

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: LUMARK

Report Number: P196717

Luminaire Tested: **NAV-AF-01-D-UNV-SLR-7030**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196717
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24264)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-AF-01-D-UNV-SLR-7030
Description: NAVION ROADWAY AND AREA LUMINAIRE
(1) 70 CRI, 3000K, 1050mA LIGHTSQUARE WITH 16 LEDS EACH AND SPILL LIGHT
ELIMINATOR RIGHT OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5219.3 lumens
Efficiency: N/A
Efficacy: 88.5 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 - G2

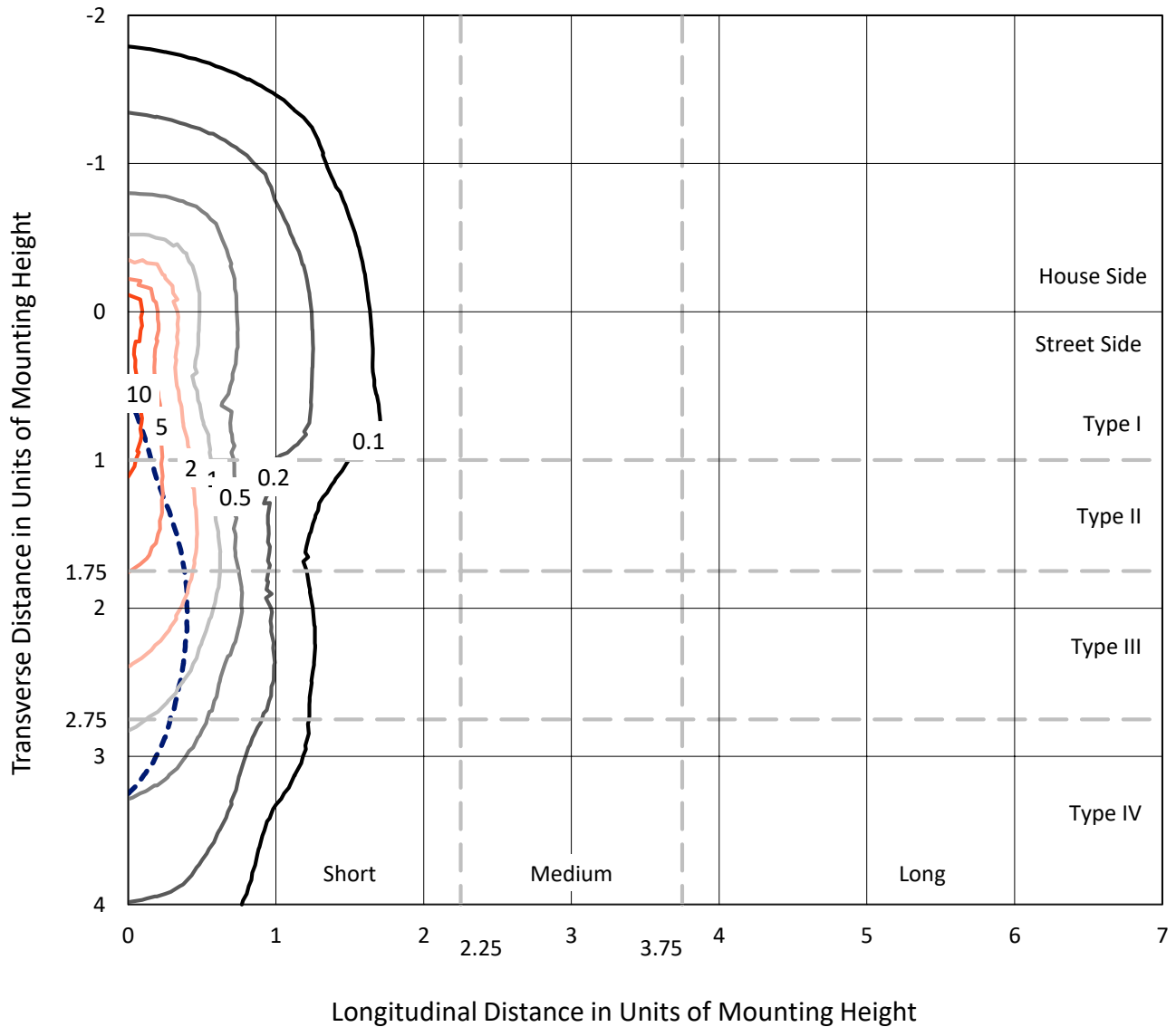
Input Watts (W): 59
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

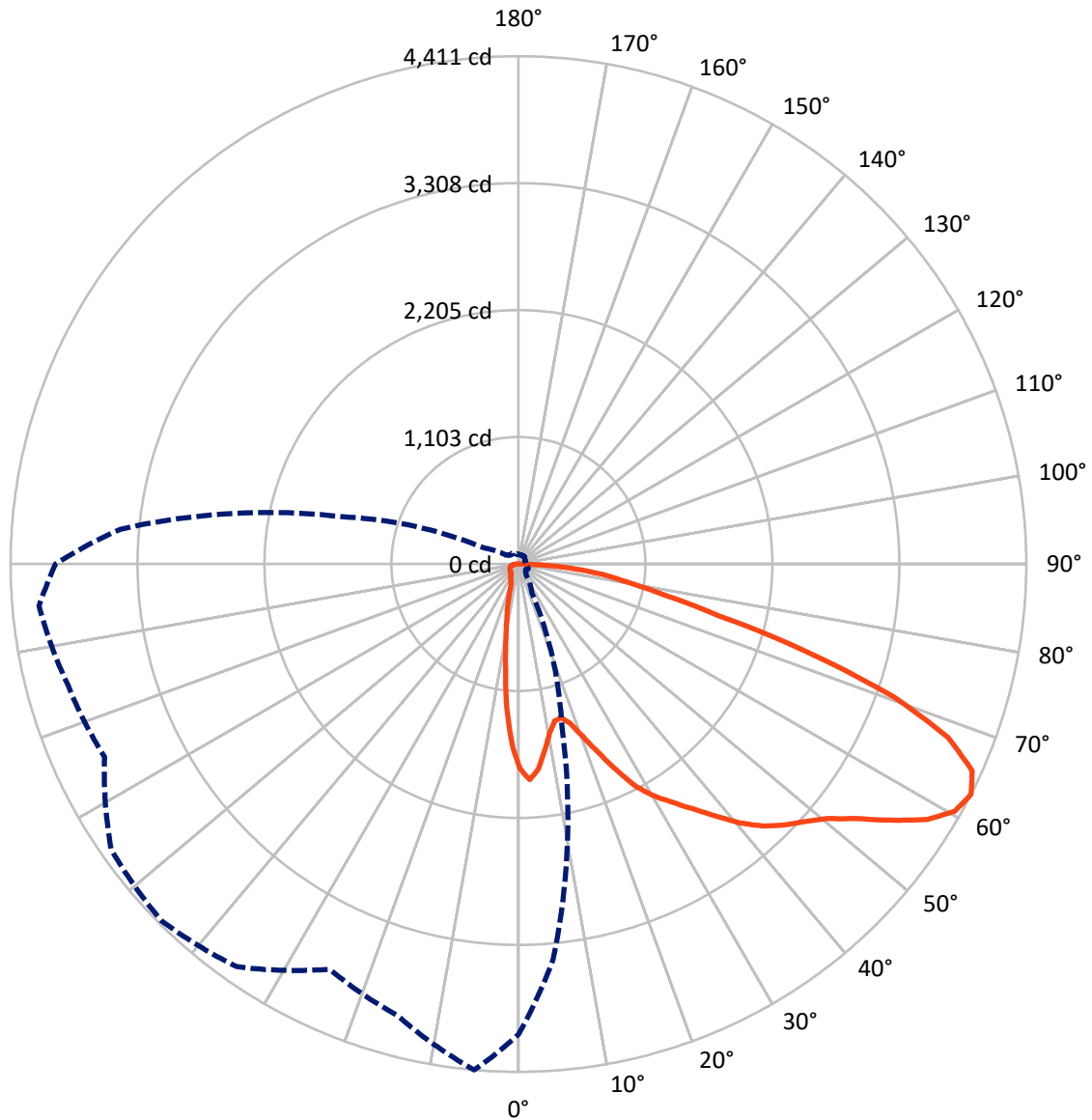
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 17.8 fc
 Type IV - Short - Non-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	924.6	0.0	924.6
	% Fixture	17.7	0.0	17.7
Street Side	Lumens	4294.7	0.0	4294.7
	% Fixture	82.3	0.0	82.3
Total	Lumens	5219.3	0.0	5219.3
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	129.4	2.5
10°-20°	236.4	4.5
20°-30°	339.9	6.5
30°-40°	520.7	10.0
40°-50°	761.2	14.6
50°-60°	1107.6	21.2
60°-70°	1283.3	24.6
70°-80°	668.9	12.8
80°-90°	172.0	3.3
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°	5219.3	100.0
0°-180°	5219.3	100.0



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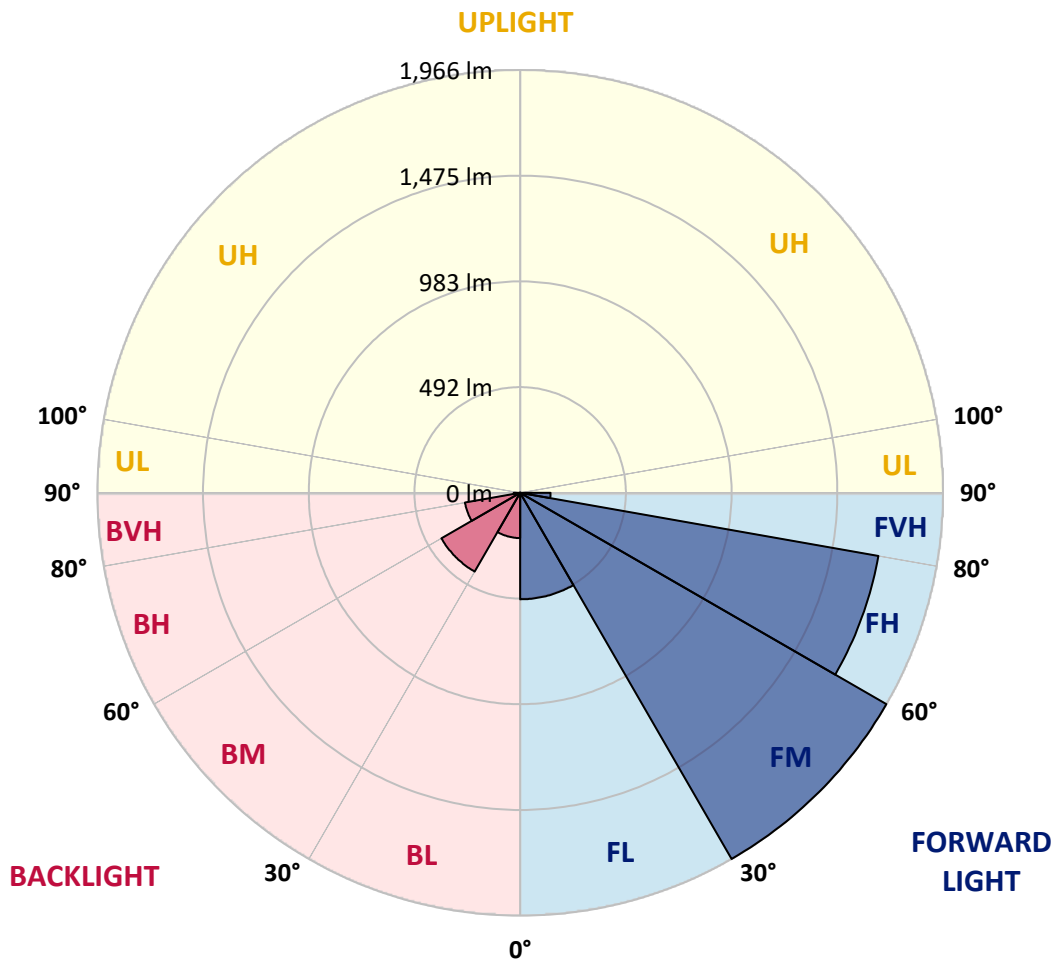
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	495.3	9.5			
FM	(30°-60°)	1966.4	37.7			
FH	(60°-80°)	1691.5	32.4			G1/1800
FVH	(80°-90°)	141.5	2.7			G2/225
BL	(0°-30°)	210.4	4.0	B1/500		
BM	(30°-60°)	423.0	8.1	B1/1000		
BH	(60°-80°)	260.7	5.0	B1/500		G1/500
BVH	(80°-90°)	30.5	0.6			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°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	1779.4	1779.4	1779.4	1779.4	1779.4	1779.4	1779.4	1779.4	1779.4	1779.4	1779.4
2.5°	1836.8	1811.2	1751.8	1699.5	1634.4	1585.6	1526.3	1494.7	1471.7	1456.2	1443.8
5°	1715.8	1653.7	1540.2	1440.7	1333.2	1255.6	1164.8	1115.2	1084.6	1067.9	1060.4
7.5°	1536.0	1453.9	1307.1	1173.6	1039.2	942.3	873.4	800.0	761.0	735.7	727.3
10°	1379.0	1286.3	1111.0	960.8	857.1	788.3	729.2	661.9	612.0	568.3	552.1
12.5°	1287.8	1179.9	980.2	844.2	757.2	683.4	621.0	548.4	495.7	450.3	432.8
15°	1268.5	1148.1	925.2	770.1	663.4	574.4	499.6	420.4	369.0	331.5	319.4
17.5°	1326.7	1178.5	902.2	702.3	573.7	465.1	372.8	288.0	245.2	224.7	219.8
20°	1446.7	1245.0	891.2	641.5	486.6	358.1	257.8	195.7	174.5	168.4	168.0
22.5°	1604.6	1353.2	903.3	591.5	405.0	264.2	188.8	160.8	152.1	148.7	148.7
25°	1782.8	1499.7	935.5	553.3	333.0	205.5	162.7	147.6	140.4	137.0	137.3
27.5°	2000.7	1678.0	979.4	518.1	281.6	180.2	152.1	139.3	132.1	128.7	129.0
30°	2165.0	1831.1	1017.2	485.8	255.0	169.9	146.4	134.4	126.4	121.5	121.1
32.5°	2318.6	1966.3	1047.9	462.8	240.0	151.8	132.4	123.4	116.6	110.9	109.7
35°	2488.5	2093.5	1062.2	462.0	230.1	137.0	121.1	110.2	103.4	96.9	95.7
37.5°	2681.1	2249.0	1074.3	466.6	224.7	127.5	115.9	105.2	99.5	93.1	91.6
40°	2881.7	2401.1	1083.9	470.4	224.0	121.1	111.7	102.1	96.4	89.7	88.2
42.5°	3053.9	2535.8	1096.6	468.8	218.7	119.9	109.0	99.5	94.2	87.4	85.5
45°	3191.7	2643.0	1116.7	468.5	210.8	122.6	108.2	98.8	92.4	85.1	83.6
47.5°	3320.0	2763.7	1159.1	467.0	202.1	121.9	112.4	98.0	91.6	84.3	83.2
50°	3466.8	2926.0	1231.4	455.6	190.0	116.6	119.9	97.2	89.7	83.2	82.2
52.5°	3671.1	3163.7	1338.5	435.2	173.2	110.9	121.1	96.9	86.7	81.0	79.4
55°	3911.5	3418.4	1453.9	405.7	151.4	101.1	115.0	95.4	83.6	77.6	75.3
57.5°	4097.2	3606.4	1534.5	363.3	129.8	95.4	102.6	92.0	79.9	73.8	71.9
60°	4149.4	3614.8	1548.9	312.6	118.9	91.6	88.2	100.3	76.8	70.4	68.5
62.5°	4087.1	3449.5	1455.0	277.0	115.0	87.9	80.2	95.7	73.8	67.4	65.4
65°	3901.9	3170.0	1245.0	271.7	118.9	84.3	76.1	76.5	70.8	64.4	62.4
67.5°	3469.8	2759.2	980.9	275.2	123.4	81.0	72.9	69.6	67.4	61.7	59.4
70°	2821.9	2221.3	772.8	281.2	127.5	76.5	69.3	65.1	63.2	57.2	56.0
72.5°	2173.7	1777.8	609.6	277.0	131.6	71.9	63.9	60.5	58.2	52.6	51.5
75°	1543.7	1412.7	448.1	237.6	120.7	65.4	57.9	54.8	53.0	46.9	46.6
77.5°	1112.6	1058.0	311.8	178.6	95.4	57.5	51.2	48.4	47.3	40.5	40.5
80°	887.4	805.2	186.7	116.6	69.6	47.6	42.7	41.6	40.5	33.7	34.1
82.5°	637.6	558.6	119.2	72.6	51.2	36.4	33.4	32.9	31.0	25.0	25.0
85°	327.0	285.3	76.5	48.8	35.9	23.5	22.0	21.2	20.1	15.6	15.6
87.5°	63.6	87.4	42.4	23.8	17.4	8.3	8.3	7.2	8.3	5.7	6.0
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):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°	185°
0°	1779.4	1779.4	1779.4	1779.4	1779.4	1779.4	1779.4	1779.4	1779.4	1779.4	1779.4
2.5°	1467.6	1459.9	1454.7	1452.0	1490.3	1506.1	1524.2	1550.4	1568.2	1560.7	1584.8
5°	1096.0	1101.3	1113.4	1132.3	1185.6	1210.9	1227.2	1248.9	1264.3	1248.9	1274.5
7.5°	749.3	757.2	783.0	821.9	886.3	914.6	920.3	920.7	917.3	892.0	909.4
10°	551.8	535.8	541.5	569.6	627.0	652.4	655.0	648.2	647.2	636.9	656.5
12.5°	427.6	405.7	392.8	397.3	440.6	461.3	464.7	468.5	484.0	488.9	513.2
15°	319.0	307.7	298.2	294.0	322.5	338.7	340.6	349.6	365.9	370.5	391.2
17.5°	224.4	227.5	232.4	234.3	254.7	265.3	262.2	262.2	265.0	263.8	275.5
20°	171.4	177.4	187.0	196.0	214.5	220.6	213.0	203.5	197.5	194.5	197.2
22.5°	151.4	155.5	161.6	173.2	188.8	191.9	182.0	174.5	168.8	165.7	166.2
25°	140.4	144.5	149.4	159.0	172.2	173.7	164.7	159.7	155.1	152.1	151.4
27.5°	130.9	133.7	136.6	142.7	156.2	157.0	151.0	147.9	145.0	142.7	141.9
30°	122.3	123.4	124.5	130.6	140.7	141.9	138.9	137.3	136.2	134.7	134.7
32.5°	110.9	112.4	114.2	119.5	129.5	130.9	129.0	128.0	125.9	125.2	124.1
35°	97.2	101.1	105.2	111.7	122.3	123.0	120.7	117.4	112.7	111.7	110.9
37.5°	91.6	92.4	97.7	105.2	116.2	116.9	113.9	108.2	104.8	105.2	106.0
40°	87.9	88.9	92.0	99.5	110.5	111.7	109.0	104.8	101.4	101.8	102.9
42.5°	84.7	86.4	88.2	93.1	104.1	106.3	105.6	101.8	98.5	99.1	100.6
45°	83.2	84.3	84.3	87.9	98.5	101.8	102.1	99.1	96.4	97.2	99.1
47.5°	82.5	82.5	81.4	84.0	94.6	98.0	98.8	97.2	95.7	96.4	98.5
50°	81.4	79.9	78.6	81.0	91.6	94.6	95.4	94.2	94.9	96.4	97.7
52.5°	77.9	76.5	76.5	77.9	88.5	91.6	92.0	91.2	92.8	94.6	96.4
55°	73.8	73.8	74.2	75.7	87.1	89.3	88.9	88.2	89.7	92.0	93.9
57.5°	70.0	69.6	71.6	73.4	85.1	86.7	85.9	85.9	87.1	88.9	90.8
60°	67.7	65.9	67.4	70.4	83.2	84.7	83.6	83.2	85.1	86.7	88.2
62.5°	65.4	63.6	64.7	67.7	80.7	81.7	81.0	81.0	82.9	84.0	85.5
65°	62.1	61.3	62.1	65.1	78.3	78.6	78.6	79.1	80.7	81.4	82.9
67.5°	59.0	59.0	59.4	62.4	76.5	75.7	75.7	77.6	77.9	78.6	80.2
70°	55.2	56.0	56.0	59.8	75.0	72.3	72.6	74.2	75.0	75.7	76.1
72.5°	51.2	51.5	52.2	57.2	72.6	68.9	69.3	70.4	70.8	71.9	72.3
75°	46.6	46.9	48.1	54.5	71.1	65.4	64.7	65.4	66.2	66.9	66.6
77.5°	41.3	41.9	43.1	53.0	66.2	64.7	59.0	59.8	60.5	60.5	60.2
80°	34.9	35.9	37.8	50.7	56.0	62.4	52.6	53.0	53.3	53.3	52.6
82.5°	26.1	28.4	31.0	41.9	43.9	53.3	45.5	46.2	45.1	44.2	43.9
85°	17.1	18.9	22.7	29.2	32.1	41.9	37.4	37.8	35.6	35.2	35.2
87.5°	6.8	7.2	10.3	14.7	19.3	26.1	26.9	27.7	25.7	25.7	26.4
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):

	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°	285°
0°	1779.4	1779.4	1779.4	1779.4	1779.4	1779.4	1779.4	1779.4	1779.4	1779.4	1779.4
2.5°	1621.5	1659.4	1703.0	1747.2	1783.5	1830.4	1875.9	1924.3	1948.8	1963.3	2003.9
5°	1314.6	1366.5	1428.2	1497.4	1555.0	1653.3	1759.3	1877.4	1934.1	1990.1	2096.1
7.5°	940.4	991.1	1063.0	1152.6	1234.4	1364.2	1503.9	1663.6	1742.2	1833.2	2006.8
10°	698.1	751.9	817.0	893.0	973.7	1108.8	1265.4	1444.9	1531.5	1634.1	1831.6
12.5°	566.2	628.9	696.3	764.4	833.6	924.6	1088.8	1288.1	1381.2	1484.7	1682.5
15°	441.6	509.0	581.7	655.8	724.7	826.1	993.7	1229.5	1335.8	1435.7	1597.7
17.5°	312.6	376.2	457.9	547.9	647.9	767.9	973.3	1255.3	1384.4	1488.7	1597.4
20°	213.0	257.0	338.7	445.4	568.8	720.9	980.9	1345.6	1506.9	1621.5	1662.8
22.5°	170.3	191.1	246.4	355.0	500.6	686.8	1012.0	1469.9	1682.9	1822.6	1782.0
25°	154.8	166.5	195.2	280.5	440.1	664.2	1072.5	1633.7	1880.1	2021.6	1925.4
27.5°	145.4	155.5	174.0	230.4	387.9	649.4	1149.3	1826.7	2102.1	2218.3	2075.0
30°	139.3	149.4	166.5	207.0	348.5	627.4	1216.6	2003.0	2279.7	2355.0	2155.5
32.5°	127.5	135.5	149.4	185.4	319.0	601.7	1274.9	2160.8	2447.3	2472.3	2252.4
35°	115.4	123.8	137.7	168.0	301.5	581.7	1305.5	2300.9	2613.4	2589.6	2348.5
37.5°	110.9	117.7	130.6	155.5	292.2	568.3	1317.3	2438.5	2791.7	2719.4	2415.5
40°	107.8	113.9	125.2	147.2	289.5	555.9	1314.6	2569.6	2964.6	2853.8	2468.0
42.5°	105.6	110.9	121.5	141.5	282.3	544.2	1305.9	2682.7	3103.1	2969.5	2518.4
45°	103.7	109.4	119.9	144.5	269.1	531.3	1300.6	2786.0	3209.5	3067.1	2585.8
47.5°	102.9	109.4	120.3	143.7	254.7	516.9	1319.6	2900.7	3302.2	3149.3	2675.4
50°	101.8	109.0	128.7	137.0	235.0	499.1	1383.5	3037.3	3399.4	3241.6	2791.7
52.5°	99.9	108.6	137.3	131.6	209.7	474.5	1487.2	3230.2	3567.5	3421.4	2963.4
55°	97.7	109.4	131.3	123.4	182.8	442.7	1591.0	3494.7	3839.9	3711.2	3210.2
57.5°	94.9	108.2	124.1	115.9	160.5	402.6	1669.6	3711.6	4064.7	4010.3	3513.3
60°	93.1	110.9	111.7	111.2	146.1	364.4	1677.2	3697.7	4129.5	4204.3	3810.0
62.5°	90.8	113.2	101.8	107.8	138.9	328.9	1583.7	3468.7	4020.0	4179.3	4051.9
65°	87.9	98.8	96.4	104.8	138.9	310.0	1366.2	3087.5	3717.6	3943.1	4183.1
67.5°	84.7	89.7	92.8	100.6	141.9	292.2	1097.8	2604.3	3240.8	3562.2	4035.6
70°	80.7	84.7	88.5	96.9	140.4	279.7	863.9	2087.4	2667.1	3035.0	3627.2
72.5°	76.8	79.9	83.6	91.2	140.4	274.0	694.1	1637.5	2036.4	2346.3	3004.7
75°	71.1	73.8	77.2	85.5	137.7	250.5	521.0	1311.9	1489.9	1684.0	2370.8
77.5°	65.4	67.4	70.0	78.3	124.1	209.2	368.6	1016.1	1103.8	1211.3	1848.2
80°	58.2	59.8	61.7	70.0	102.9	162.4	240.0	794.8	825.4	877.3	1215.8
82.5°	49.9	52.2	52.6	60.2	82.9	117.7	142.7	544.5	544.2	620.3	857.9
85°	40.9	41.9	42.7	47.3	61.3	78.3	93.9	297.4	265.3	371.6	745.1
87.5°	30.7	29.5	30.7	31.8	40.5	46.2	50.4	54.8	32.9	67.4	433.3
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):

	295°	305°	315°	325°	335°	345°	355°	360°
0°	1779.4	1779.4	1779.4	1779.4	1779.4	1779.4	1779.4	1779.4
2.5°	2025.3	2047.6	2034.4	2018.6	1978.8	1920.6	1875.9	1836.8
5°	2169.6	2210.8	2192.7	2133.7	2030.7	1913.6	1790.8	1715.8
7.5°	2151.4	2233.2	2225.9	2127.5	1979.9	1807.8	1634.8	1536.0
10°	2006.0	2120.7	2140.4	2039.8	1883.4	1690.8	1490.7	1379.0
12.5°	1847.9	1944.4	1984.4	1946.2	1799.1	1603.4	1399.4	1287.8
15°	1715.4	1764.2	1804.0	1828.6	1737.3	1572.4	1383.5	1268.5
17.5°	1617.4	1608.0	1641.3	1700.3	1704.0	1613.6	1455.5	1326.7
20°	1570.0	1496.0	1515.2	1598.1	1694.9	1718.4	1598.9	1446.7
22.5°	1567.5	1451.6	1455.5	1544.7	1721.1	1861.4	1777.8	1604.6
25°	1608.3	1446.7	1450.1	1539.0	1767.3	2005.7	1984.8	1782.8
27.5°	1678.0	1467.9	1465.6	1564.0	1828.9	2125.9	2193.7	2000.7
30°	1753.3	1498.6	1492.9	1604.2	1889.5	2200.2	2342.1	2165.0
32.5°	1847.1	1553.1	1533.4	1662.8	1949.3	2271.3	2468.8	2318.6
35°	1936.4	1632.9	1604.6	1746.8	2013.2	2350.3	2610.8	2488.5
37.5°	2027.7	1752.1	1736.2	1867.9	2103.7	2436.4	2773.1	2681.1
40°	2144.5	1921.7	1914.1	2043.9	2224.4	2530.1	2955.1	2881.7
42.5°	2270.5	2101.8	2095.4	2246.0	2374.2	2624.4	3111.0	3053.9
45°	2398.9	2320.1	2321.6	2461.7	2532.1	2713.4	3233.6	3191.7
47.5°	2550.2	2559.0	2613.1	2685.4	2685.7	2812.5	3342.2	3320.0
50°	2742.5	2847.3	2947.2	2958.5	2840.8	2943.5	3475.1	3466.8
52.5°	2960.1	3179.9	3296.2	3260.2	2992.3	3105.8	3671.5	3671.1
55°	3218.6	3527.7	3637.0	3575.7	3173.6	3317.3	3928.1	3911.5
57.5°	3486.5	3862.2	3950.4	3870.5	3400.1	3563.7	4185.4	4097.2
60°	3776.0	4150.2	4240.0	4119.9	3654.5	3809.3	4355.7	4149.4
62.5°	3965.6	4318.6	4382.9	4267.8	3882.3	4059.4	4410.6	4087.1
65°	3975.4	4206.6	4223.6	4182.8	3979.2	4276.6	4331.1	3901.9
67.5°	3705.2	3718.8	3741.1	3785.1	3772.1	4179.7	4024.6	3469.8
70°	3127.3	2945.6	3019.1	3061.5	3156.8	3717.6	3458.0	2821.9
72.5°	2391.2	2125.9	2209.2	2194.9	2393.3	3049.4	2645.6	2173.7
75°	1721.1	1449.8	1456.2	1457.0	1719.5	2434.1	1804.0	1543.7
77.5°	1169.7	1026.0	1047.1	1033.8	1150.8	1906.9	1298.8	1112.6
80°	800.0	796.2	800.8	769.7	767.4	1232.6	961.6	887.4
82.5°	593.4	548.4	541.9	509.0	588.1	942.3	730.0	637.6
85°	468.0	303.5	263.8	318.3	509.3	867.0	445.0	327.0
87.5°	198.3	119.2	72.3	143.0	283.1	635.4	123.4	63.6
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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