

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: P401800

Luminaire Tested: **ENC-SA1F-727-U-SLR**

Issue Date: 5/20/2020

Test Information

Test Method: LM-79-08
Report Number: P401800
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: ENC-SA1F-727-U-SLR
Description: ENTRI LED LUMINAIRE
(1) 70 CRI, 2700K, 1200mA LIGHTSQUARE WITH 16 LEDS AND SPILL LIGHT ELIMINATOR RIGHT OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5758 lumens
Efficiency: N/A
Efficacy: 87.1 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 - G2

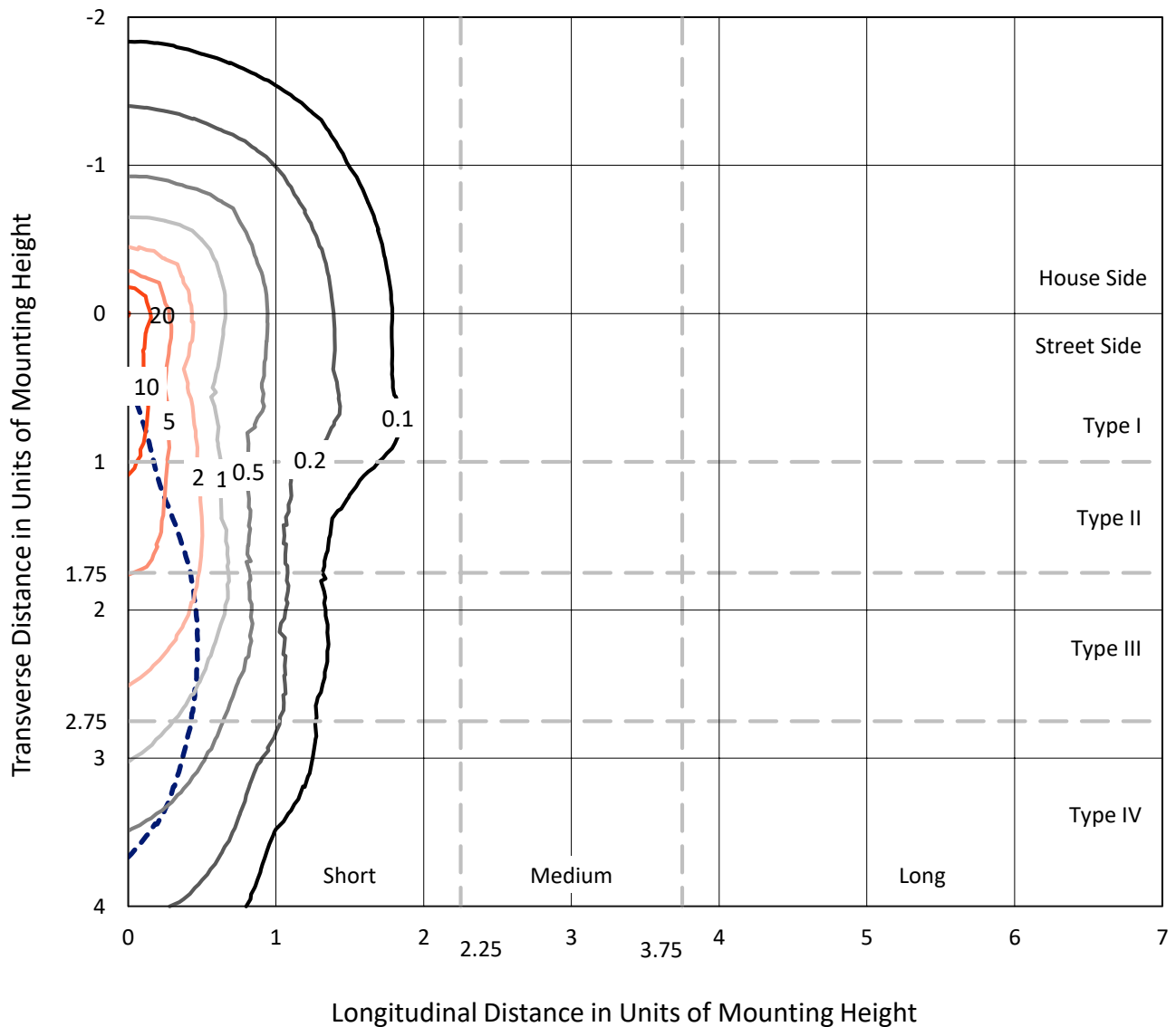
Input Watts (W): 66.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

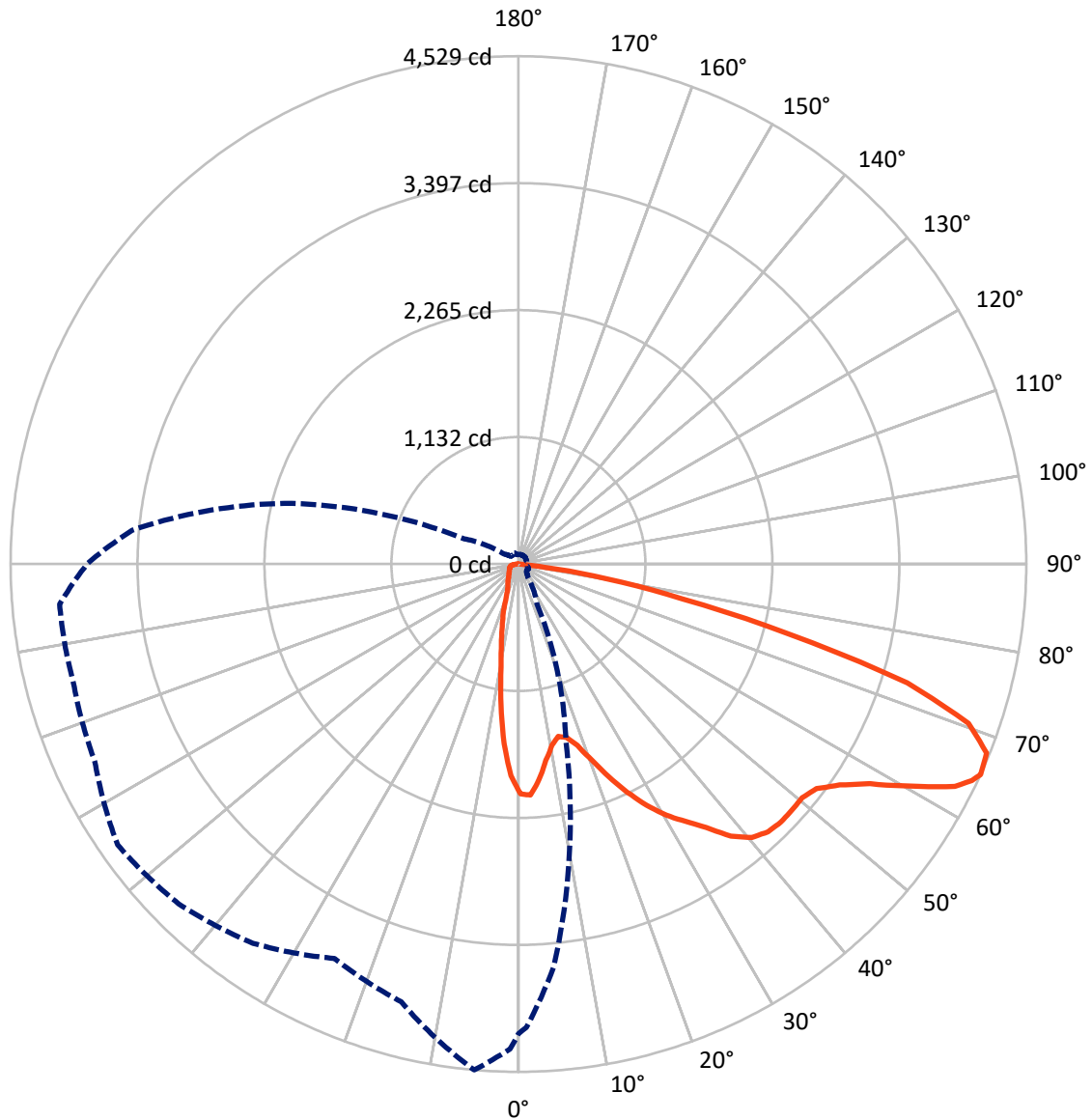
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 20.5 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	1181.4	0.0	1181.4
	% Fixture	20.5	0.0	20.5
Street Side	Lumens	4576.5	0.0	4576.5
	% Fixture	79.5	0.0	79.5
Total	Lumens	5758.0	0.0	5758.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	156.3	2.7
10°-20°	311.3	5.4
20°-30°	431.7	7.5
30°-40°	603.5	10.5
40°-50°	821.1	14.3
50°-60°	1122.9	19.5
60°-70°	1373.0	23.8
70°-80°	828.9	14.4
80°-90°	109.3	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°	5758.0	100.0
0°-180°	5758.0	100.0



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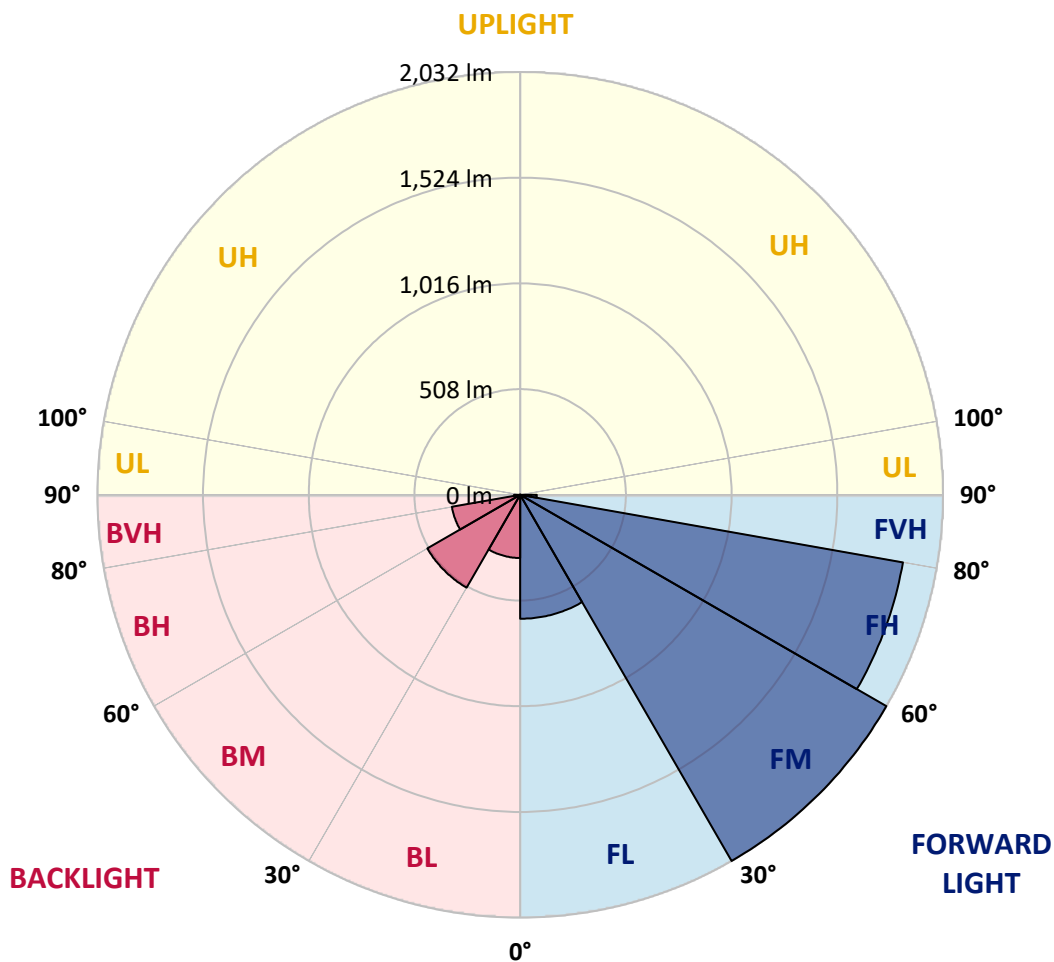
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	595.8	10.3			
FM	(30°-60°)	2032.5	35.3			
FH	(60°-80°)	1868.4	32.4			G2/5000
FVH	(80°-90°)	79.9	1.4			G1/100
BL	(0°-30°)	303.6	5.3	B1/500		
BM	(30°-60°)	515.0	8.9	B1/1000		
BH	(60°-80°)	333.4	5.8	B1/500		G1/500
BVH	(80°-90°)	29.4	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-G2

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	1°	5°	15°	25°	35°	45°	55°	65°	75°	85°
0°	2049.0	2049.0	2049.0	2049.0	2049.0	2049.0	2049.0	2049.0	2049.0	2049.0	2049.0
2.5°	2044.2	2038.4	2024.0	1985.4	1944.0	1894.9	1886.3	1833.3	1839.1	1823.7	1827.5
5°	1867.0	1859.3	1819.8	1742.8	1637.8	1577.2	1530.0	1502.1	1479.0	1467.4	1481.9
7.5°	1694.7	1684.1	1636.9	1501.1	1384.6	1288.3	1211.3	1164.1	1117.9	1081.3	1064.0
10°	1555.0	1551.2	1488.6	1335.5	1189.1	1071.7	1021.6	971.5	932.1	880.1	837.7
12.5°	1484.8	1473.2	1399.1	1220.9	1078.4	1006.2	959.0	895.5	841.6	778.0	723.1
15°	1487.6	1474.2	1381.7	1194.9	1039.9	952.3	880.1	804.0	725.0	660.5	604.7
17.5°	1570.4	1560.8	1448.2	1219.0	1007.2	885.8	773.2	675.0	588.3	507.4	457.4
20°	1710.1	1695.6	1539.6	1247.9	965.8	809.8	656.7	521.9	428.5	357.2	317.7
22.5°	1892.0	1865.1	1669.6	1283.5	924.4	723.1	530.5	380.3	297.5	261.9	251.3
25°	2086.5	2065.4	1826.6	1328.8	880.1	628.8	392.9	276.3	247.5	233.0	225.3
27.5°	2265.6	2231.0	1995.1	1378.8	821.3	534.4	298.5	237.8	218.6	211.8	207.0
30°	2393.7	2363.9	2111.6	1436.6	770.3	436.2	255.2	215.7	200.3	189.7	187.8
32.5°	2516.0	2473.6	2196.3	1463.6	727.9	383.2	235.9	200.3	185.8	175.2	171.4
35°	2660.4	2618.1	2293.6	1467.4	696.2	361.1	217.6	188.7	173.3	163.7	158.9
37.5°	2830.8	2773.1	2403.3	1470.3	664.4	352.4	202.2	179.1	163.7	153.1	149.2
40°	2992.6	2948.3	2516.0	1465.5	643.2	339.9	192.6	168.5	154.1	144.4	139.6
42.5°	3114.9	3067.7	2612.3	1451.1	630.7	318.7	196.4	160.8	147.3	136.7	131.0
45°	3177.5	3135.1	2699.9	1437.6	623.9	300.4	192.6	157.9	142.5	130.0	124.2
47.5°	3224.7	3183.3	2789.4	1431.8	612.4	286.9	177.2	168.5	137.7	123.2	117.5
50°	3300.7	3265.1	2910.8	1464.5	594.1	278.3	162.7	180.1	135.8	117.5	110.7
52.5°	3437.5	3414.3	3111.0	1540.6	574.8	263.8	148.3	172.4	137.7	113.6	105.9
55°	3692.6	3678.2	3386.4	1640.7	556.5	245.5	132.9	156.0	136.7	106.9	101.1
57.5°	3968.0	3964.1	3720.5	1728.4	529.6	214.7	123.2	131.9	130.0	101.1	94.4
60°	4152.9	4140.4	3874.6	1777.5	494.9	177.2	115.5	111.7	132.9	95.3	87.6
62.5°	4216.4	4175.0	3828.4	1759.2	442.9	153.1	106.9	102.1	123.2	89.5	80.9
64°	4212.6	4151.9	3708.0	1689.8	409.2	148.3	102.1	95.3	108.8	85.7	78.0
65°	4190.4	4132.7	3607.9	1635.9	390.9	148.3	99.2	92.4	99.2	83.8	76.1
67.5°	4048.9	3972.8	3266.1	1385.6	343.7	150.2	92.4	84.7	82.8	77.0	71.3
70°	3726.3	3627.1	2797.1	1090.0	318.7	151.2	84.7	77.0	74.1	70.3	65.5
72.5°	2992.6	2859.7	2226.2	779.0	292.7	148.3	77.0	70.3	67.4	63.5	58.7
75°	2006.6	1861.2	1640.7	513.2	239.8	132.9	66.4	60.7	59.7	55.8	52.0
77.5°	1131.4	1070.7	968.7	282.1	165.6	91.5	53.0	49.1	50.1	48.1	44.3
80°	591.2	563.3	518.0	136.7	79.9	44.3	33.7	33.7	38.5	38.5	36.6
82.5°	208.9	209.9	203.2	30.8	16.4	13.5	11.6	16.4	22.1	27.0	27.0
85°	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	3.9	6.7
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):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	2049.0	2049.0	2049.0	2049.0	2049.0	2049.0	2049.0	2049.0	2049.0	2049.0	2049.0
2.5°	1794.8	1800.6	1816.0	1813.1	1828.5	1821.8	1842.0	1852.6	1858.3	1888.2	1902.6
5°	1470.3	1472.2	1527.1	1538.7	1567.6	1552.2	1587.8	1574.3	1603.2	1607.0	1655.2
7.5°	1080.3	1084.2	1111.2	1174.7	1237.3	1263.3	1273.9	1290.3	1276.8	1272.0	1278.7
10°	821.3	824.2	827.1	872.4	927.2	982.1	982.1	983.1	959.0	934.9	930.1
12.5°	701.9	683.6	654.8	655.7	694.2	720.2	740.4	719.3	715.4	727.0	739.5
15°	577.7	559.4	540.2	517.1	518.0	536.3	546.9	545.9	565.2	573.9	599.9
17.5°	448.7	422.7	423.7	410.2	391.9	403.4	406.3	423.7	448.7	460.3	465.1
20°	301.4	301.4	309.1	325.5	316.8	324.5	325.5	338.9	350.5	343.7	350.5
22.5°	249.4	248.4	251.3	261.9	270.6	277.3	279.2	278.3	266.7	261.9	271.5
25°	226.3	225.3	226.3	232.1	241.7	250.3	246.5	240.7	227.2	226.3	228.2
27.5°	207.0	208.0	209.9	213.8	219.5	230.1	226.3	214.7	208.0	206.1	206.1
30°	190.6	190.6	194.5	198.4	205.1	214.7	208.0	198.4	191.6	189.7	188.7
32.5°	174.3	177.2	180.1	183.9	189.7	199.3	193.5	184.9	178.1	174.3	171.4
35°	157.9	159.8	165.6	171.4	176.2	183.9	180.1	172.4	165.6	156.9	153.1
37.5°	148.3	148.3	151.2	159.8	163.7	169.5	167.5	160.8	150.2	143.5	142.5
40°	139.6	139.6	140.6	145.4	152.1	158.9	155.0	144.4	137.7	134.8	133.8
42.5°	131.0	131.0	131.9	131.9	140.6	152.1	142.5	131.9	129.0	127.1	126.1
45°	123.2	123.2	123.2	122.3	127.1	141.5	131.0	122.3	120.4	120.4	119.4
47.5°	117.5	116.5	115.5	113.6	116.5	128.1	119.4	114.6	113.6	114.6	113.6
50°	109.8	108.8	107.8	106.9	108.8	113.6	111.7	106.9	107.8	107.8	108.8
52.5°	103.0	102.1	101.1	100.1	102.1	105.9	105.9	102.1	102.1	103.0	104.0
55°	99.2	97.3	96.3	96.3	97.3	102.1	101.1	98.2	98.2	100.1	101.1
57.5°	93.4	91.5	91.5	90.5	92.4	98.2	97.3	94.4	94.4	95.3	97.3
60°	87.6	86.7	85.7	87.6	88.6	94.4	93.4	91.5	90.5	93.4	93.4
62.5°	80.9	80.9	80.9	82.8	83.8	90.5	89.5	88.6	88.6	89.5	88.6
64°	77.0	77.0	78.0	79.0	80.9	86.7	86.7	86.7	86.7	86.7	85.7
65°	75.1	75.1	77.0	78.0	79.0	85.7	84.7	85.7	86.7	85.7	83.8
67.5°	70.3	70.3	73.2	73.2	74.1	81.8	80.9	82.8	84.7	82.8	80.9
70°	64.5	65.5	68.4	67.4	69.3	78.0	75.1	79.0	82.8	79.9	78.0
72.5°	58.7	59.7	63.5	61.6	62.6	73.2	69.3	73.2	79.0	77.0	75.1
75°	53.0	53.9	56.8	55.8	57.8	67.4	63.5	67.4	73.2	73.2	72.2
77.5°	45.3	47.2	49.1	48.1	52.0	60.7	56.8	59.7	64.5	68.4	66.4
80°	36.6	39.5	40.4	41.4	45.3	52.0	49.1	50.1	54.9	57.8	58.7
82.5°	25.0	29.8	31.8	32.7	38.5	40.4	41.4	40.4	43.3	47.2	44.3
85°	7.7	9.6	18.3	23.1	28.9	28.9	33.7	31.8	33.7	29.8	25.0
87.5°	0.0	0.0	0.0	6.7	17.3	17.3	24.1	22.1	23.1	17.3	15.4
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°	2049.0	2049.0	2049.0	2049.0	2049.0	2049.0	2049.0	2049.0	2049.0	2049.0	2049.0
2.5°	1905.5	1921.9	1958.5	2000.9	2024.0	2074.0	2104.8	2137.6	2170.3	2177.1	2187.6
5°	1664.8	1684.1	1725.5	1782.3	1839.1	1905.5	1982.6	2064.4	2154.9	2193.4	2231.0
7.5°	1297.0	1300.8	1359.6	1462.6	1512.7	1607.0	1716.8	1842.9	1982.6	2054.8	2131.8
10°	958.1	997.5	1041.8	1127.5	1253.7	1362.5	1498.2	1645.6	1790.9	1895.9	1975.8
12.5°	753.0	803.0	876.2	970.6	1065.9	1168.9	1325.9	1483.8	1662.9	1757.2	1855.5
15°	620.1	683.6	779.0	878.1	966.7	1058.2	1197.8	1391.4	1620.5	1716.8	1804.4
17.5°	491.1	561.4	663.4	767.4	873.3	985.0	1146.8	1386.5	1665.8	1777.5	1868.0
20°	376.5	431.4	517.1	622.0	746.2	899.3	1106.3	1423.1	1799.6	1939.2	1998.9
22.5°	279.2	311.0	378.4	488.2	634.5	823.3	1065.9	1475.1	1965.2	2128.9	2174.2
25°	231.1	239.8	270.6	365.9	517.1	737.6	1035.1	1542.5	2130.8	2314.7	2347.5
27.5°	208.0	212.8	227.2	262.9	404.4	667.3	994.6	1620.5	2305.1	2498.7	2495.8
30°	187.8	188.7	197.4	222.4	328.3	604.7	947.5	1707.2	2460.1	2630.6	2621.9
32.5°	169.5	169.5	181.0	200.3	280.2	547.9	890.7	1769.8	2594.9	2738.4	2710.5
35°	153.1	156.0	166.6	185.8	248.4	484.3	837.7	1792.9	2710.5	2868.4	2789.4
37.5°	141.5	145.4	156.0	174.3	221.5	437.1	794.4	1819.8	2853.0	3025.3	2878.0
40°	133.8	136.7	146.4	161.8	200.3	397.7	747.2	1838.1	2994.5	3192.9	2971.4
42.5°	126.1	129.0	138.7	153.1	190.6	351.4	701.9	1848.7	3141.9	3338.3	3049.4
45°	119.4	123.2	132.9	146.4	191.6	310.0	664.4	1844.9	3230.4	3443.2	3110.1
47.5°	114.6	118.4	129.0	146.4	185.8	286.0	632.6	1831.4	3295.9	3511.6	3138.0
50°	109.8	113.6	126.1	161.8	176.2	279.2	608.5	1829.5	3364.3	3525.1	3138.0
52.5°	105.0	111.7	127.1	162.7	161.8	276.3	589.3	1880.5	3458.6	3548.2	3165.9
55°	102.1	107.8	131.0	150.2	141.5	266.7	577.7	1950.8	3617.5	3675.3	3306.5
57.5°	98.2	103.0	129.0	140.6	126.1	244.6	568.1	2018.2	3826.5	3911.2	3586.7
60°	93.4	99.2	125.2	120.4	114.6	208.0	562.3	2074.0	3904.5	4063.3	3888.1
62.5°	88.6	95.3	136.7	105.0	105.9	173.3	551.7	2127.9	3739.8	4026.7	4081.6
64°	85.7	92.4	127.1	98.2	101.1	157.9	541.1	2130.8	3594.4	3940.1	4118.2
65°	83.8	89.5	118.4	94.4	97.3	154.1	531.5	2090.4	3457.7	3847.6	4107.6
67.5°	80.9	84.7	91.5	87.6	90.5	147.3	466.0	1912.3	3166.9	3609.8	3943.0
70°	77.0	79.9	80.9	79.9	84.7	142.5	393.8	1659.0	2849.1	3360.4	3686.8
72.5°	73.2	73.2	73.2	72.2	78.0	135.8	354.3	1340.3	2462.1	3033.1	3368.1
75°	70.3	67.4	66.4	64.5	71.3	131.9	319.7	1006.2	1902.6	2526.6	2822.2
77.5°	64.5	61.6	58.7	56.8	63.5	117.5	266.7	710.6	1402.9	1838.1	2178.0
80°	55.8	53.9	50.1	47.2	53.0	92.4	202.2	439.1	1026.4	1241.1	1428.9
82.5°	45.3	44.3	40.4	36.6	38.5	66.4	137.7	223.4	684.6	674.0	798.2
85°	27.9	34.7	29.8	24.1	26.0	38.5	55.8	71.3	209.9	126.1	195.5
87.5°	16.4	22.1	18.3	12.5	9.6	17.3	15.4	14.4	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°	2049.0	2049.0	2049.0	2049.0	2049.0	2049.0	2049.0	2049.0	2049.0	2049.0
2.5°	2212.7	2225.2	2231.9	2206.9	2179.9	2155.9	2109.7	2063.4	2039.4	2044.2
5°	2303.2	2324.4	2330.2	2293.6	2217.5	2139.5	2026.8	1929.6	1870.9	1867.0
7.5°	2268.5	2337.9	2349.4	2309.9	2201.1	2055.7	1902.6	1766.9	1708.1	1694.7
10°	2145.3	2251.2	2285.9	2272.4	2166.5	1999.9	1814.1	1641.7	1583.0	1555.0
12.5°	2019.1	2129.9	2151.1	2164.5	2100.0	1959.4	1755.3	1578.1	1507.9	1484.8
15°	1936.3	2012.4	2018.2	2030.7	2017.2	1940.2	1782.3	1604.1	1519.4	1487.6
17.5°	1924.8	1897.8	1879.5	1905.5	1921.9	1941.2	1852.6	1701.4	1610.9	1570.4
20°	1926.7	1842.9	1790.9	1789.0	1859.3	1966.2	1995.1	1865.1	1747.6	1710.1
22.5°	1997.0	1814.1	1727.4	1716.8	1802.5	2008.6	2140.5	2059.6	1942.1	1892.0
25°	2102.0	1796.7	1682.1	1685.0	1770.7	2036.5	2264.7	2254.1	2151.1	2086.5
27.5°	2203.1	1825.6	1676.4	1684.1	1781.3	2054.8	2367.7	2437.0	2321.5	2265.6
30°	2283.9	1890.1	1693.7	1700.4	1814.1	2079.8	2418.7	2599.8	2460.1	2393.7
32.5°	2354.2	1950.8	1719.7	1724.5	1866.0	2115.4	2466.9	2736.5	2594.9	2516.0
35°	2417.8	2002.8	1759.2	1775.5	1932.5	2166.5	2516.0	2884.8	2759.6	2660.4
37.5°	2473.6	2066.3	1837.2	1864.1	2029.7	2240.6	2579.5	3080.2	2943.5	2830.8
40°	2505.4	2123.1	1952.7	1993.1	2155.9	2336.9	2660.4	3207.3	3119.7	2992.6
42.5°	2529.5	2201.1	2138.5	2211.7	2351.3	2427.4	2698.9	3264.1	3223.7	3114.9
45°	2542.0	2355.2	2417.8	2486.1	2571.8	2526.6	2677.8	3283.4	3270.9	3177.5
47.5°	2598.8	2587.2	2741.3	2835.7	2830.8	2675.8	2637.3	3281.5	3301.7	3224.7
50°	2714.3	2857.8	3073.5	3165.9	3130.3	2815.4	2629.6	3278.6	3363.3	3300.7
52.5°	2852.0	3128.4	3432.6	3471.2	3396.1	2957.0	2687.4	3328.7	3478.9	3437.5
55°	3033.1	3382.6	3714.8	3727.3	3621.4	3094.7	2810.6	3476.0	3694.5	3692.6
57.5°	3285.3	3610.8	3951.6	3936.2	3787.0	3285.3	3009.0	3696.5	3934.3	3968.0
60°	3559.7	3851.5	4143.2	4134.6	3975.7	3504.9	3281.5	4022.9	4144.2	4152.9
62.5°	3822.6	4074.9	4328.1	4286.7	4107.6	3732.1	3658.9	4369.5	4280.9	4216.4
64°	3994.0	4150.0	4375.3	4309.8	4139.4	3840.9	3876.5	4482.2	4319.4	4212.6
65°	4107.6	4168.3	4364.7	4285.7	4128.8	3881.3	4041.2	4529.4	4326.2	4190.4
67.5°	4311.7	4063.3	4077.8	4015.2	3874.6	3843.8	4310.8	4503.4	4252.0	4048.9
70°	4254.9	3640.6	3442.3	3402.8	3234.3	3407.6	4277.1	4258.8	3973.8	3726.3
72.5°	3769.6	2923.3	2638.3	2602.6	2368.7	2582.4	3690.7	3627.1	3197.7	2992.6
75°	3106.2	2215.6	1884.3	1914.2	1736.1	1933.4	2935.8	2485.2	2128.9	2006.6
77.5°	2411.0	1565.6	1301.8	1266.2	1230.6	1251.7	2018.2	1492.5	1244.0	1131.4
80°	1536.7	984.1	976.4	892.6	863.7	727.9	1037.0	794.4	624.9	591.2
82.5°	816.5	567.1	644.2	516.1	415.0	298.5	351.4	235.9	199.3	208.9
85°	223.4	117.5	32.7	0.0	0.0	0.0	0.0	1.0	1.0	1.0
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	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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