

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: P401817

Luminaire Tested: **ENT-SA1F-730-U-SLR-HSS**

Issue Date: 5/20/2020

Test Information

Test Method: LM-79-08
Report Number: P401817
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-SA1F-730-U-SLR-HSS
Description: ENTRI LED LUMINAIRE
(1) 70 CRI, 3000K, 1200mA 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: 5331 lumens
Efficiency: N/A
Efficacy: 80.7 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): 66.1
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

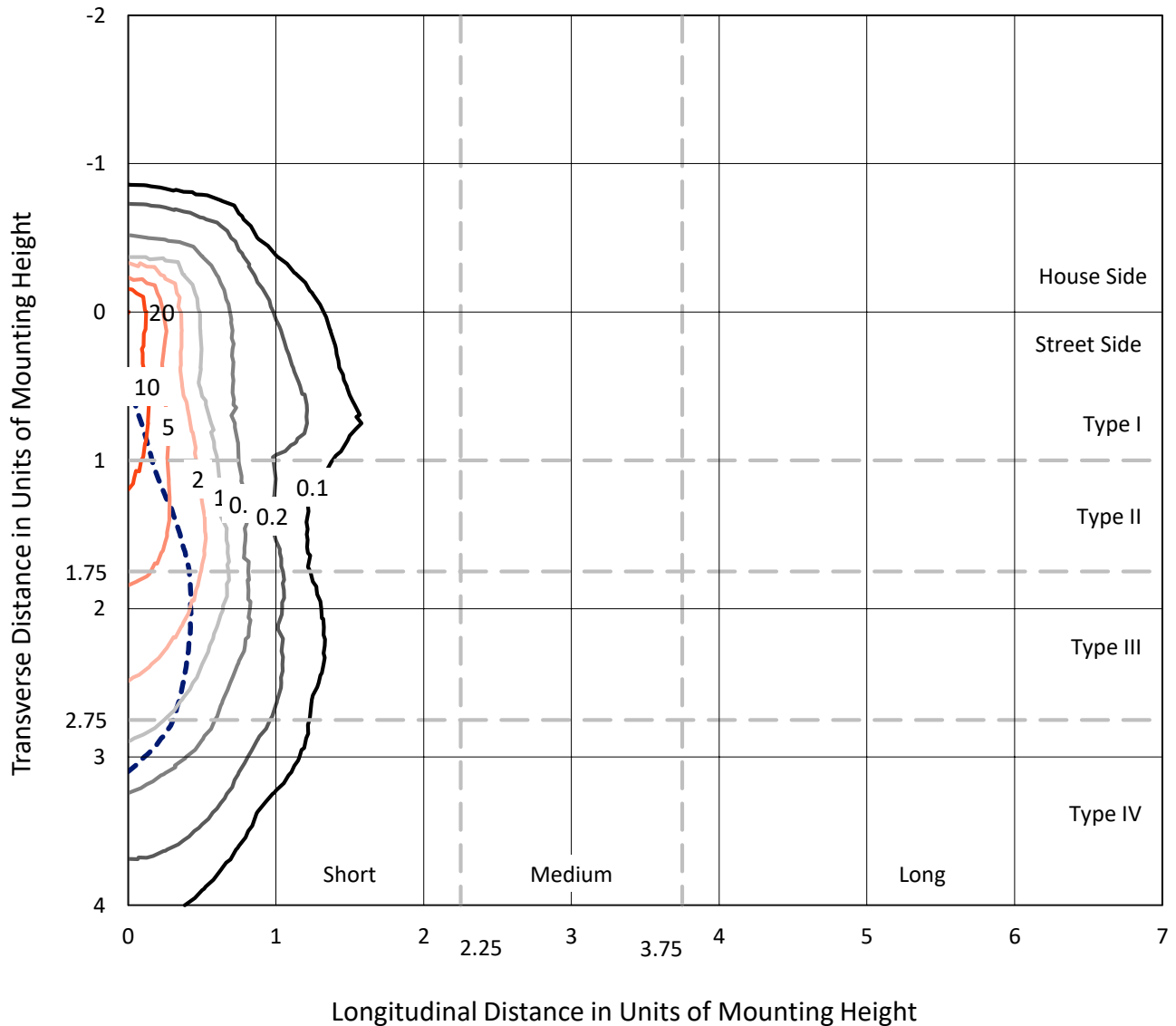


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Iso-Footcandle Lines of Horizontal Illumination

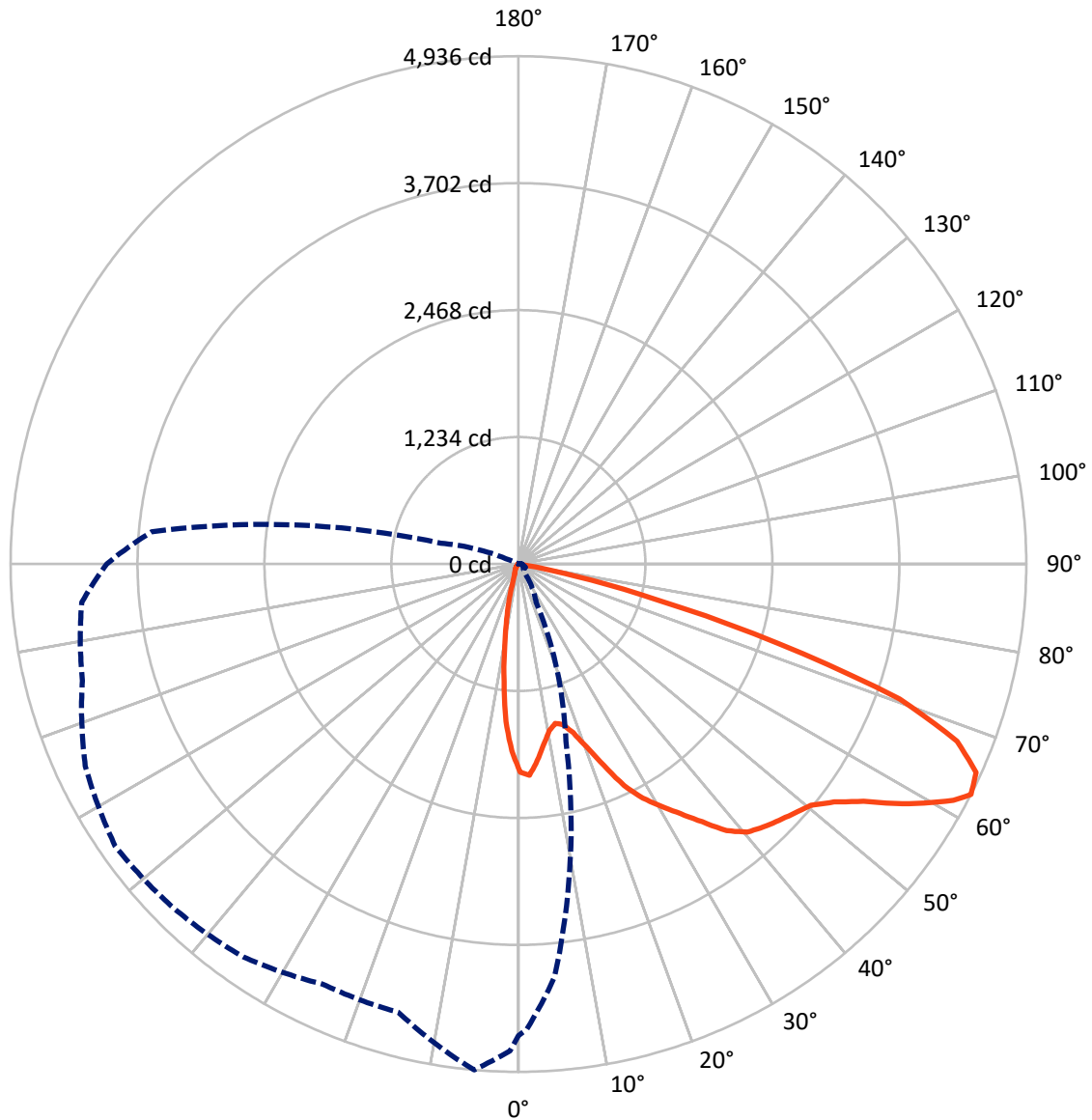
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 20.2 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	749.9	0.0	749.9
	% Fixture	14.1	0.0	14.1
Street Side	Lumens	4581.1	0.0	4581.1
	% Fixture	85.9	0.0	85.9
Total	Lumens	5331.0	0.0	5331.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	151.6	2.8
10°-20°	288.2	5.4
20°-30°	401.1	7.5
30°-40°	580.0	10.9
40°-50°	831.7	15.6
50°-60°	1206.6	22.6
60°-70°	1305.4	24.5
70°-80°	527.2	9.9
80°-90°	39.1	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°	5331.0	100.0
0°-180°	5331.0	100.0

Coefficient of Utilization



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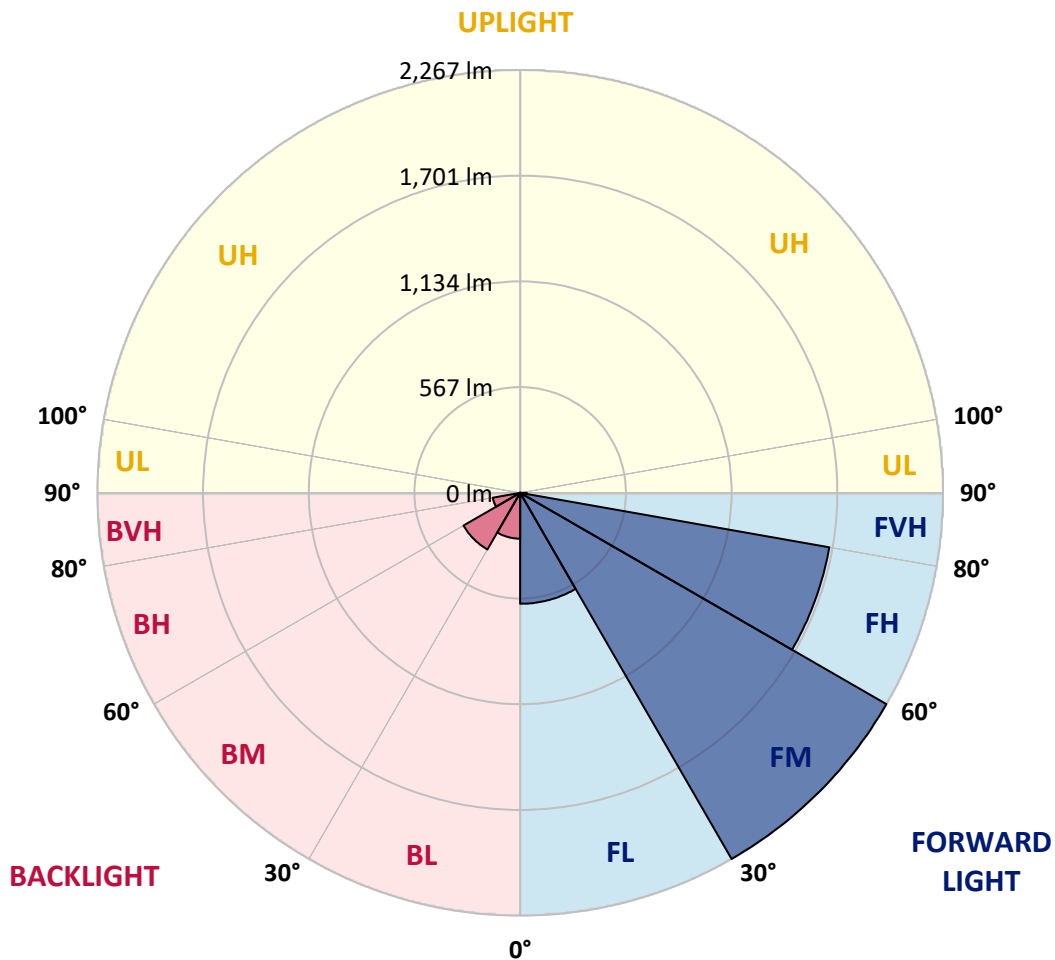
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	595.1	11.2			
FM	(30°-60°)	2267.4	42.5			
FH	(60°-80°)	1683.5	31.6			G1/1800
FVH	(80°-90°)	35.1	0.7			G1/100
BL	(0°-30°)	245.9	4.6	B1/500		
BM	(30°-60°)	350.9	6.6	B1/1000		
BH	(60°-80°)	149.1	2.8	B1/500		G1/500
BVH	(80°-90°)	4.0	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°	2022.2	2022.2	2022.2	2022.2	2022.2	2022.2	2022.2	2022.2	2022.2	2022.2	2022.2
2.5°	2030.6	2022.2	2003.2	1962.0	1903.0	1865.0	1840.7	1809.1	1776.4	1765.8	1744.7
5°	1853.4	1839.7	1813.3	1709.9	1617.1	1524.3	1457.8	1394.5	1373.4	1331.2	1356.5
7.5°	1682.5	1676.2	1615.0	1481.0	1333.3	1214.1	1138.2	1045.4	1017.9	974.7	939.9
10°	1548.5	1543.3	1469.4	1294.3	1135.0	1035.9	975.7	915.6	855.5	794.3	745.8
12.5°	1481.0	1469.4	1384.0	1195.2	1047.5	965.2	901.9	821.7	757.4	675.1	616.0
15°	1491.6	1481.0	1382.9	1179.3	1005.3	891.4	797.5	702.5	611.8	530.6	472.6
17.5°	1576.0	1571.7	1452.5	1193.0	954.6	803.8	678.3	550.6	443.0	355.5	305.9
20°	1740.5	1727.9	1554.9	1222.6	901.9	702.5	530.6	373.4	283.8	223.6	202.5
22.5°	1944.1	1915.6	1716.3	1265.8	851.3	593.9	384.0	251.1	202.5	179.3	164.6
25°	2183.6	2184.6	1916.7	1323.8	800.6	492.6	269.0	199.4	170.9	154.0	141.4
27.5°	2377.6	2362.9	2097.1	1381.9	745.8	404.0	225.7	174.1	149.8	131.9	124.5
30°	2521.1	2499.0	2216.3	1421.9	675.1	341.8	202.5	165.6	141.4	121.3	111.8
32.5°	2668.8	2641.4	2323.8	1444.1	632.9	312.2	179.3	144.5	126.6	118.1	105.5
35°	2841.8	2817.5	2443.0	1442.0	610.8	295.4	162.4	130.8	107.6	93.9	85.4
37.5°	3034.8	2985.2	2566.5	1432.5	594.9	286.9	147.7	121.3	100.2	85.4	74.9
40°	3200.4	3150.9	2680.4	1419.8	584.4	278.5	139.2	115.0	94.9	79.1	68.6
42.5°	3330.2	3282.7	2786.9	1404.0	579.1	260.5	143.5	110.8	90.7	74.9	63.3
45°	3442.0	3393.5	2913.5	1401.9	577.0	247.9	141.4	109.7	88.6	69.6	59.1
47.5°	3571.7	3546.4	3080.2	1436.7	568.6	238.4	129.7	118.1	87.6	67.5	55.9
50°	3763.7	3741.6	3298.5	1540.1	555.9	228.9	118.1	129.7	87.6	65.4	52.7
52.5°	4032.7	4007.4	3642.4	1675.1	544.3	218.4	106.5	125.5	88.6	62.2	50.6
55°	4311.2	4307.0	3967.3	1818.6	533.8	195.1	93.9	112.9	86.5	58.0	47.5
57.5°	4529.6	4526.4	4211.0	1915.6	513.7	157.2	85.4	93.9	80.2	52.7	43.2
60°	4619.2	4592.8	4237.4	1915.6	467.3	129.7	78.1	73.8	81.2	47.5	38.0
61°	4619.2	4585.5	4189.9	1887.1	444.1	123.4	73.8	68.6	83.3	45.4	35.9
62.5°	4583.4	4527.4	4027.4	1784.8	407.2	123.4	67.5	61.2	75.9	43.2	32.7
65°	4424.1	4332.3	3646.6	1551.7	369.2	126.6	58.0	51.7	54.9	36.9	28.5
67.5°	4030.6	3927.2	3153.0	1227.9	338.6	134.0	48.5	45.4	42.2	32.7	25.3
70°	3320.7	3233.1	2572.8	919.8	314.3	136.1	42.2	38.0	35.9	28.5	22.2
72.5°	2122.4	1977.9	1606.5	623.4	252.1	118.1	34.8	35.9	32.7	23.2	17.9
75°	1025.3	1065.4	934.6	314.3	169.8	77.0	27.4	29.5	26.4	21.1	15.8
77.5°	458.9	450.4	446.2	80.2	43.2	26.4	16.9	20.0	21.1	19.0	13.7
80°	47.5	64.3	38.0	24.3	15.8	11.6	9.5	10.5	12.7	13.7	7.4
82.5°	2.1	1.1	1.1	3.2	3.2	2.1	0.0	0.0	2.1	2.1	1.1
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°	2022.2	2022.2	2022.2	2022.2	2022.2	2022.2	2022.2	2022.2	2022.2	2022.2	2022.2
2.5°	1725.7	1754.2	1741.6	1738.4	1755.3	1746.8	1772.2	1773.2	1792.2	1817.5	1833.3
5°	1356.5	1334.4	1378.7	1408.2	1445.2	1433.5	1477.9	1472.6	1496.8	1536.9	1521.1
7.5°	942.0	945.2	968.4	994.7	1093.9	1113.9	1128.7	1140.3	1139.2	1148.7	1165.6
10°	720.5	702.5	686.7	723.6	762.7	805.9	812.2	828.1	784.8	802.7	811.2
12.5°	589.7	568.6	533.8	514.8	524.3	549.6	560.1	569.6	544.3	545.4	564.3
15°	447.3	418.8	405.1	379.7	370.3	368.1	373.4	359.7	356.5	344.9	352.3
17.5°	291.1	282.7	275.3	270.0	262.7	260.5	241.6	208.9	189.9	185.7	185.7
20°	194.1	187.8	187.8	198.3	195.1	186.7	161.4	134.0	120.3	116.0	118.1
22.5°	159.3	155.1	148.7	148.7	153.0	146.6	123.4	103.4	93.9	93.9	93.9
25°	138.2	136.1	129.7	123.4	125.5	120.3	100.2	87.6	81.2	80.2	81.2
27.5°	121.3	120.3	112.9	106.5	106.5	102.3	86.5	74.9	70.7	68.6	69.6
30°	109.7	107.6	99.2	93.9	92.8	88.6	73.8	65.4	61.2	60.1	60.1
32.5°	101.3	97.0	89.7	84.4	81.2	74.9	64.3	55.9	51.7	50.6	50.6
35°	81.2	81.2	78.1	74.9	70.7	61.2	53.8	46.4	42.2	41.1	41.1
37.5°	70.7	66.5	61.2	62.2	60.1	51.7	44.3	36.9	33.8	32.7	32.7
40°	64.3	59.1	51.7	48.5	49.6	45.4	36.9	28.5	24.3	25.3	24.3
42.5°	58.0	53.8	45.4	38.0	36.9	38.0	28.5	20.0	16.9	16.9	16.9
45°	53.8	49.6	40.1	31.6	26.4	29.5	22.2	13.7	10.5	10.5	10.5
47.5°	50.6	46.4	35.9	26.4	19.0	20.0	15.8	8.4	6.3	4.2	5.3
50°	48.5	43.2	32.7	21.1	13.7	11.6	10.5	4.2	1.1	1.1	0.0
52.5°	45.4	41.1	29.5	17.9	10.5	7.4	5.3	1.1	0.0	0.0	0.0
55°	43.2	38.0	26.4	15.8	8.4	4.2	1.1	0.0	0.0	0.0	0.0
57.5°	39.0	34.8	23.2	12.7	6.3	2.1	0.0	0.0	0.0	0.0	0.0
60°	34.8	31.6	20.0	9.5	4.2	0.0	0.0	0.0	0.0	0.0	0.0
61°	32.7	29.5	19.0	8.4	3.2	0.0	0.0	0.0	0.0	0.0	0.0
62.5°	30.6	27.4	16.9	6.3	2.1	0.0	0.0	0.0	0.0	0.0	0.0
65°	26.4	23.2	14.8	4.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
67.5°	23.2	21.1	12.7	2.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70°	20.0	17.9	9.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
72.5°	16.9	15.8	7.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75°	14.8	12.7	6.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	11.6	10.5	5.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	6.3	5.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	1.1	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°	2022.2	2022.2	2022.2	2022.2	2022.2	2022.2	2022.2	2022.2	2022.2	2022.2	2022.2
2.5°	1848.1	1885.0	1919.8	1964.1	1988.4	2054.9	2102.3	2142.4	2174.1	2180.4	2205.7
5°	1563.3	1615.0	1648.7	1741.6	1793.3	1904.0	1989.5	2090.7	2181.4	2231.0	2276.4
7.5°	1177.2	1202.5	1260.6	1353.4	1475.7	1571.7	1716.3	1843.9	2007.4	2097.1	2181.4
10°	831.2	854.4	939.9	1036.9	1148.7	1310.1	1485.2	1653.0	1818.6	1933.6	2032.7
12.5°	584.4	660.3	744.7	868.1	977.9	1096.0	1282.7	1478.9	1685.7	1795.4	1903.0
15°	384.0	451.5	568.6	723.6	860.8	975.7	1149.8	1379.8	1642.4	1764.8	1867.1
17.5°	189.9	239.5	342.8	509.5	692.0	873.4	1083.3	1361.8	1698.3	1836.5	1932.5
20°	119.2	134.0	171.9	288.0	497.9	765.8	1033.8	1397.7	1850.2	2003.2	2065.4
22.5°	96.0	100.2	115.0	153.0	303.8	632.9	990.5	1446.2	2016.9	2203.6	2267.9
25°	82.3	85.4	93.9	112.9	176.2	474.7	937.8	1531.7	2211.0	2436.7	2452.5
27.5°	70.7	73.8	81.2	96.0	125.5	319.6	861.8	1631.9	2443.0	2641.4	2630.8
30°	60.1	64.3	71.7	82.3	99.2	216.2	720.5	1733.1	2613.9	2773.2	2756.3
32.5°	51.7	54.9	61.2	70.7	82.3	148.7	541.1	1799.6	2756.3	2897.7	2860.8
35°	42.2	45.4	50.6	59.1	66.5	105.5	409.3	1801.7	2903.0	3051.7	2958.9
37.5°	33.8	35.9	41.1	48.5	54.9	82.3	300.6	1766.9	3084.4	3252.1	3070.7
40°	25.3	28.5	33.8	40.1	46.4	69.6	224.7	1682.5	3261.6	3452.5	3205.7
42.5°	16.9	21.1	26.4	32.7	44.3	55.9	158.2	1542.2	3405.1	3630.8	3337.6
45°	10.5	13.7	20.0	27.4	45.4	44.3	105.5	1374.5	3507.4	3766.9	3427.2
47.5°	5.3	8.4	14.8	26.4	40.1	32.7	65.4	1214.1	3600.2	3846.0	3468.4
50°	1.1	3.2	10.5	32.7	33.8	24.3	43.2	1113.9	3648.7	3826.0	3464.1
52.5°	0.0	0.0	7.4	31.6	24.3	19.0	33.8	1099.2	3724.7	3852.3	3536.9
55°	0.0	0.0	3.2	13.7	13.7	15.8	29.5	1079.1	3859.7	4009.5	3756.3
57.5°	0.0	0.0	0.0	6.3	8.4	12.7	27.4	1026.4	4002.1	4176.2	4023.2
60°	0.0	0.0	0.0	3.2	5.3	10.5	24.3	906.1	3871.3	4177.2	4244.7
61°	0.0	0.0	0.0	3.2	4.2	9.5	22.2	863.9	3754.2	4109.7	4272.2
62.5°	0.0	0.0	0.0	1.1	3.2	7.4	19.0	780.6	3579.1	4001.1	4259.5
65°	0.0	0.0	0.0	0.0	1.1	4.2	14.8	630.8	3286.9	3727.9	4113.9
67.5°	0.0	0.0	0.0	0.0	0.0	1.1	9.5	444.1	2867.1	3418.8	3802.8
70°	0.0	0.0	0.0	0.0	0.0	0.0	4.2	257.4	2310.1	2894.5	3257.4
72.5°	0.0	0.0	0.0	0.0	0.0	0.0	2.1	117.1	1499.0	2235.2	2569.6
75°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	49.6	923.0	1615.0	1919.8
77.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	22.2	625.5	1074.9	1292.2
80°	0.0	2.1	1.1	0.0	0.0	0.0	0.0	8.4	385.0	670.9	728.9
82.5°	0.0	1.1	1.1	0.0	0.0	0.0	0.0	0.0	199.4	473.6	483.1
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	83.3	100.2
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°	2022.2	2022.2	2022.2	2022.2	2022.2	2022.2	2022.2	2022.2	2022.2	2022.2
2.5°	2228.9	2235.2	2239.5	2232.1	2186.7	2161.4	2110.8	2054.9	2035.9	2030.6
5°	2358.7	2394.5	2388.2	2339.7	2260.6	2163.5	2043.3	1918.8	1871.3	1853.4
7.5°	2333.3	2427.2	2445.2	2394.5	2260.6	2090.7	1916.7	1769.0	1700.4	1682.5
10°	2204.6	2322.8	2379.8	2363.9	2238.4	2042.2	1828.1	1646.6	1571.7	1548.5
12.5°	2080.2	2194.1	2230.0	2242.6	2174.1	2004.2	1783.8	1588.6	1510.6	1481.0
15°	1996.8	2067.5	2065.4	2088.6	2083.3	1989.5	1812.2	1618.1	1530.6	1491.6
17.5°	1969.4	1948.3	1920.9	1939.9	1976.8	1993.7	1905.1	1723.6	1621.3	1576.0
20°	1986.3	1882.9	1822.8	1821.7	1899.8	2028.5	2041.1	1897.7	1801.7	1740.5
22.5°	2072.8	1850.2	1757.4	1759.5	1855.5	2080.2	2198.3	2125.5	2020.0	1944.1
25°	2200.4	1856.5	1732.1	1744.7	1851.3	2125.5	2368.2	2385.0	2250.0	2183.6
27.5°	2330.2	1911.4	1733.1	1746.8	1869.2	2149.8	2465.2	2576.0	2459.9	2377.6
30°	2420.9	1978.9	1752.1	1766.9	1897.7	2168.8	2502.1	2733.1	2612.9	2521.1
32.5°	2506.3	2048.5	1782.7	1797.5	1954.6	2207.8	2571.7	2891.4	2759.5	2668.8
35°	2589.7	2117.1	1839.7	1866.0	2046.4	2278.5	2642.4	3077.0	2967.3	2841.8
37.5°	2661.4	2193.0	1937.8	1993.7	2170.9	2387.1	2738.4	3288.0	3175.1	3034.8
40°	2721.5	2282.7	2140.3	2202.5	2360.8	2502.1	2844.9	3426.2	3351.3	3200.4
42.5°	2770.1	2440.9	2430.4	2517.9	2628.7	2634.0	2875.5	3492.6	3464.1	3330.2
45°	2851.3	2724.7	2811.2	2954.7	2947.3	2792.2	2867.1	3553.8	3555.9	3442.0
47.5°	2984.2	3080.2	3330.2	3427.2	3377.6	3008.5	2875.5	3613.9	3661.4	3571.7
50°	3174.1	3483.1	3810.1	3938.8	3794.3	3225.8	2950.4	3685.7	3829.1	3763.7
52.5°	3336.5	3788.0	4253.2	4368.2	4170.9	3457.8	3125.5	3840.7	4053.8	4032.7
55°	3568.6	4050.6	4568.6	4657.2	4499.0	3720.5	3360.8	4068.6	4300.6	4311.2
57.5°	3805.9	4288.0	4774.3	4863.9	4743.7	4047.5	3695.2	4395.6	4532.7	4529.6
60°	4069.6	4509.5	4867.1	4916.7	4848.1	4374.5	4054.9	4695.2	4692.0	4619.2
61°	4220.5	4580.2	4860.8	4875.5	4809.1	4470.5	4240.5	4810.1	4715.2	4619.2
62.5°	4387.1	4644.5	4782.7	4733.1	4661.4	4504.2	4509.5	4935.7	4731.0	4583.4
65°	4555.9	4483.1	4423.0	4185.7	4118.2	4194.1	4736.3	4888.2	4635.0	4424.1
67.5°	4266.9	3841.8	3712.0	3473.6	3206.8	3516.9	4521.1	4598.1	4311.2	4030.6
70°	3487.4	2822.8	2668.8	2660.3	2468.4	2809.1	3987.4	3931.4	3578.1	3320.7
72.5°	2733.1	1926.2	1716.3	1764.8	1726.8	2093.9	3261.6	2638.2	2294.3	2122.4
75°	2142.4	1369.2	1181.4	1173.0	1131.9	1426.2	2388.2	1390.3	1147.7	1025.3
77.5°	1413.5	986.3	983.1	908.2	876.6	773.2	1071.7	557.0	454.6	458.9
80°	814.3	604.4	708.9	562.2	563.3	453.6	433.5	81.2	65.4	47.5
82.5°	467.3	290.1	219.4	86.5	181.4	181.4	34.8	1.1	1.1	2.1
85°	45.4	13.7	0.0	0.0	0.0	0.0	0.0	0.0	1.1	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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