

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: P163550

Luminaire Tested: **LDRL-SL3-F05-E-8030-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P163550
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33727)
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: LDRL-SL3-F05-E-8030-HSS
Description: RL LED ROADWAY LARGE CUTOFF COBRAHEAD LUMINAIRE
(5) LIGHTBARS WITH AccuLED OPTICS - TYPE 3 W/ SPILL LIGHT CONTROL AND HOUSE SIDE SHIELD
Light Source: (35) 3000K CCT, 80 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5858.8 lumens
Efficiency: N/A
Efficacy: 44.0 lumens/watt
Luminous Opening: Rectangular w/ Sides (W: 0.83' x L: 1' x H: 0.1')
IES Classification: Type III - Short - Non-Cutoff
BUG Rating: B0 - U0 - G2

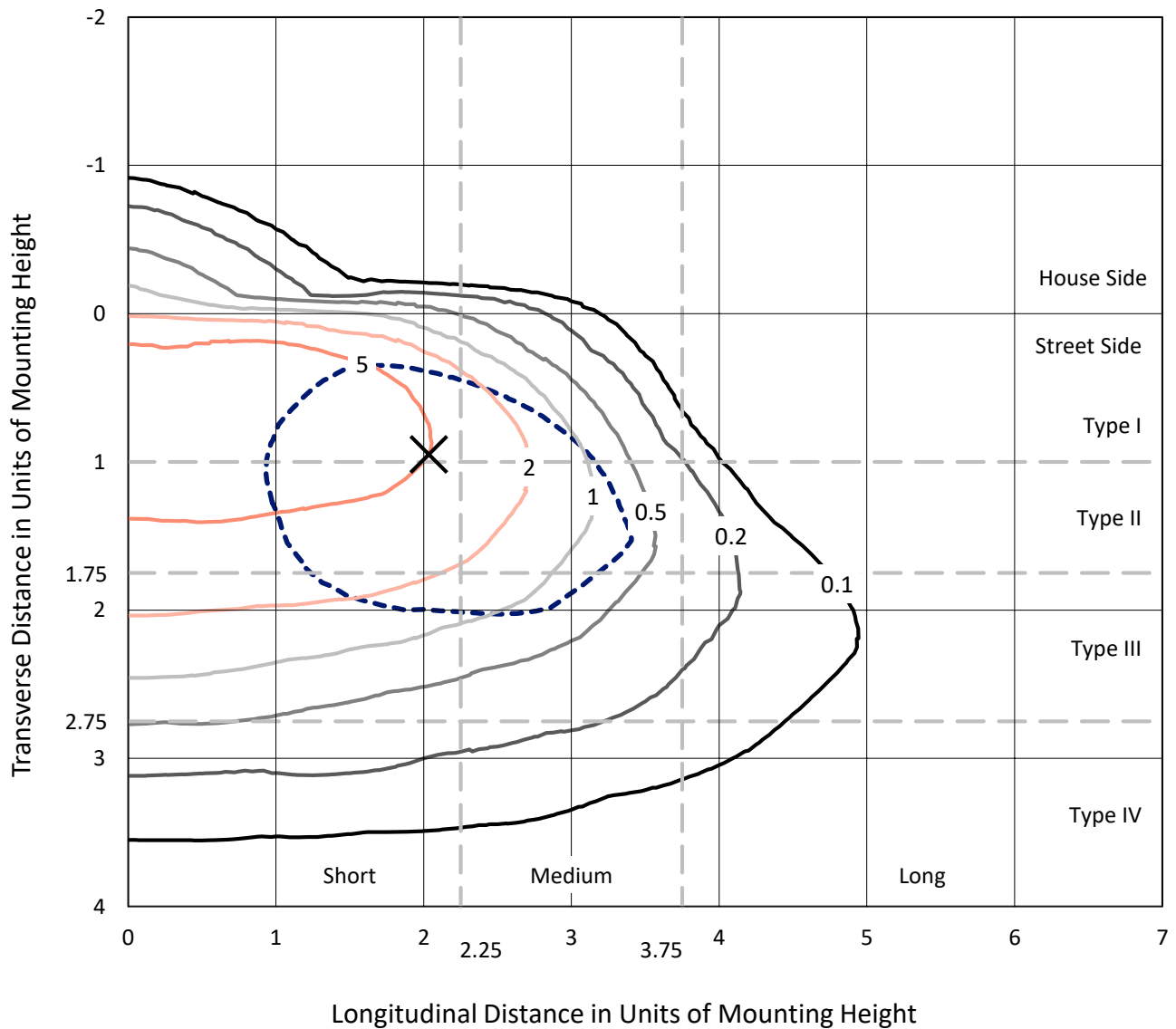
Input Watts (W): 133.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

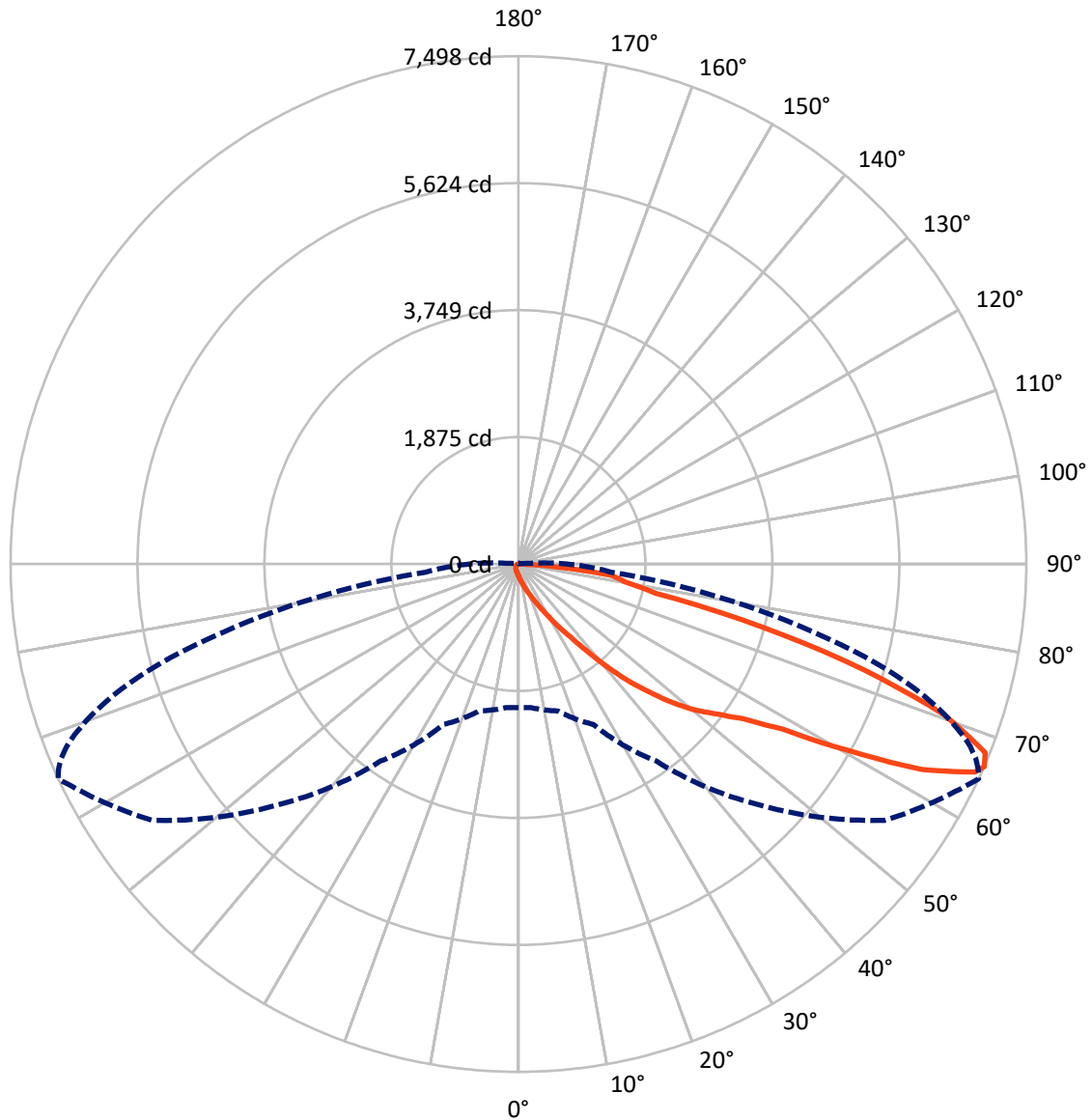


Based on 10 foot mounting height. Maximum calculated value = 9.7 fc
 Type III - Short - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 65-Deg Lateral - - - Horizontal Cone Through 66-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	126.9	0.0	126.9
	% Fixture	2.2	0.0	2.2
Street Side	Lumens	5731.8	0.0	5731.8
	% Fixture	97.8	0.0	97.8
Total	Lumens	5858.8	0.0	5858.8
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	19.8	0.3
10°-20°	83.9	1.4
20°-30°	181.0	3.1
30°-40°	386.6	6.6
40°-50°	855.0	14.6
50°-60°	1449.0	24.7
60°-70°	1933.6	33.0
70°-80°	851.7	14.5
80°-90°	98.1	1.7
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°	5858.8	100.0
0°-180°	5858.8	100.0

Coefficient of Utilization



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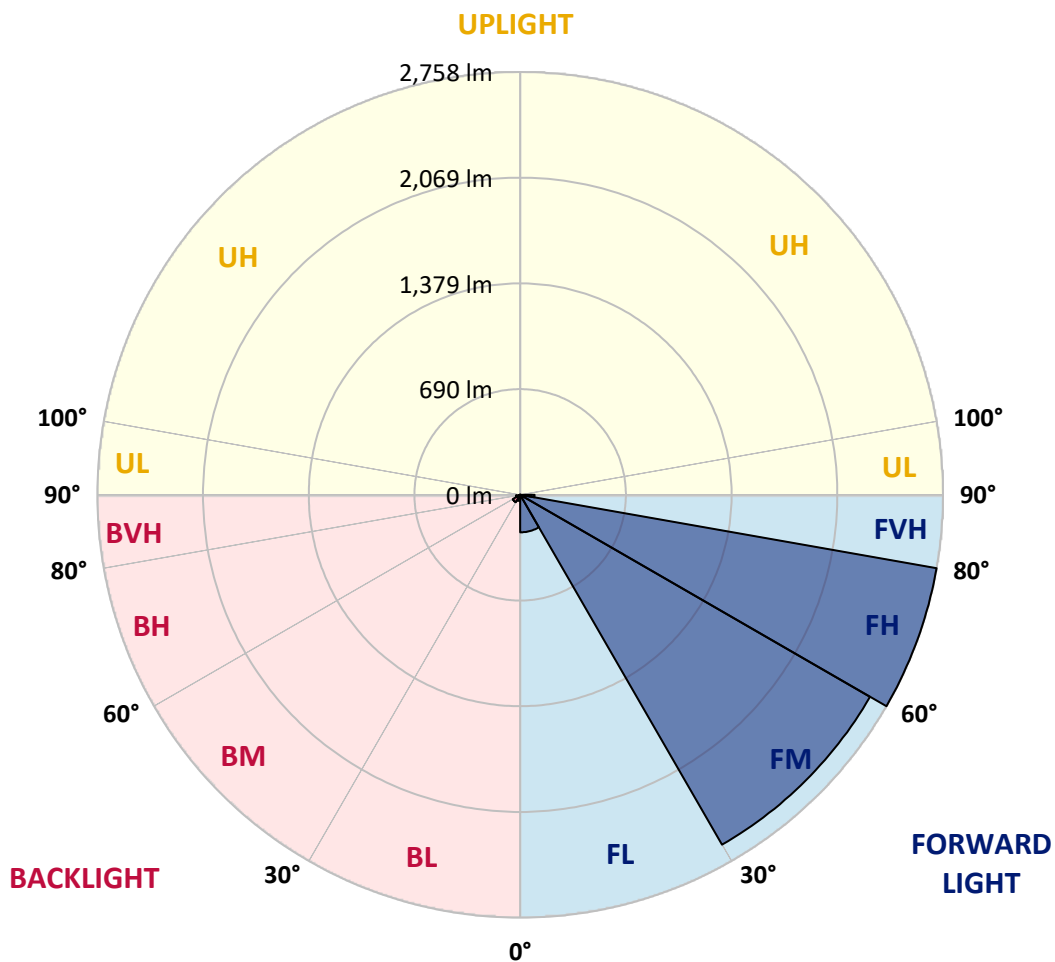
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	244.7	4.2			
FM (30°-60°)	2634.9	45.0			
FH (60°-80°)	2758.0	47.1			G2/5000
FVH (80°-90°)	94.2	1.6			G1/100
BL (0°-30°)	40.1	0.7	B0/110		
BM (30°-60°)	55.7	1.0	B0/220		
BH (60°-80°)	27.2	0.5	B0/110		G0/110
BVH (80°-90°)	3.9	0.1			G0/10
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B0-U0-G2

Type III Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	66°	67°	68°
0°	176.8	176.8	176.8	176.8	176.8	176.8	176.8	176.8	176.8	176.8	176.8
2.5°	223.0	221.9	217.4	217.4	210.6	206.1	200.5	194.9	194.9	193.8	192.6
5°	295.1	288.4	287.2	274.9	264.7	250.1	236.5	218.5	216.3	214.0	212.9
7.5°	375.1	373.9	363.8	349.2	328.9	301.9	274.9	245.5	241.1	238.8	234.3
10°	478.7	473.1	459.6	434.8	404.4	368.3	324.4	278.2	272.6	268.1	265.8
12.5°	577.8	567.7	559.8	528.3	489.9	437.1	384.1	317.6	313.1	307.5	298.5
15°	670.2	661.2	647.7	620.7	577.8	511.4	449.4	368.3	357.1	349.2	342.4
17.5°	742.3	736.7	720.9	690.5	644.3	585.7	511.4	420.1	411.1	401.0	388.6
20°	811.0	803.1	778.3	736.7	687.1	642.0	584.6	487.7	475.3	462.9	449.4
22.5°	876.4	868.4	827.9	759.2	706.2	687.1	666.8	564.3	545.2	535.0	521.5
25°	967.6	950.7	887.6	778.3	707.4	722.0	756.9	663.4	645.4	630.8	609.4
27.5°	1090.3	1067.8	968.7	806.5	711.9	760.3	860.5	784.0	764.8	747.9	724.3
30°	1228.9	1214.2	1096.0	874.1	744.5	816.6	976.5	937.2	914.6	894.3	866.2
32.5°	1368.5	1348.3	1231.1	1002.5	832.4	925.9	1121.9	1115.1	1085.9	1066.7	1036.3
35°	1491.3	1481.2	1394.4	1213.1	1032.9	1117.4	1315.6	1323.5	1297.6	1277.3	1243.5
37.5°	1574.7	1574.7	1557.8	1439.5	1351.7	1414.7	1600.6	1601.7	1575.8	1529.6	1512.8
40°	1617.5	1629.9	1690.7	1713.2	1708.7	1789.8	1974.5	1954.3	1932.9	1909.2	1852.9
42.5°	1705.3	1716.6	1846.1	2001.6	2103.0	2210.0	2337.2	2330.4	2304.6	2261.7	2210.0
45°	1854.0	1868.6	2023.0	2269.6	2478.0	2630.1	2711.2	2679.6	2653.7	2613.2	2586.1
47.5°	2043.2	2071.4	2246.0	2551.2	2802.4	3053.6	3138.1	3054.8	3032.2	3000.7	2956.7
50°	2244.9	2271.9	2457.7	2806.9	3090.8	3390.4	3531.2	3390.4	3357.7	3347.6	3298.1
52.5°	2419.5	2442.0	2621.0	3004.0	3311.6	3662.9	3868.0	3682.1	3658.5	3624.7	3588.6
55°	2523.1	2541.1	2708.9	3098.7	3461.4	3908.5	4193.5	4030.2	3995.3	3981.8	3929.9
57.5°	2558.0	2576.0	2727.0	3111.1	3542.5	4132.7	4588.8	4594.5	4552.8	4504.4	4488.6
60°	2558.0	2578.3	2705.6	3080.6	3621.3	4371.5	5116.0	5585.7	5495.6	5486.6	5429.2
62.5°	2452.1	2471.3	2599.7	2987.2	3727.2	4693.6	5850.4	6679.4	6653.5	6595.0	6500.3
65°	2222.4	2233.6	2359.8	2748.3	3686.6	4989.9	6486.8	7407.1	7365.4	7250.5	7128.9
66°	2118.7	2127.8	2246.0	2612.1	3553.7	5030.4	6599.5	7498.3	7429.6	7332.7	7195.3
67.5°	1968.9	1984.7	2068.1	2358.7	3234.9	4889.6	6528.5	7434.1	7374.4	7257.3	7119.8
70°	1314.5	1303.2	1597.2	1810.1	2464.5	3984.0	5857.2	6674.9	6676.1	6620.9	6565.7
72.5°	624.0	630.8	716.4	1114.0	1612.9	2661.6	4662.1	5327.8	5404.4	5305.2	5236.5
75°	448.3	458.5	510.2	681.5	961.9	1597.2	3022.1	3726.1	3728.3	3552.6	3396.0
77.5°	130.6	136.3	191.5	420.1	720.9	1077.9	1735.8	2071.4	2023.0	1896.8	1778.6
80°	54.1	54.1	56.3	134.1	289.5	732.1	1214.2	1595.0	1589.3	1540.9	1471.0
82.5°	20.3	21.4	27.0	55.2	68.7	180.2	809.9	1384.3	1380.9	1312.2	1262.7
85°	2.2	2.2	6.8	23.6	25.9	33.8	162.2	610.5	607.1	610.5	535.0
87.5°	0.0	0.0	1.1	2.2	3.3	4.5	6.8	23.6	25.9	24.8	22.5
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):

	69°	70°	71°	72°	73°	74°	75°	76°	77°	78°	79°
0°	176.8	176.8	176.8	176.8	176.8	176.8	176.8	176.8	176.8	176.8	176.8
2.5°	192.6	190.3	190.3	189.2	189.2	189.2	188.1	187.0	187.0	185.8	184.7
5°	210.6	208.4	207.3	205.0	203.9	202.8	200.5	199.3	197.1	196.0	194.9
7.5°	232.0	227.6	226.4	223.0	219.6	217.4	215.2	211.7	209.5	205.0	203.9
10°	259.0	253.4	248.9	244.4	241.1	235.4	232.0	227.6	223.0	219.6	216.3
12.5°	294.0	286.1	279.3	274.9	266.9	260.2	253.4	250.1	241.1	236.5	230.9
15°	332.3	323.3	315.4	306.4	300.7	289.5	280.4	270.3	265.8	257.9	248.9
17.5°	381.8	367.2	354.8	345.8	334.5	323.3	313.1	303.0	289.5	280.4	269.2
20°	434.8	422.4	405.5	389.8	376.2	362.7	348.0	334.5	322.2	307.5	294.0
22.5°	502.3	484.4	464.1	448.3	430.3	415.6	395.3	377.4	357.1	337.9	322.2
25°	588.0	564.3	545.2	522.6	501.2	478.7	453.9	431.4	405.5	387.5	360.4
27.5°	693.9	671.3	645.4	616.1	594.7	560.9	528.3	500.1	469.7	441.5	411.1
30°	829.0	796.4	769.3	741.2	698.3	665.7	627.4	589.1	547.4	519.3	473.1
32.5°	991.2	956.3	915.7	875.2	835.8	789.6	742.3	695.0	648.8	597.0	549.7
35°	1189.5	1147.8	1101.6	1057.6	996.8	947.3	887.6	822.3	770.5	710.7	651.0
37.5°	1451.9	1383.2	1342.6	1296.5	1214.2	1146.6	1080.2	1014.9	923.7	860.5	776.1
40°	1780.8	1740.2	1673.8	1599.4	1525.1	1436.1	1346.0	1259.3	1153.4	1065.6	967.6
42.5°	2167.1	2107.5	2039.9	1932.9	1857.4	1752.6	1650.1	1535.3	1405.7	1293.1	1178.2
45°	2529.8	2458.8	2407.1	2300.1	2221.2	2097.3	1973.4	1851.8	1702.0	1556.6	1423.7
47.5°	2921.8	2863.2	2777.7	2690.9	2610.9	2471.3	2337.2	2189.7	2032.0	1859.7	1687.3
50°	3266.5	3220.3	3161.7	3057.0	2968.0	2850.8	2693.2	2532.1	2332.7	2161.6	1965.6
52.5°	3559.3	3523.3	3441.1	3366.8	3286.8	3176.4	3035.6	2881.3	2666.1	2478.0	2255.0
55°	3905.1	3879.2	3807.2	3761.0	3690.0	3584.1	3452.3	3309.3	3081.8	2876.8	2624.5
57.5°	4471.7	4451.4	4388.4	4369.2	4299.4	4207.0	4044.8	3891.6	3625.8	3371.2	3082.9
60°	5410.0	5369.5	5277.1	5229.8	5082.2	4958.3	4747.7	4537.1	4216.0	3891.6	3544.7
62.5°	6414.7	6300.9	6125.2	5974.3	5764.8	5549.6	5268.1	4945.9	4569.7	4184.5	3785.8
65°	6956.5	6762.8	6540.9	6300.9	6029.5	5713.0	5358.2	4971.8	4567.4	4160.8	3739.6
66°	7018.4	6799.9	6564.5	6297.6	5995.7	5658.9	5298.5	4893.0	4472.8	4076.4	3655.1
67.5°	6940.7	6712.1	6463.1	6166.9	5840.2	5491.1	5112.6	4691.3	4287.0	3884.9	3474.9
70°	6396.7	6169.2	5947.3	5635.3	5287.2	4935.8	4577.6	4106.8	3723.8	3354.4	2989.4
72.5°	5108.1	4953.8	4734.2	4467.2	4128.2	3715.9	3417.4	2996.2	2663.9	2305.7	2023.0
75°	3192.2	2974.8	2703.3	2363.1	2104.1	1769.6	1595.0	1275.0	1085.9	920.2	760.3
77.5°	1632.1	1468.8	1278.4	1087.0	903.4	720.9	557.5	394.2	265.8	184.7	137.4
80°	1348.3	1204.1	1046.4	871.8	709.6	550.8	396.5	270.3	172.3	112.7	87.9
82.5°	1114.0	992.4	851.6	689.4	548.5	432.5	300.7	196.0	121.7	78.9	61.9
85°	474.2	430.3	332.3	263.6	198.2	146.5	102.5	68.7	48.4	39.4	36.0
87.5°	20.3	22.5	21.4	16.9	12.4	12.4	11.3	9.0	9.0	9.0	9.0
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):

	80°	81°	82°	83°	84°	85°	95°	105°	115°	125°	135°
0°	176.8	176.8	176.8	176.8	176.8	176.8	176.8	176.8	176.8	176.8	176.8
2.5°	184.7	183.6	182.5	182.5	181.4	180.2	173.5	167.8	161.1	156.6	152.0
5°	192.6	191.5	189.2	188.1	185.8	184.7	170.1	157.7	147.6	139.7	134.1
7.5°	200.5	199.3	196.0	192.6	191.5	189.2	165.5	149.8	136.3	127.3	121.7
10°	210.6	207.3	203.9	199.3	196.0	192.6	161.1	140.8	126.2	118.2	112.7
12.5°	225.3	219.6	214.0	208.4	203.9	198.2	158.8	132.9	118.2	109.2	103.6
15°	242.2	234.3	227.6	220.8	212.9	207.3	154.3	126.2	111.5	102.5	95.7
17.5°	257.9	248.9	238.8	228.7	220.8	212.9	149.8	119.4	104.7	95.7	89.0
20°	280.4	266.9	254.6	242.2	230.9	220.8	143.0	112.7	99.1	89.0	82.2
22.5°	305.2	289.5	273.7	256.8	242.2	228.7	137.4	107.0	93.5	83.3	75.5
25°	336.8	317.6	296.3	274.9	257.9	239.9	131.8	101.4	87.9	77.7	69.8
27.5°	380.7	353.7	330.0	303.0	277.1	256.8	127.3	96.8	82.2	72.1	64.2
30°	440.4	401.0	363.8	334.5	304.1	274.9	122.8	91.2	77.7	66.5	57.4
32.5°	506.9	460.7	417.9	373.9	335.7	301.9	118.2	86.7	72.1	60.8	53.0
35°	589.1	530.5	473.1	422.4	376.2	331.2	113.8	82.2	67.6	55.2	47.3
37.5°	707.4	634.2	558.7	493.4	433.6	373.9	110.4	77.7	61.9	49.5	41.7
40°	869.6	775.0	682.6	593.6	515.9	441.5	105.9	73.2	57.4	45.1	37.1
42.5°	1045.3	930.4	808.8	708.5	601.5	508.0	101.4	68.7	53.0	40.6	32.7
45°	1263.8	1120.8	973.2	836.9	706.2	585.7	96.8	64.2	47.3	36.0	28.1
47.5°	1502.6	1320.1	1153.4	982.2	826.7	682.6	91.2	60.8	42.8	31.6	24.8
50°	1748.1	1555.5	1344.9	1150.0	965.3	779.4	85.6	55.2	38.3	28.1	20.3
52.5°	2012.9	1785.3	1570.2	1328.0	1112.9	906.7	80.0	50.7	34.9	24.8	16.9
55°	2349.6	2095.1	1842.7	1571.3	1312.2	1054.3	74.3	45.1	30.4	21.4	13.5
57.5°	2773.1	2471.3	2161.6	1855.1	1540.9	1248.0	69.8	39.4	25.9	18.0	11.3
60°	3173.0	2820.5	2445.3	2092.8	1738.0	1396.7	63.1	34.9	22.5	14.6	11.3
62.5°	3380.3	2978.1	2573.7	2185.2	1806.7	1449.6	56.3	29.3	19.2	12.4	10.1
65°	3329.6	2919.6	2527.6	2135.6	1765.0	1415.8	49.5	25.9	16.9	11.3	10.1
66°	3256.3	2850.8	2456.6	2083.8	1730.1	1379.8	46.2	24.8	15.7	11.3	9.0
67.5°	3096.4	2704.4	2328.2	1981.3	1634.4	1311.1	41.7	22.5	14.6	10.1	9.0
70°	2644.7	2288.8	1988.1	1679.4	1396.7	1105.0	33.8	19.2	12.4	9.0	9.0
72.5°	1750.4	1508.2	1307.7	1125.2	940.5	729.9	28.1	15.7	10.1	9.0	7.9
75°	660.1	597.0	512.5	460.7	402.1	352.5	22.5	10.1	7.9	7.9	7.9
77.5°	117.1	108.1	95.7	87.9	81.1	74.3	18.0	6.8	6.8	7.9	7.9
80°	78.9	73.2	66.5	60.8	56.3	50.7	12.4	5.6	6.8	6.8	7.9
82.5°	56.3	53.0	49.5	45.1	41.7	37.1	7.9	5.6	6.8	6.8	6.8
85°	33.8	31.6	29.3	27.0	23.6	22.5	5.6	5.6	5.6	6.8	6.8
87.5°	9.0	7.9	9.0	9.0	6.8	7.9	4.5	4.5	4.5	5.6	5.6
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):

	145°	155°	165°	175°	180°
0°	176.8	176.8	176.8	176.8	176.8
2.5°	149.8	149.8	147.6	150.9	150.9
5°	129.5	129.5	128.4	129.5	129.5
7.5°	118.2	117.1	117.1	117.1	118.2
10°	108.1	107.0	107.0	107.0	107.0
12.5°	99.1	98.0	96.8	98.0	98.0
15°	91.2	89.0	89.0	89.0	89.0
17.5°	84.4	82.2	81.1	81.1	81.1
20°	77.7	74.3	74.3	74.3	74.3
22.5°	70.9	67.6	67.6	67.6	67.6
25°	64.2	60.8	60.8	60.8	60.8
27.5°	58.6	55.2	55.2	55.2	55.2
30°	51.8	49.5	49.5	50.7	49.5
32.5°	47.3	43.9	43.9	45.1	45.1
35°	41.7	39.4	39.4	39.4	39.4
37.5°	36.0	33.8	33.8	33.8	33.8
40°	31.6	29.3	28.1	29.3	29.3
42.5°	27.0	24.8	23.6	23.6	23.6
45°	23.6	20.3	19.2	20.3	20.3
47.5°	19.2	16.9	16.9	18.0	18.0
50°	14.6	14.6	15.7	18.0	18.0
52.5°	13.5	13.5	15.7	18.0	18.0
55°	12.4	13.5	15.7	16.9	18.0
57.5°	11.3	13.5	15.7	16.9	16.9
60°	11.3	12.4	14.6	16.9	16.9
62.5°	10.1	11.3	13.5	15.7	15.7
65°	10.1	11.3	13.5	15.7	15.7
66°	10.1	11.3	13.5	15.7	15.7
67.5°	10.1	11.3	13.5	15.7	15.7
70°	10.1	11.3	13.5	14.6	14.6
72.5°	9.0	10.1	12.4	14.6	14.6
75°	9.0	10.1	12.4	14.6	14.6
77.5°	9.0	10.1	12.4	14.6	14.6
80°	9.0	10.1	12.4	13.5	14.6
82.5°	7.9	10.1	11.3	13.5	13.5
85°	7.9	9.0	11.3	12.4	13.5
87.5°	6.8	7.9	9.0	11.3	11.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)