2	271.5	118.6	73.0	66.9	65.4	60.8	56.3
70°	2942.6	2864.3	2208.9	860.7	251.7	119.4	66.9	60.8	58.5	55.5	51.7
72.5°	2363.2	2258.3	1758.0	615.1	231.2	117.1	60.8	55.5	53.2	50.2	46.4
75°	1584.6	1469.8	1295.7	405.3	189.3	104.9	52.5	47.9	47.1	44.1	41.1
77.5°	893.4	845.5	764.9	222.8	130.8	72.2	41.8	38.8	39.5	38.0	35.0
80°	466.9	444.8	409.1	108.0	63.1	35.0	26.6	26.6	30.4	30.4	28.9
82.5°	165.0	165.8	160.4	24.3	12.9	10.6	9.1	12.9	17.5	21.3	21.3
85°	0.8	0.8	0.0	0.0	0.0	0.0	0.0	0.0	1.5	3.0	5.3
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°	1618.1	1618.1	1618.1	1618.1	1618.1	1618.1	1618.1	1618.1	1618.1	1618.1	1618.1
2.5°	1417.3	1421.9	1434.0	1431.8	1443.9	1438.6	1454.6	1462.9	1467.5	1491.1	1502.5
5°	1161.1	1162.6	1205.9	1215.1	1237.9	1225.7	1253.8	1243.2	1266.0	1269.1	1307.1
7.5°	853.1	856.2	877.5	927.6	977.1	997.6	1006.0	1018.9	1008.2	1004.4	1009.8
10°	648.6	650.9	653.2	688.9	732.2	775.6	775.6	776.3	757.3	738.3	734.5
12.5°	554.3	539.9	517.0	517.8	548.2	568.8	584.7	568.0	565.0	574.1	584.0
15°	456.2	441.8	426.6	408.3	409.1	423.5	431.9	431.1	446.3	453.2	473.7
17.5°	354.3	333.8	334.6	323.9	309.5	318.6	320.9	334.6	354.3	363.5	367.3
20°	238.0	238.0	244.1	257.0	250.2	256.2	257.0	267.6	276.8	271.5	276.8
22.5°	196.9	196.2	198.5	206.8	213.7	219.0	220.5	219.7	210.6	206.8	214.4
25°	178.7	177.9	178.7	183.2	190.9	197.7	194.7	190.1	179.4	178.7	180.2
27.5°	163.5	164.2	165.8	168.8	173.4	181.7	178.7	169.6	164.2	162.7	162.7
30°	150.6	150.6	153.6	156.6	162.0	169.6	164.2	156.6	151.3	149.8	149.0
32.5°	137.6	139.9	142.2	145.2	149.8	157.4	152.8	146.0	140.7	137.6	135.3
35°	124.7	126.2	130.8	135.3	139.1	145.2	142.2	136.1	130.8	123.9	120.9
37.5°	117.1	117.1	119.4	126.2	129.3	133.8	132.3	127.0	118.6	113.3	112.5
40°	110.3	110.3	111.0	114.8	120.1	125.5	122.4	114.1	108.7	106.5	105.7
42.5°	103.4	103.4	104.2	104.2	111.0	120.1	112.5	104.2	101.9	100.4	99.6
45°	97.3	97.3	97.3	96.6	100.4	111.8	103.4	96.6	95.0	95.0	94.3
47.5°	92.8	92.0	91.2	89.7	92.0	101.1	94.3	90.5	89.7	90.5	89.7
50°	86.7	85.9	85.2	84.4	85.9	89.7	88.2	84.4	85.2	85.2	85.9
52.5°	81.4	80.6	79.8	79.1	80.6	83.6	83.6	80.6	80.6	81.4	82.1
55°	78.3	76.8	76.0	76.0	76.8	80.6	79.8	77.6	77.6	79.1	79.8
57.5°	73.8	72.2	72.2	71.5	73.0	77.6	76.8	74.5	74.5	75.3	76.8
60°	69.2	68.4	67.7	69.2	70.0	74.5	73.8	72.2	71.5	73.8	73.8
62.5°	63.9	63.9	63.9	65.4	66.2	71.5	70.7	70.0	70.0	70.7	70.0
64°	60.8	60.8	61.6	62.3	63.9	68.4	68.4	68.4	68.4	68.4	67.7
65°	59.3	59.3	60.8	61.6	62.3	67.7	66.9	67.7	68.4	67.7	66.2
67.5°	55.5	55.5	57.8	57.8	58.5	64.6	63.9	65.4	66.9	65.4	63.9
70°	50.9	51.7	54.0	53.2	54.7	61.6	59.3	62.3	65.4	63.1	61.6
72.5°	46.4	47.1	50.2	48.7	49.4	57.8	54.7	57.8	62.3	60.8	59.3
75°	41.8	42.6	44.9	44.1	45.6	53.2	50.2	53.2	57.8	57.8	57.0
77.5°	35.7	37.3	38.8	38.0	41.1	47.9	44.9	47.1	50.9	54.0	52.5
80°	28.9	31.2	31.9	32.7	35.7	41.1	38.8	39.5	43.3	45.6	46.4
82.5°	19.8	23.6	25.1	25.9	30.4	31.9	32.7	31.9	34.2	37.3	35.0
85°	6.1	7.6	14.4	18.2	22.8	22.8	26.6	25.1	26.6	23.6	19.8
87.5°	0.0	0.0	0.0	5.3	13.7	13.7	19.0	17.5	18.2	13.7	12.2
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°	1618.1	1618.1	1618.1	1618.1	1618.1	1618.1	1618.1	1618.1	1618.1	1618.1	1618.1
2.5°	1504.8	1517.7	1546.6	1580.0	1598.3	1637.8	1662.2	1688.0	1713.9	1719.2	1727.6
5°	1314.7	1329.9	1362.6	1407.4	1452.3	1504.8	1565.6	1630.2	1701.7	1732.1	1761.8
7.5°	1024.2	1027.3	1073.6	1155.0	1194.5	1269.1	1355.7	1455.3	1565.6	1622.6	1683.4
10°	756.6	787.7	822.7	890.4	990.0	1075.9	1183.1	1299.5	1414.3	1497.2	1560.3
12.5°	594.6	634.1	691.9	766.4	841.7	923.1	1047.0	1171.7	1313.2	1387.7	1465.2
15°	489.7	539.9	615.1	693.5	763.4	835.6	945.9	1098.7	1279.7	1355.7	1424.9
17.5°	387.8	443.3	523.9	606.0	689.7	777.9	905.6	1094.9	1315.4	1403.6	1475.1
20°	297.3	340.6	408.3	491.2	589.3	710.2	873.7	1123.8	1421.1	1531.4	1578.5
22.5°	220.5	245.6	298.8	385.5	501.1	650.1	841.7	1164.9	1551.9	1681.2	1716.9
25°	182.5	189.3	213.7	288.9	408.3	582.4	817.4	1218.1	1682.7	1827.9	1853.8
27.5°	164.2	168.0	179.4	207.6	319.4	526.9	785.5	1279.7	1820.3	1973.1	1970.9
30°	148.3	149.0	155.9	175.6	259.3	477.5	748.2	1348.1	1942.7	2077.3	2070.5
32.5°	133.8	133.8	142.9	158.2	221.3	432.6	703.3	1397.6	2049.2	2162.5	2140.4
35°	120.9	123.2	131.5	146.8	196.2	382.5	661.5	1415.8	2140.4	2265.1	2202.8
37.5°	111.8	114.8	123.2	137.6	174.9	345.2	627.3	1437.1	2253.0	2389.1	2272.7
40°	105.7	108.0	115.6	127.7	158.2	314.0	590.0	1451.5	2364.7	2521.4	2346.5
42.5°	99.6	101.9	109.5	120.9	150.6	277.5	554.3	1459.9	2481.1	2636.2	2408.1
45°	94.3	97.3	104.9	115.6	151.3	244.8	524.7	1456.9	2551.0	2719.1	2456.0
47.5°	90.5	93.5	101.9	115.6	146.8	225.8	499.6	1446.2	2602.7	2773.1	2478.0
50°	86.7	89.7	99.6	127.7	139.1	220.5	480.6	1444.7	2656.7	2783.7	2478.0
52.5°	82.9	88.2	100.4	128.5	127.7	218.2	465.3	1485.0	2731.2	2801.9	2500.1
55°	80.6	85.2	103.4	118.6	111.8	210.6	456.2	1540.5	2856.7	2902.3	2611.1
57.5°	77.6	81.4	101.9	111.0	99.6	193.1	448.6	1593.7	3021.7	3088.6	2832.4
60°	73.8	78.3	98.8	95.0	90.5	164.2	444.1	1637.8	3083.3	3208.7	3070.4
62.5°	70.0	75.3	108.0	82.9	83.6	136.9	435.7	1680.4	2953.3	3179.8	3223.2
64°	67.7	73.0	100.4	77.6	79.8	124.7	427.3	1682.7	2838.4	3111.4	3252.1
65°	66.2	70.7	93.5	74.5	76.8	121.7	419.7	1650.8	2730.5	3038.4	3243.7
67.5°	63.9	66.9	72.2	69.2	71.5	116.3	368.0	1510.1	2500.8	2850.6	3113.7
70°	60.8	63.1	63.9	63.1	66.9	112.5	311.0	1310.1	2249.9	2653.7	2911.4
72.5°	57.8	57.8	57.8	57.0	61.6	107.2	279.8	1058.4	1944.3	2395.2	2659.8
75°	55.5	53.2	52.5	50.9	56.3	104.2	252.4	794.6	1502.5	1995.2	2228.6
77.5°	50.9	48.7	46.4	44.9	50.2	92.8	210.6	561.1	1107.9	1451.5	1719.9
80°	44.1	42.6	39.5	37.3	41.8	73.0	159.7	346.7	810.5	980.1	1128.4
82.5°	35.7	35.0	31.9	28.9	30.4	52.5	108.7	176.4	540.6	532.3	630.3
85°	22.1	27.4	23.6	19.0	20.5	30.4	44.1	56.3	165.8	99.6	154.4
87.5°	12.9	17.5	14.4	9.9	7.6	13.7	12.2	11.4	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°	1618.1	1618.1	1618.1	1618.1	1618.1	1618.1	1618.1	1618.1	1618.1	1618.1
2.5°	1747.3	1757.2	1762.5	1742.8	1721.5	1702.5	1666.0	1629.5	1610.5	1614.3
5°	1818.8	1835.5	1840.1	1811.2	1751.1	1689.5	1600.6	1523.8	1477.4	1474.3
7.5°	1791.4	1846.2	1855.3	1824.1	1738.2	1623.4	1502.5	1395.3	1348.9	1338.2
10°	1694.1	1777.7	1805.1	1794.5	1710.8	1579.3	1432.5	1296.4	1250.0	1228.0
12.5°	1594.5	1681.9	1698.7	1709.3	1658.4	1547.3	1386.1	1246.2	1190.7	1172.5
15°	1529.1	1589.2	1593.7	1603.6	1593.0	1532.1	1407.4	1266.8	1199.9	1174.8
17.5°	1520.0	1498.7	1484.2	1504.8	1517.7	1532.9	1462.9	1343.6	1272.1	1240.2
20°	1521.5	1455.3	1414.3	1412.8	1468.3	1552.7	1575.5	1472.8	1380.1	1350.4
22.5°	1577.0	1432.5	1364.1	1355.7	1423.4	1586.1	1690.3	1626.4	1533.7	1494.1
25°	1659.9	1418.8	1328.4	1330.6	1398.3	1608.2	1788.4	1780.0	1698.7	1647.7
27.5°	1739.7	1441.7	1323.8	1329.9	1406.7	1622.6	1869.7	1924.5	1833.2	1789.1
30°	1803.6	1492.6	1337.5	1342.8	1432.5	1642.4	1910.0	2053.0	1942.7	1890.3
32.5°	1859.1	1540.5	1358.0	1361.8	1473.6	1670.5	1948.1	2161.0	2049.2	1986.8
35°	1909.3	1581.6	1389.2	1402.1	1526.1	1710.8	1986.8	2278.1	2179.2	2100.9
37.5°	1953.4	1631.7	1450.8	1472.1	1602.9	1769.4	2037.0	2432.4	2324.4	2235.5
40°	1978.5	1676.6	1542.0	1574.0	1702.5	1845.4	2100.9	2532.8	2463.6	2363.2
42.5°	1997.5	1738.2	1688.8	1746.6	1856.8	1916.9	2131.3	2577.6	2545.7	2459.8
45°	2007.4	1859.9	1909.3	1963.3	2030.9	1995.2	2114.6	2592.8	2583.0	2509.2
47.5°	2052.2	2043.1	2164.8	2239.3	2235.5	2113.1	2082.6	2591.3	2607.3	2546.5
50°	2143.5	2256.8	2427.1	2500.1	2471.9	2223.3	2076.6	2589.0	2656.0	2606.5
52.5°	2252.2	2470.4	2710.7	2741.1	2681.8	2335.1	2122.2	2628.6	2747.2	2714.5
55°	2395.2	2671.2	2933.5	2943.4	2859.7	2443.8	2219.5	2744.9	2917.5	2916.0
57.5°	2594.4	2851.4	3120.5	3108.4	2990.5	2594.4	2376.1	2919.0	3106.9	3133.5
60°	2811.1	3041.5	3271.9	3265.0	3139.5	2767.7	2591.3	3176.8	3272.6	3279.5
62.5°	3018.7	3217.9	3417.8	3385.1	3243.7	2947.2	2889.4	3450.5	3380.6	3329.6
64°	3154.0	3277.2	3455.1	3403.4	3268.8	3033.1	3061.2	3539.5	3411.0	3326.6
65°	3243.7	3291.6	3446.7	3384.4	3260.4	3065.0	3191.3	3576.8	3416.3	3309.1
67.5°	3404.9	3208.7	3220.1	3170.7	3059.7	3035.4	3404.2	3556.2	3357.8	3197.3
70°	3360.1	2874.9	2718.3	2687.1	2554.1	2690.9	3377.5	3363.1	3138.0	2942.6
72.5°	2976.8	2308.5	2083.4	2055.3	1870.5	2039.3	2914.5	2864.3	2525.2	2363.2
75°	2452.9	1749.6	1488.0	1511.6	1370.9	1526.8	2318.4	1962.5	1681.2	1584.6
77.5°	1904.0	1236.4	1028.0	999.9	971.7	988.5	1593.7	1178.6	982.4	893.4
80°	1213.5	777.1	771.0	704.9	682.0	574.8	818.9	627.3	493.5	466.9
82.5°	644.8	447.9	508.7	407.6	327.7	235.7	277.5	186.3	157.4	165.0
85°	176.4	92.8	25.9	0.0	0.0	0.0	0.0	0.8	0.8	0.8
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	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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