

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: P163549

Luminaire Tested: **LDRL-SL3-E05-E-7060-HSS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P163549  
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-E05-E-7060-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: (105) 5700K CCT, 70 CRI LEDs  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 8628.4 lumens  
Efficiency: N/A  
Efficacy: 67.8 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): 127.3  
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

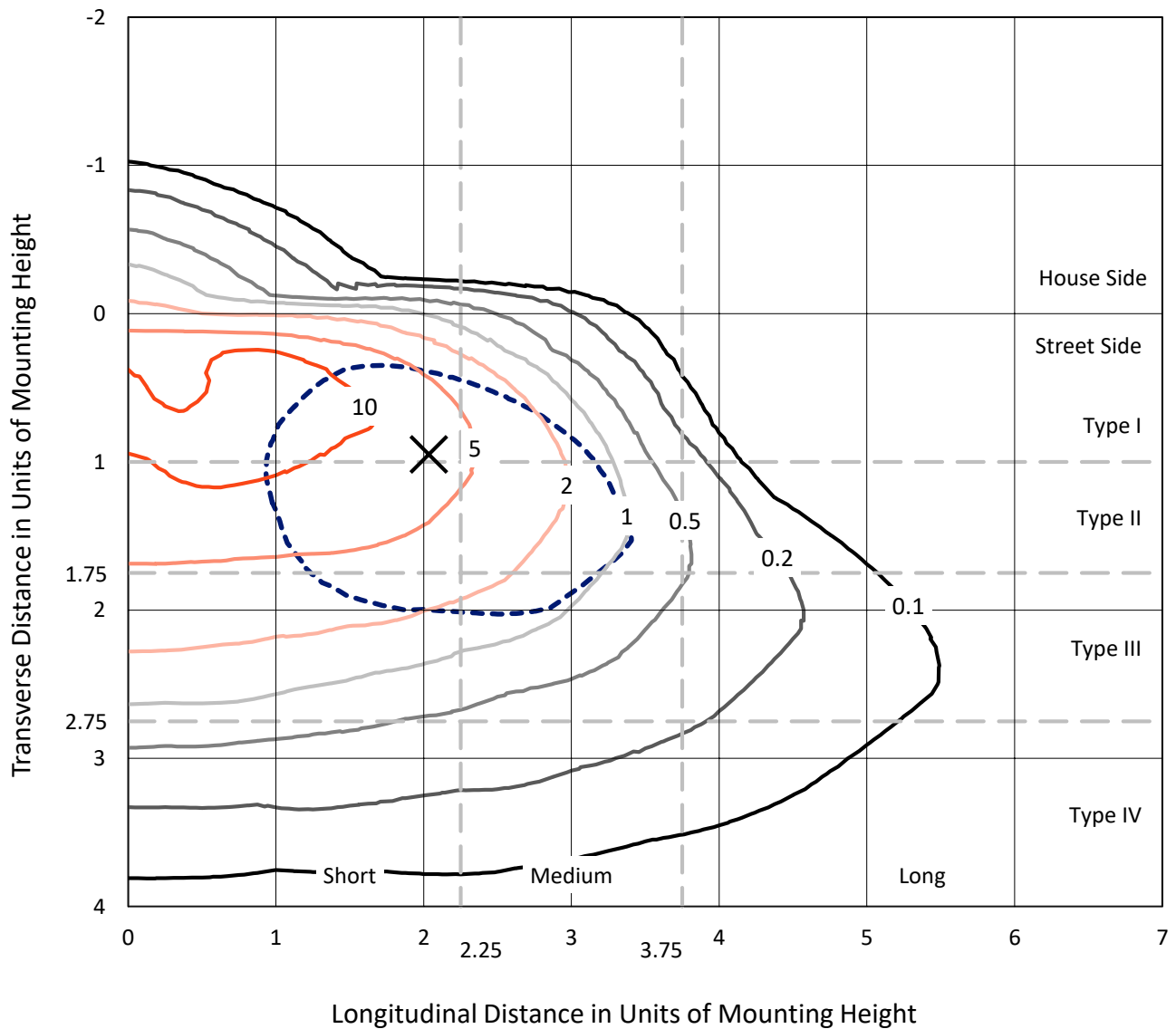


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### Iso-Footcandle Lines of Horizontal Illumination

× Max cd  
 - - - 1/2 Max cd

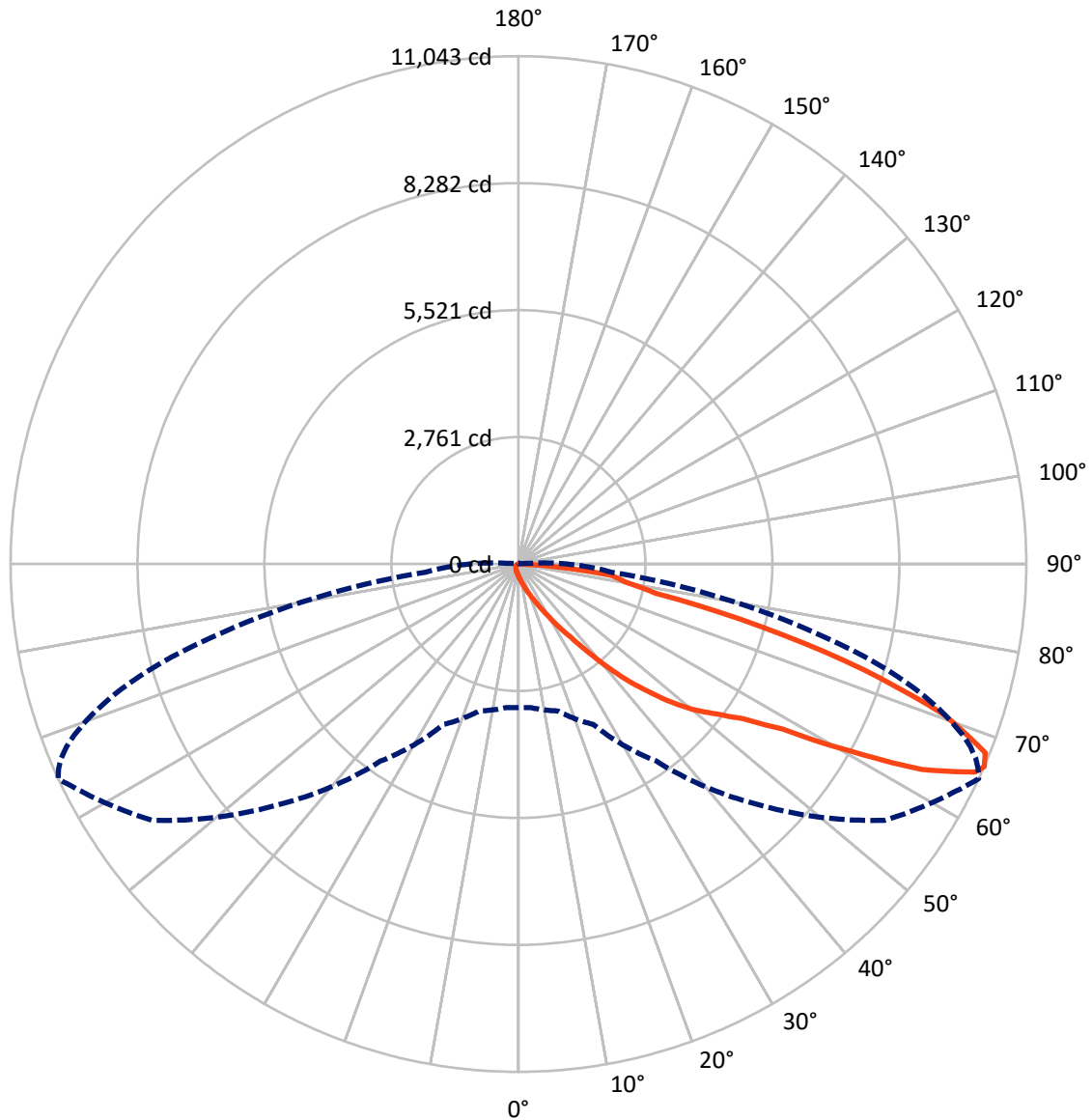


Based on 10 foot mounting height. Maximum calculated value = 14.2 fc  
 Type III - Short - Non-Cutoff

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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
<b>House Side</b>	Lumens	187.0	0.0	187.0
	% Fixture	2.2	0.0	2.2
<b>Street Side</b>	Lumens	8441.5	0.0	8441.5
	% Fixture	97.8	0.0	97.8
<b>Total</b>	Lumens	8628.4	0.0	8628.4
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	29.2	0.3
10°-20°	123.6	1.4
20°-30°	266.6	3.1
30°-40°	569.4	6.6
40°-50°	1259.2	14.6
50°-60°	2134.0	24.7
60°-70°	2847.6	33.0
70°-80°	1254.3	14.5
80°-90°	144.5	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°	8628.4	100.0
0°-180°	8628.4	100.0



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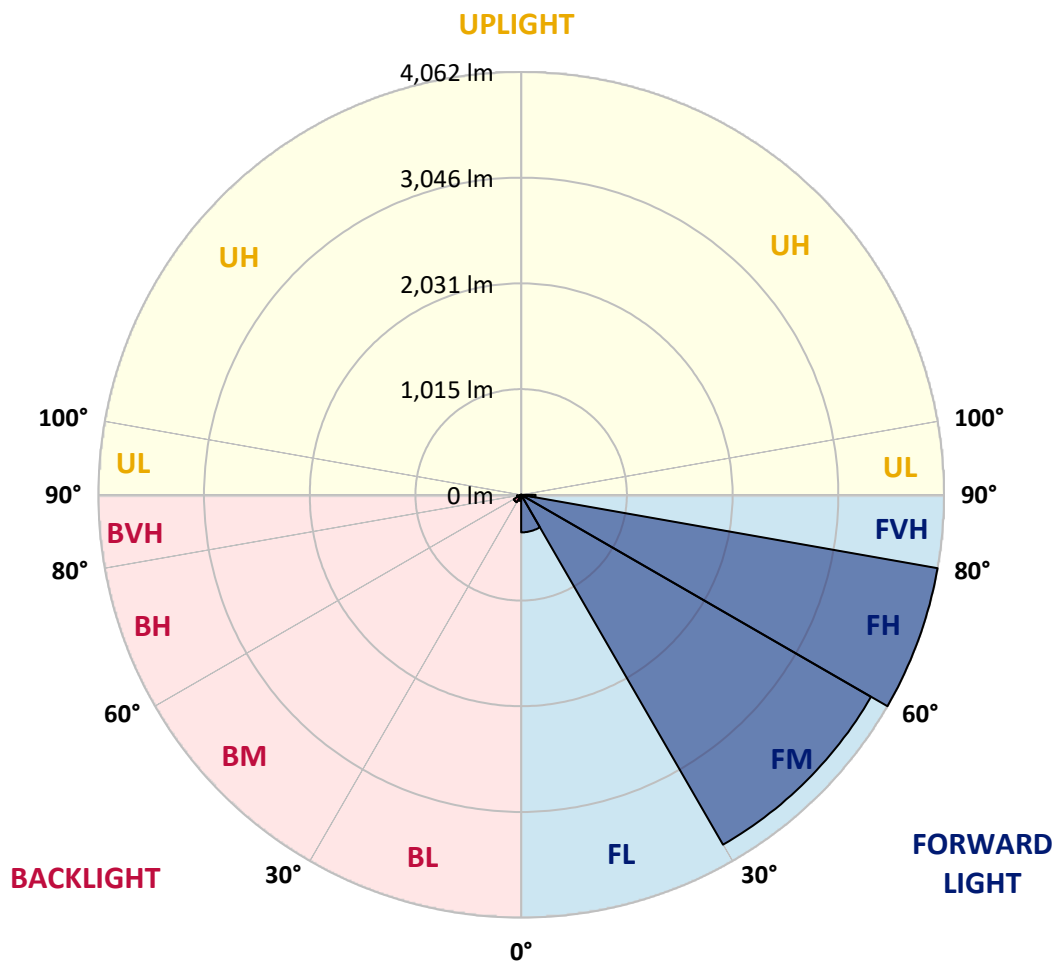
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	360.4	4.2			
FM	(30°-60°)	3880.5	45.0			
FH	(60°-80°)	4061.8	47.1			G2/5000
FVH	(80°-90°)	138.7	1.6			G2/225
BL	(0°-30°)	59.0	0.7	B0/110		
BM	(30°-60°)	82.1	1.0	B0/220		
BH	(60°-80°)	40.1	0.5	B0/110		G0/110
BVH	(80°-90°)	5.8	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°	260.4	260.4	260.4	260.4	260.4	260.4	260.4	260.4	260.4	260.4	260.4
2.5°	328.5	326.8	320.1	320.1	310.2	303.5	295.3	287.0	287.0	285.4	283.6
5°	434.7	424.7	423.0	404.8	389.8	368.3	348.4	321.8	318.5	315.2	313.5
7.5°	552.4	550.7	535.8	514.3	484.4	444.6	404.8	361.6	355.0	351.6	345.1
10°	705.0	696.7	676.8	640.3	595.6	542.4	477.8	409.7	401.4	394.8	391.5
12.5°	850.9	836.1	824.5	778.0	721.6	643.7	565.7	467.8	461.1	452.8	439.6
15°	987.0	973.8	953.9	914.1	850.9	753.2	661.8	542.4	525.9	514.3	504.3
17.5°	1093.2	1084.9	1061.7	1016.9	948.8	862.6	753.2	618.7	605.5	590.5	572.3
20°	1194.4	1182.8	1146.3	1084.9	1011.9	945.6	860.9	718.3	700.0	681.7	661.8
22.5°	1290.6	1278.9	1219.2	1118.0	1040.1	1011.9	982.1	831.0	802.9	787.9	768.0
25°	1425.0	1400.1	1307.2	1146.3	1041.8	1063.4	1114.8	977.1	950.5	928.9	897.4
27.5°	1605.8	1572.6	1426.6	1187.7	1048.4	1119.7	1267.3	1154.6	1126.4	1101.5	1066.6
30°	1809.8	1788.2	1614.1	1287.2	1096.5	1202.7	1438.2	1380.2	1347.0	1317.1	1275.7
32.5°	2015.5	1985.6	1813.1	1476.4	1225.9	1363.6	1652.2	1642.3	1599.2	1571.0	1526.1
35°	2196.3	2181.4	2053.6	1786.6	1521.2	1645.6	1937.5	1949.2	1911.0	1881.2	1831.4
37.5°	2319.1	2319.1	2294.2	2120.0	1990.6	2083.5	2357.3	2358.9	2320.7	2252.7	2227.9
40°	2382.1	2400.4	2489.9	2523.1	2516.5	2636.0	2908.0	2878.1	2846.6	2811.7	2728.8
42.5°	2511.5	2528.1	2718.9	2947.8	3097.1	3254.7	3442.1	3432.1	3394.0	3330.9	3254.7
45°	2730.5	2752.0	2979.3	3342.5	3649.4	3873.4	3992.9	3946.4	3908.2	3848.5	3808.7
47.5°	3009.2	3050.6	3307.8	3757.3	4127.2	4497.1	4621.6	4498.9	4465.6	4419.2	4354.5
50°	3306.1	3345.9	3619.6	4133.9	4551.9	4993.1	5200.5	4993.1	4945.0	4930.1	4857.2
52.5°	3563.3	3596.4	3860.1	4424.2	4877.1	5394.5	5696.5	5422.8	5388.0	5338.2	5285.1
55°	3715.8	3742.4	3989.5	4563.5	5097.7	5756.2	6175.9	5935.4	5884.0	5864.1	5787.7
57.5°	3767.2	3793.8	4016.1	4581.8	5217.1	6086.3	6758.1	6766.4	6705.1	6633.8	6610.6
60°	3767.2	3797.1	3984.6	4536.9	5333.2	6438.0	7534.5	8226.3	8093.5	8080.3	7995.7
62.5°	3611.3	3639.5	3828.6	4399.3	5489.2	6912.5	8616.1	9837.0	9798.9	9712.6	9573.3
65°	3273.0	3289.5	3475.3	4047.6	5429.4	7348.8	9553.3	10908.6	10847.3	10678.1	10498.9
66°	3120.3	3133.6	3307.8	3846.9	5233.7	7408.5	9719.3	11042.9	10941.8	10799.1	10596.8
67.5°	2899.7	2922.9	3045.7	3473.7	4764.2	7201.1	9614.7	10948.4	10860.5	10688.0	10485.6
70°	1935.9	1919.3	2352.2	2665.8	3629.5	5867.4	8626.1	9830.4	9832.0	9750.8	9669.5
72.5°	919.0	928.9	1055.0	1640.6	2375.4	3919.8	6866.0	7846.4	7959.2	7813.2	7712.0
75°	660.2	675.2	751.4	1003.6	1416.6	2352.2	4450.7	5487.5	5490.8	5232.0	5001.4
77.5°	192.4	200.7	282.0	618.7	1061.7	1587.5	2556.3	3050.6	2979.3	2793.5	2619.3
80°	79.6	79.6	82.9	197.4	426.3	1078.2	1788.2	2349.0	2340.6	2269.3	2166.4
82.5°	29.9	31.5	39.8	81.3	101.2	265.5	1192.7	2038.8	2033.7	1932.6	1859.6
85°	3.3	3.3	10.0	34.8	38.2	49.8	238.9	899.1	894.1	899.1	787.9
87.5°	0.0	0.0	1.6	3.3	4.9	6.7	10.0	34.8	38.2	36.5	33.1
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°	260.4	260.4	260.4	260.4	260.4	260.4	260.4	260.4	260.4	260.4	260.4
2.5°	283.6	280.3	280.3	278.7	278.7	278.7	277.0	275.4	275.4	273.7	272.0
5°	310.2	306.9	305.3	301.9	300.2	298.6	295.3	293.6	290.3	288.6	287.0
7.5°	341.7	335.1	333.4	328.5	323.4	320.1	316.9	311.8	308.5	301.9	300.2
10°	381.5	373.2	366.6	360.0	355.0	346.7	341.7	335.1	328.5	323.4	318.5
12.5°	432.9	421.3	411.4	404.8	393.1	383.1	373.2	368.3	355.0	348.4	340.1
15°	489.3	476.1	464.5	451.2	442.9	426.3	413.0	398.1	391.5	379.9	366.6
17.5°	562.3	540.8	522.5	509.3	492.6	476.1	461.1	446.3	426.3	413.0	396.5
20°	640.3	622.0	597.2	574.0	554.1	534.2	512.5	492.6	474.5	452.8	432.9
22.5°	739.8	713.3	683.5	660.2	633.7	612.1	582.2	555.7	525.9	497.7	474.5
25°	865.9	831.0	802.9	769.7	738.2	705.0	668.5	635.4	597.2	570.6	530.8
27.5°	1021.9	988.7	950.5	907.4	875.9	826.1	778.0	736.5	691.7	650.2	605.5
30°	1221.0	1172.8	1133.0	1091.6	1028.5	980.3	924.0	867.6	806.2	764.8	696.7
32.5°	1459.8	1408.3	1348.6	1288.9	1230.9	1162.9	1093.2	1023.5	955.5	879.2	809.5
35°	1751.8	1690.4	1622.4	1557.6	1468.0	1395.1	1307.2	1211.0	1134.7	1046.7	958.8
37.5°	2138.3	2037.0	1977.3	1909.4	1788.2	1688.7	1590.9	1494.6	1360.3	1267.3	1143.0
40°	2622.6	2562.9	2465.0	2355.5	2246.0	2115.0	1982.3	1854.6	1698.6	1569.3	1425.0
42.5°	3191.6	3103.8	3004.2	2846.6	2735.5	2581.2	2430.2	2261.0	2070.3	1904.3	1735.1
45°	3725.8	3621.2	3545.0	3387.4	3271.2	3088.8	2906.3	2727.2	2506.6	2292.5	2096.7
47.5°	4303.1	4216.8	4090.8	3963.0	3845.2	3639.5	3442.1	3224.8	2992.5	2738.8	2484.9
50°	4810.7	4742.7	4656.4	4502.1	4371.1	4198.5	3966.3	3729.1	3435.5	3183.4	2894.7
52.5°	5242.0	5188.9	5067.8	4958.3	4840.5	4678.0	4470.6	4243.4	3926.5	3649.4	3321.0
55°	5751.2	5713.0	5606.9	5538.9	5434.4	5278.5	5084.4	4873.7	4538.7	4236.7	3865.1
57.5°	6585.6	6555.8	6462.9	6434.7	6331.9	6195.8	5957.0	5731.3	5339.9	4964.9	4540.3
60°	7967.5	7907.8	7771.7	7702.1	7484.7	7302.3	6992.1	6681.9	6209.1	5731.3	5220.4
62.5°	9447.1	9279.6	9020.8	8798.5	8490.0	8173.1	7758.5	7284.0	6729.9	6162.7	5575.4
65°	10245.0	9959.8	9633.0	9279.6	8879.8	8413.7	7891.2	7322.2	6726.6	6127.8	5507.4
66°	10336.3	10014.5	9667.8	9274.7	8830.0	8334.0	7803.2	7206.0	6587.3	6003.4	5382.9
67.5°	10221.9	9885.1	9518.5	9082.3	8601.1	8086.9	7529.6	6909.1	6313.6	5721.4	5117.6
70°	9420.7	9085.5	8758.7	8299.2	7786.7	7269.1	6741.6	6048.2	5484.1	4940.1	4402.6
72.5°	7522.9	7295.6	6972.2	6579.0	6079.7	5472.5	5032.9	4412.6	3923.2	3395.7	2979.3
75°	4701.2	4381.1	3981.3	3480.2	3098.7	2606.1	2349.0	1877.8	1599.2	1355.3	1119.7
77.5°	2403.7	2163.1	1882.8	1600.8	1330.4	1061.7	821.1	580.6	391.5	272.0	202.3
80°	1985.6	1773.3	1541.1	1284.0	1045.1	811.1	584.0	398.1	253.8	165.9	129.4
82.5°	1640.6	1461.5	1254.1	1015.2	807.9	637.0	442.9	288.6	179.2	116.2	91.2
85°	698.4	633.7	489.3	388.2	291.9	215.7	150.9	101.2	71.3	58.1	53.0
87.5°	29.9	33.1	31.5	24.8	18.3	18.3	16.6	13.2	13.2	13.2	13.2
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):**

	80°	81°	82°	83°	84°	85°	95°	105°	115°	125°	135°
0°	260.4	260.4	260.4	260.4	260.4	260.4	260.4	260.4	260.4	260.4	260.4
2.5°	272.0	270.4	268.7	268.7	267.1	265.5	255.5	247.2	237.2	230.6	223.9
5°	283.6	282.0	278.7	277.0	273.7	272.0	250.5	232.2	217.3	205.7	197.4
7.5°	295.3	293.6	288.6	283.6	282.0	278.7	243.8	220.6	200.7	187.5	179.2
10°	310.2	305.3	300.2	293.6	288.6	283.6	237.2	207.4	185.8	174.1	165.9
12.5°	331.7	323.4	315.2	306.9	300.2	291.9	233.8	195.8	174.1	160.9	152.6
15°	356.7	345.1	335.1	325.2	313.5	305.3	227.3	185.8	164.2	150.9	141.0
17.5°	379.9	366.6	351.6	336.8	325.2	313.5	220.6	175.9	154.2	141.0	131.0
20°	413.0	393.1	374.9	356.7	340.1	325.2	210.7	165.9	146.0	131.0	121.1
22.5°	449.5	426.3	403.1	378.2	356.7	336.8	202.3	157.6	137.7	122.7	111.1
25°	496.0	467.8	436.3	404.8	379.9	353.3	194.0	149.3	129.4	114.4	102.8
27.5°	560.7	520.9	486.1	446.3	408.1	378.2	187.5	142.6	121.1	106.2	94.5
30°	648.6	590.5	535.8	492.6	447.9	404.8	180.8	134.3	114.4	97.9	84.6
32.5°	746.5	678.5	615.5	550.7	494.4	444.6	174.1	127.8	106.2	89.6	78.0
35°	867.6	781.3	696.7	622.0	554.1	487.7	167.6	121.1	99.5	81.3	69.7
37.5°	1041.8	934.0	822.8	726.6	638.6	550.7	162.5	114.4	91.2	73.0	61.4
40°	1280.7	1141.3	1005.3	874.2	759.7	650.2	156.0	107.8	84.6	66.4	54.7
42.5°	1539.5	1370.3	1191.1	1043.4	885.8	748.1	149.3	101.2	78.0	59.7	48.1
45°	1861.3	1650.6	1433.3	1232.6	1040.1	862.6	142.6	94.5	69.7	53.0	41.5
47.5°	2212.9	1944.2	1698.6	1446.5	1217.6	1005.3	134.3	89.6	63.0	46.5	36.5
50°	2574.5	2290.9	1980.7	1693.7	1421.7	1147.9	126.1	81.3	56.4	41.5	29.9
52.5°	2964.4	2629.3	2312.4	1955.8	1639.0	1335.4	117.8	74.6	51.4	36.5	24.8
55°	3460.3	3085.5	2713.8	2314.1	1932.6	1552.7	109.5	66.4	44.7	31.5	19.9
57.5°	4084.1	3639.5	3183.4	2732.1	2269.3	1838.0	102.8	58.1	38.2	26.6	16.6
60°	4673.0	4153.8	3601.3	3082.1	2559.6	2056.9	92.9	51.4	33.1	21.5	16.6
62.5°	4978.3	4386.0	3790.4	3218.2	2660.8	2134.9	82.9	43.1	28.2	18.3	14.9
65°	4903.6	4299.8	3722.5	3145.2	2599.4	2085.1	73.0	38.2	24.8	16.6	14.9
66°	4795.7	4198.5	3617.9	3068.9	2548.0	2032.1	68.0	36.5	23.2	16.6	13.2
67.5°	4560.2	3982.9	3428.8	2917.9	2407.0	1930.9	61.4	33.1	21.5	14.9	13.2
70°	3895.0	3370.8	2927.9	2473.3	2056.9	1627.3	49.8	28.2	18.3	13.2	13.2
72.5°	2577.9	2221.2	1925.9	1657.2	1385.1	1074.9	41.5	23.2	14.9	13.2	11.6
75°	972.1	879.2	754.8	678.5	592.2	519.2	33.1	14.9	11.6	11.6	11.6
77.5°	172.5	159.3	141.0	129.4	119.4	109.5	26.6	10.0	10.0	11.6	11.6
80°	116.2	107.8	97.9	89.6	82.9	74.6	18.3	8.3	10.0	10.0	11.6
82.5°	82.9	78.0	73.0	66.4	61.4	54.7	11.6	8.3	10.0	10.0	10.0
85°	49.8	46.5	43.1	39.8	34.8	33.1	8.3	8.3	8.3	10.0	10.0
87.5°	13.2	11.6	13.2	13.2	10.0	11.6	6.7	6.7	6.7	8.3	8.3
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):**

	145°	155°	165°	175°	180°
0°	260.4	260.4	260.4	260.4	260.4
2.5°	220.6	220.6	217.3	222.3	222.3
5°	190.8	190.8	189.1	190.8	190.8
7.5°	174.1	172.5	172.5	172.5	174.1
10°	159.3	157.6	157.6	157.6	157.6
12.5°	146.0	144.3	142.6	144.3	144.3
15°	134.3	131.0	131.0	131.0	131.0
17.5°	124.4	121.1	119.4	119.4	119.4
20°	114.4	109.5	109.5	109.5	109.5
22.5°	104.5	99.5	99.5	99.5	99.5
25°	94.5	89.6	89.6	89.6	89.6
27.5°	86.3	81.3	81.3	81.3	81.3
30°	76.3	73.0	73.0	74.6	73.0
32.5°	69.7	64.6	64.6	66.4	66.4
35°	61.4	58.1	58.1	58.1	58.1
37.5°	53.0	49.8	49.8	49.8	49.8
40°	46.5	43.1	41.5	43.1	43.1
42.5°	39.8	36.5	34.8	34.8	34.8
45°	34.8	29.9	28.2	29.9	29.9
47.5°	28.2	24.8	24.8	26.6	26.6
50°	21.5	21.5	23.2	26.6	26.6
52.5°	19.9	19.9	23.2	26.6	26.6
55°	18.3	19.9	23.2	24.8	26.6
57.5°	16.6	19.9	23.2	24.8	24.8
60°	16.6	18.3	21.5	24.8	24.8
62.5°	14.9	16.6	19.9	23.2	23.2
65°	14.9	16.6	19.9	23.2	23.2
66°	14.9	16.6	19.9	23.2	23.2
67.5°	14.9	16.6	19.9	23.2	23.2
70°	14.9	16.6	19.9	21.5	21.5
72.5°	13.2	14.9	18.3	21.5	21.5
75°	13.2	14.9	18.3	21.5	21.5
77.5°	13.2	14.9	18.3	21.5	21.5
80°	13.2	14.9	18.3	19.9	21.5
82.5°	11.6	14.9	16.6	19.9	19.9
85°	11.6	13.2	16.6	18.3	19.9
87.5°	10.0	11.6	13.2	16.6	16.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)