

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: P145468

Luminaire Tested: **LDRL-SL4-E06-E-8030**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P145468
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33703)
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: LDRL-SL4-E06-E-8030
Description: RL LED ROADWAY LARGE CUTOFF COBRAHEAD LUMINAIRE
(6) LIGHTBARS WITH AccuLED OPTICS - TYPE 4 W/ SPILL LIGHT CONTROL
Light Source: (126) 3000K CCT, 80 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 14594.4 lumens
Efficiency: N/A
Efficacy: 97.0 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short - Semi-Cutoff
BUG Rating: B2 - U0 - G3

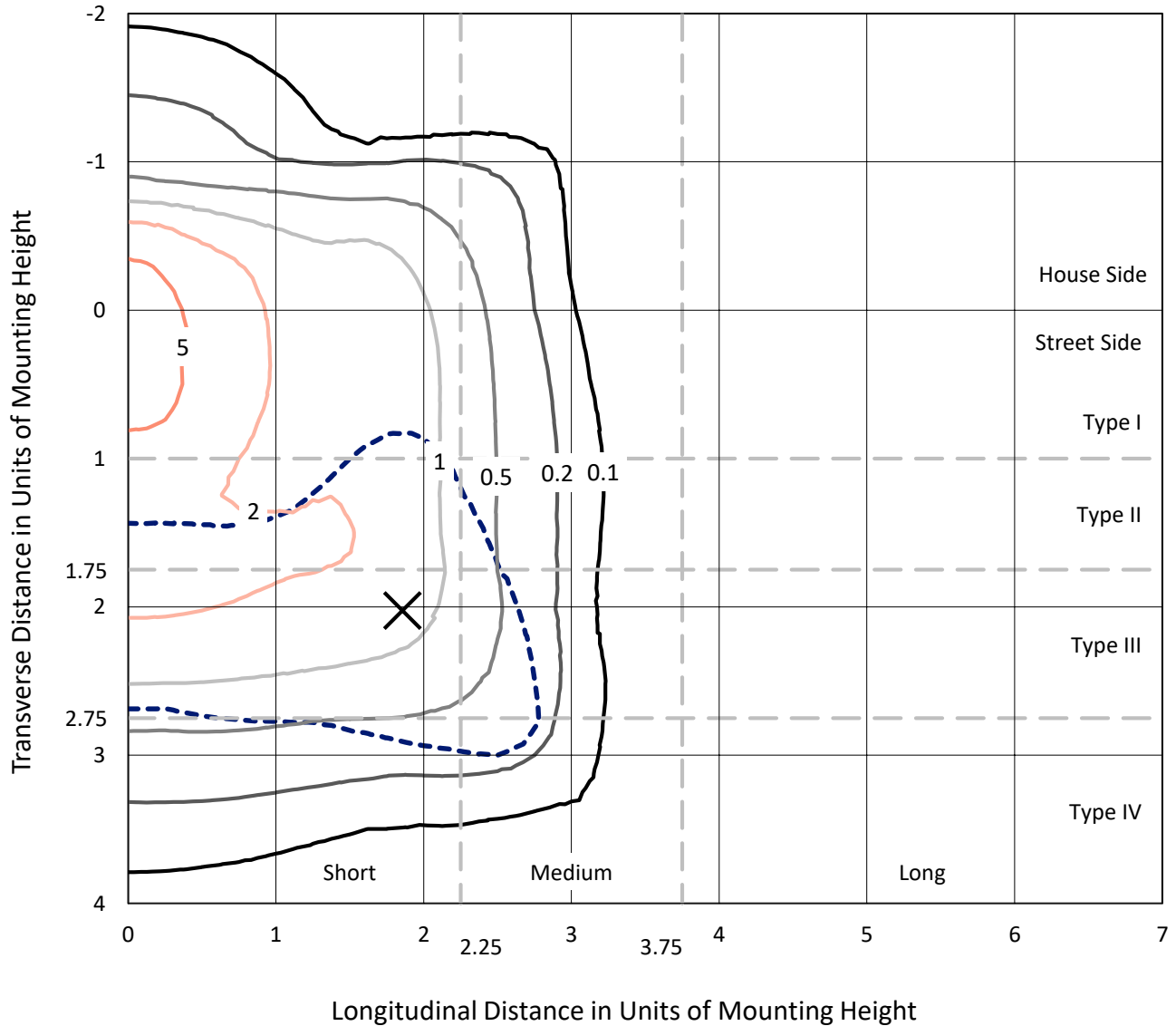
Input Watts (W): 150.5
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

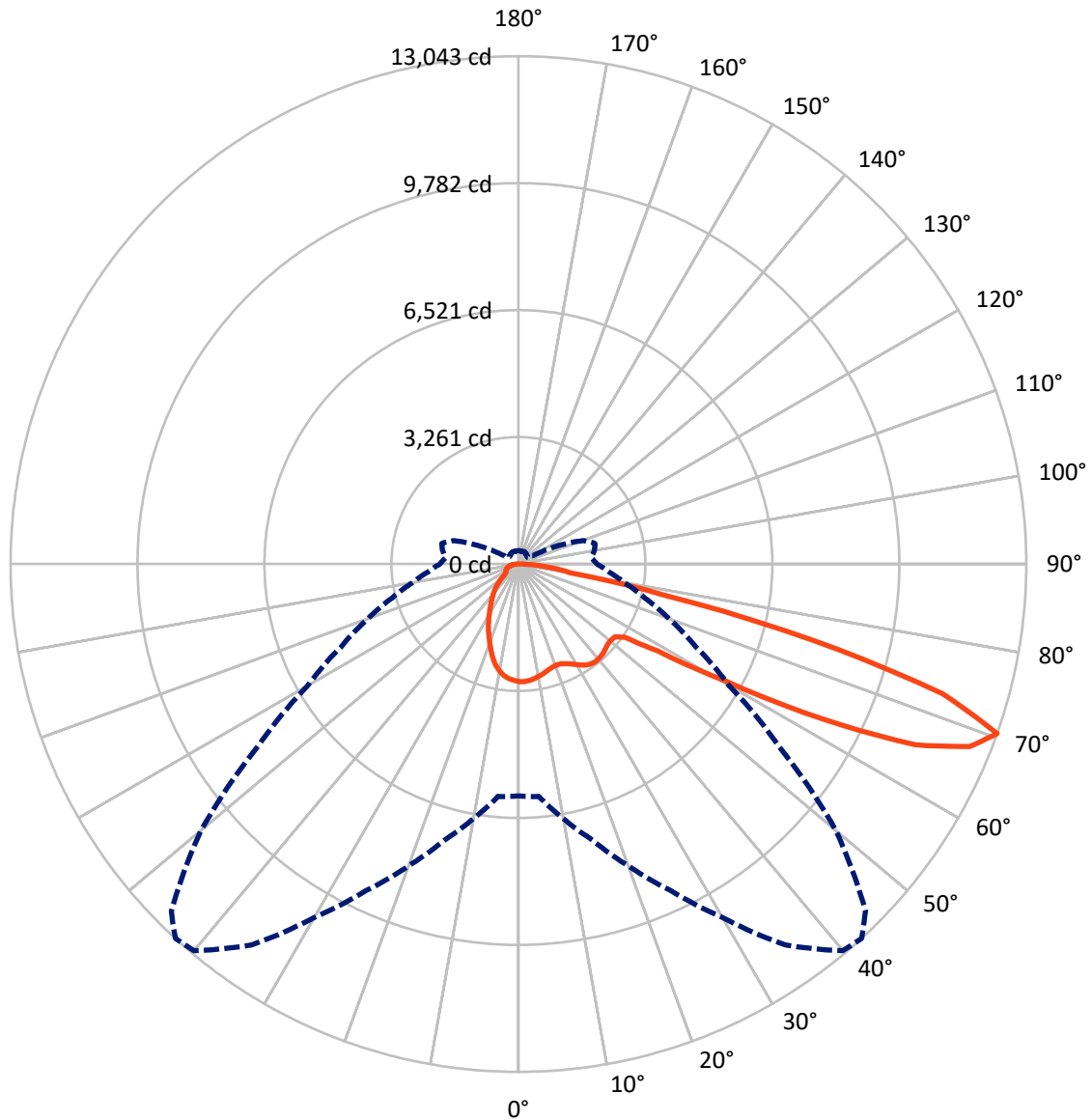
✕ Max cd
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 7.5 fc
 Type IV - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 42.5-Deg Lateral - - - Horizontal Cone Through 70-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	3152.7	0.0	3152.7
	% Fixture	21.6	0.0	21.6
Street Side	Lumens	11441.8	0.0	11441.8
	% Fixture	78.4	0.0	78.4
Total	Lumens	14594.4	0.0	14594.4
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	280.8	1.9
10°-20°	756.5	5.2
20°-30°	1103.4	7.6
30°-40°	1407.3	9.6
40°-50°	1642.6	11.3
50°-60°	2512.1	17.2
60°-70°	4553.7	31.2
70°-80°	2024.7	13.9
80°-90°	313.3	2.1
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°	14594.4	100.0
0°-180°	14594.4	100.0



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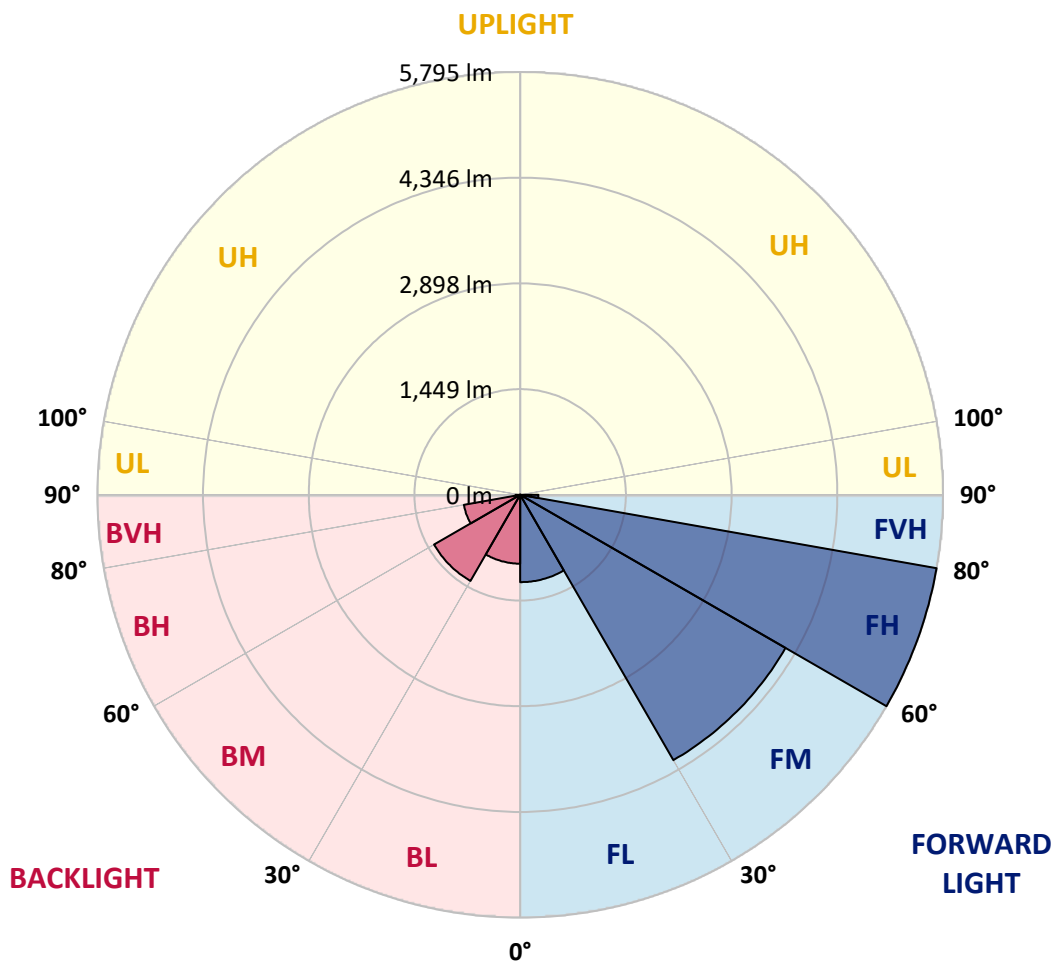
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1197.1	8.2			
FM	(30°-60°)	4199.2	28.8			
FH	(60°-80°)	5795.1	39.7			G3/7500
FVH	(80°-90°)	250.3	1.7			G3/500
BL	(0°-30°)	943.6	6.5	B2/1000		
BM	(30°-60°)	1362.8	9.3	B2/2500		
BH	(60°-80°)	783.2	5.4	B2/1000		G2/1000
BVH	(80°-90°)	63.0	0.4			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G3

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	42.5°	45°
0°	3018.1	3018.1	3018.1	3018.1	3018.1	3018.1	3018.1	3018.1	3018.1	3018.1	3018.1
2.5°	3032.3	3029.3	3031.3	3033.3	3033.3	3034.3	3025.2	3026.2	3022.2	3023.2	3024.2
5°	3021.1	3018.1	3020.1	3020.1	3020.1	3019.1	3007.0	3006.0	3000.9	3000.9	2998.9
7.5°	2999.9	2988.7	2994.8	2995.8	2993.8	2988.7	2981.7	2974.6	2971.5	2971.5	2964.4
10°	2967.5	2955.3	2958.4	2960.4	2959.4	2949.2	2946.2	2939.1	2931.0	2928.0	2919.9
12.5°	2925.9	2917.8	2921.9	2920.9	2920.9	2911.8	2906.7	2896.6	2886.4	2881.4	2871.3
15°	2899.6	2889.5	2893.5	2893.5	2889.5	2880.4	2873.3	2855.1	2837.8	2831.8	2818.6
17.5°	2915.8	2905.7	2909.7	2906.7	2899.6	2880.4	2862.1	2832.8	2805.4	2789.2	2772.0
20°	2980.6	2970.5	2973.5	2971.5	2961.4	2930.0	2896.6	2845.9	2795.3	2771.0	2744.7
22.5°	3083.9	3075.8	3080.9	3077.9	3061.7	3021.1	2971.5	2898.6	2822.6	2786.2	2748.7
25°	3236.9	3234.8	3243.0	3233.8	3210.5	3149.8	3077.9	2979.6	2880.4	2834.8	2782.1
27.5°	3421.2	3404.0	3416.1	3408.0	3391.8	3314.9	3217.6	3093.1	2966.5	2906.7	2843.9
30°	3587.3	3572.1	3594.4	3590.3	3566.0	3487.0	3364.5	3218.6	3075.8	2999.9	2928.0
32.5°	3779.7	3760.5	3777.7	3777.7	3741.2	3634.9	3495.1	3328.0	3178.1	3097.1	3011.0
35°	3981.3	3961.0	3977.2	3972.2	3907.3	3766.6	3591.4	3410.1	3245.0	3161.9	3073.8
37.5°	4168.6	4165.6	4169.7	4136.2	4046.1	3865.8	3656.2	3453.6	3278.4	3191.3	3099.1
40°	4356.0	4348.9	4331.7	4273.0	4141.3	3924.6	3689.6	3468.8	3280.4	3189.3	3096.1
42.5°	4473.5	4460.3	4431.0	4350.9	4185.9	3938.7	3679.5	3445.5	3256.1	3162.9	3071.8
45°	4514.0	4500.8	4465.4	4375.2	4186.9	3916.5	3640.0	3398.9	3210.5	3125.5	3033.3
47.5°	4480.6	4472.5	4440.1	4349.9	4154.5	3874.9	3590.3	3352.3	3167.0	3083.9	2997.9
50°	4423.9	4418.8	4390.4	4307.4	4124.1	3849.6	3567.0	3330.1	3154.8	3077.9	2996.8
52.5°	4565.7	4550.5	4499.8	4401.6	4187.9	3895.2	3603.5	3363.5	3183.2	3105.2	3022.2
55°	6308.7	6196.2	5945.1	5474.1	4814.8	4303.3	3872.9	3583.2	3388.8	3312.8	3233.8
57.5°	8296.8	8179.3	8075.0	7715.4	6932.5	5966.3	5097.4	4588.9	4240.5	4207.1	4175.7
60°	9062.4	9099.9	9090.8	8957.1	8556.0	8097.2	7370.1	6769.5	6104.1	6076.7	6116.2
62.5°	9590.1	9621.5	9625.5	9585.0	9454.4	9301.5	9149.5	8957.1	8830.5	8775.8	8422.4
65°	9807.8	9853.4	9953.7	10028.6	10049.9	10102.6	10240.3	10763.9	11200.4	11197.4	10783.2
67.5°	8976.3	9031.0	9410.8	9783.5	10096.5	10459.1	11017.1	11868.9	12526.2	12505.9	12166.6
70°	5957.2	5991.7	6636.8	7338.7	8249.2	9255.9	10475.3	11943.8	12962.7	13042.7	12605.2
72.5°	3654.1	3733.1	3943.8	4228.4	4714.5	5647.3	7460.2	9969.9	11464.8	11389.8	11041.4
75°	2467.2	2471.2	2465.1	2495.5	2522.9	2711.2	3441.5	5482.2	7766.1	7806.6	7656.7
77.5°	1686.3	1708.6	1720.7	1712.6	1740.0	1731.9	1774.4	1878.7	2976.6	3799.0	3491.1
80°	1473.6	1482.7	1495.9	1476.6	1426.0	1397.6	1437.1	1399.7	1318.7	1362.2	1304.5
82.5°	932.8	960.1	963.2	1030.0	1129.3	1133.3	1184.0	1146.5	1043.2	975.3	892.3
85°	670.5	680.6	698.8	702.9	668.4	639.1	657.3	625.9	564.1	527.7	466.9
87.5°	390.9	401.1	419.3	408.2	373.7	331.2	298.8	257.2	203.6	190.4	168.1
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):

	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°
0°	3018.1	3018.1	3018.1	3018.1	3018.1	3018.1	3018.1	3018.1	3018.1	3018.1	3018.1
2.5°	3025.2	3020.1	3016.1	3014.1	3018.1	3014.1	3010.0	3008.0	3003.9	3004.9	2999.9
5°	2996.8	2989.8	2983.7	2978.6	2982.7	2975.6	2969.5	2965.4	2960.4	2959.4	2954.3
7.5°	2957.3	2946.2	2938.1	2929.0	2918.9	2912.8	2905.7	2898.6	2887.5	2886.4	2884.4
10°	2905.7	2896.6	2880.4	2866.2	2852.0	2836.8	2821.6	2810.5	2797.3	2792.3	2785.2
12.5°	2854.0	2835.8	2816.6	2794.3	2777.1	2752.8	2732.5	2711.2	2692.0	2679.8	2666.7
15°	2793.3	2774.0	2746.7	2725.4	2701.1	2673.8	2647.4	2616.0	2584.6	2565.4	2547.2
17.5°	2740.6	2716.3	2694.0	2663.6	2639.3	2607.9	2568.4	2535.0	2497.5	2466.1	2432.7
20°	2700.1	2672.8	2646.4	2619.1	2589.7	2554.3	2510.7	2463.1	2415.5	2370.9	2321.3
22.5°	2683.9	2640.3	2611.0	2585.7	2555.3	2514.8	2466.1	2407.4	2348.7	2291.9	2234.2
25°	2698.1	2633.3	2587.7	2559.3	2532.0	2490.4	2435.8	2368.9	2300.0	2228.1	2159.3
27.5°	2736.6	2654.5	2589.7	2545.1	2513.7	2473.2	2412.5	2342.6	2264.6	2183.6	2109.6
30°	2792.3	2690.0	2608.9	2545.1	2498.6	2452.0	2386.1	2307.1	2225.1	2140.0	2057.0
32.5°	2853.0	2729.5	2632.2	2548.2	2476.3	2417.5	2348.7	2271.7	2184.6	2094.4	2005.3
35°	2898.6	2757.8	2642.4	2537.0	2444.9	2370.9	2297.0	2222.1	2137.0	2045.8	1956.7
37.5°	2917.8	2769.0	2640.3	2513.7	2401.3	2320.3	2243.3	2168.4	2086.3	2000.3	1918.2
40°	2918.9	2769.0	2628.2	2482.3	2355.7	2267.6	2186.6	2116.7	2039.8	1965.8	1892.9
42.5°	2899.6	2754.8	2605.9	2453.0	2322.3	2223.1	2140.0	2068.1	2006.3	1940.5	1878.7
45°	2865.2	2726.4	2585.7	2436.8	2310.2	2211.9	2122.8	2054.9	1999.2	1940.5	1886.8
47.5°	2838.8	2710.2	2586.7	2460.1	2339.5	2238.3	2142.0	2070.1	2022.5	1976.0	1937.5
50°	2843.9	2716.3	2598.8	2478.3	2359.8	2257.5	2164.3	2102.6	2074.2	2059.0	2049.9
52.5°	2870.2	2740.6	2651.5	2571.5	2533.0	2470.2	2418.5	2372.0	2379.0	2342.6	2296.0
55°	3141.7	3098.1	3200.4	3274.3	3310.8	3374.6	3466.8	3378.7	3366.5	3254.1	2919.9
57.5°	4218.3	4321.6	4478.6	4590.0	4601.1	4581.9	4505.9	4433.0	4314.5	4145.3	3677.4
60°	6024.1	5999.8	5853.9	5658.5	5506.5	5307.0	5106.5	4937.3	4746.9	4487.7	3989.4
62.5°	7923.0	7337.7	6818.1	6375.5	5999.8	5666.6	5363.7	5109.5	4848.2	4475.5	3944.8
65°	9456.4	8330.2	7414.6	6702.6	6143.6	5672.6	5281.7	4931.3	4581.9	4150.4	3635.9
67.5°	10552.2	8765.7	7384.2	6382.6	5598.7	4950.5	4381.3	3982.3	3623.8	3284.5	3052.5
70°	10639.3	8163.1	6246.9	5021.4	4117.0	3355.4	2764.9	2329.4	2017.5	1876.7	1977.0
72.5°	9091.8	6039.3	4153.4	3073.8	2439.8	1895.9	1524.2	1218.4	967.2	843.7	860.9
75°	5354.6	2899.6	1870.6	1393.6	1138.4	909.5	786.9	664.4	586.4	469.9	375.7
77.5°	2038.7	1260.9	943.9	783.9	559.1	402.1	317.0	273.5	251.2	248.1	235.0
80°	1174.8	924.7	647.2	423.3	309.9	262.3	224.8	192.4	179.3	176.2	181.3
82.5°	742.4	576.3	355.5	272.4	225.9	194.5	162.0	140.8	129.6	125.6	132.7
85°	383.8	288.6	216.7	186.4	173.2	158.0	129.6	108.4	107.4	112.4	129.6
87.5°	141.8	123.6	97.2	84.1	90.1	84.1	60.8	52.7	47.6	62.8	91.2
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):

	105°	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°
0°	3018.1	3018.1	3018.1	3018.1	3018.1	3018.1	3018.1	3018.1	3018.1	3018.1	3018.1
2.5°	2999.9	2997.9	2998.9	2996.8	2996.8	2999.9	2995.8	2992.8	2997.9	2997.9	3000.9
5°	2953.3	2955.3	2955.3	2954.3	2956.3	2961.4	2960.4	2960.4	2968.5	2971.5	2975.6
7.5°	2879.4	2882.4	2883.4	2886.4	2887.5	2894.6	2899.6	2905.7	2917.8	2920.9	2930.0
10°	2779.1	2777.1	2784.2	2783.1	2792.3	2798.3	2802.4	2815.6	2833.8	2843.9	2853.0
12.5°	2660.6	2660.6	2664.6	2665.7	2673.8	2681.9	2686.9	2703.1	2718.3	2731.5	2751.7
15°	2535.0	2531.0	2521.8	2520.8	2523.9	2532.0	2543.1	2555.3	2578.6	2597.8	2615.0
17.5°	2403.3	2391.2	2380.1	2365.9	2364.9	2363.8	2369.9	2379.0	2415.5	2434.7	2459.1
20°	2286.9	2260.5	2234.2	2204.8	2187.6	2179.5	2182.6	2194.7	2229.1	2254.5	2279.8
22.5°	2182.6	2143.1	2101.5	2054.9	2026.6	2009.4	2011.4	2016.5	2041.8	2057.0	2070.1
25°	2093.4	2038.7	1981.0	1921.3	1881.8	1855.4	1854.4	1854.4	1843.3	1845.3	1838.2
27.5°	2032.7	1956.7	1882.8	1812.9	1761.2	1734.9	1699.5	1674.1	1651.9	1621.5	1608.3
30°	1973.9	1895.9	1811.9	1734.9	1673.1	1621.5	1555.6	1501.0	1457.4	1415.9	1380.4
32.5°	1921.3	1840.2	1760.2	1676.2	1591.1	1502.0	1415.9	1353.1	1291.3	1227.5	1185.0
35°	1874.7	1798.7	1718.7	1623.5	1504.0	1387.5	1290.3	1205.2	1132.3	1055.3	993.5
37.5°	1848.3	1779.5	1696.4	1566.8	1416.9	1284.2	1175.8	1080.6	983.4	891.3	815.3
40°	1835.2	1774.4	1673.1	1509.1	1338.9	1197.1	1076.6	962.1	847.7	739.3	660.3
42.5°	1833.1	1774.4	1638.7	1450.3	1272.1	1120.1	985.4	847.7	709.0	603.6	533.7
45°	1851.4	1772.4	1602.2	1397.6	1212.3	1051.3	889.2	727.2	584.4	492.2	453.7
47.5°	1904.0	1779.5	1573.9	1353.1	1155.6	975.3	779.8	593.5	472.0	430.4	429.4
50°	1989.1	1811.9	1567.8	1320.7	1099.9	880.1	651.2	475.0	416.3	414.2	425.4
52.5°	2123.8	1872.6	1583.0	1298.4	1033.0	756.6	515.5	410.2	399.0	410.2	424.4
55°	2420.6	1981.0	1603.2	1258.9	924.7	599.6	424.4	388.9	394.0	407.1	420.3
57.5°	2960.4	2205.9	1624.5	1169.8	749.5	460.8	381.8	380.8	389.9	401.1	413.2
60°	3302.7	2483.4	1676.2	1038.1	566.1	380.8	365.6	375.7	386.9	395.0	405.1
62.5°	3313.8	2556.3	1703.5	897.3	421.3	348.4	351.4	370.7	383.8	386.9	391.9
65°	3100.1	2418.5	1580.0	730.2	349.4	330.2	341.3	358.5	371.7	373.7	377.8
67.5°	2708.2	2132.9	1338.9	551.0	318.0	316.0	328.1	341.3	350.4	358.5	364.6
70°	2039.8	1760.2	1076.6	427.4	298.8	296.7	308.9	320.0	328.1	338.3	348.4
72.5°	1034.1	1218.4	816.3	349.4	272.4	274.5	287.6	297.8	303.8	313.0	323.1
75°	352.5	531.7	516.5	282.6	243.1	251.2	257.2	268.4	277.5	283.6	288.6
77.5°	220.8	230.9	266.4	227.9	214.7	216.7	226.9	237.0	247.1	251.2	253.2
80°	184.3	185.3	186.4	182.3	183.3	189.4	195.5	206.6	216.7	218.8	219.8
82.5°	145.8	156.0	155.0	153.9	159.0	165.1	169.1	173.2	177.2	179.3	182.3
85°	128.6	126.6	127.6	130.6	126.6	122.5	121.5	121.5	127.6	134.7	137.7
87.5°	117.5	100.3	74.9	70.9	70.9	68.9	64.8	64.8	70.9	77.0	80.0
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):

	160°	165°	170°	175°	180°
0°	3018.1	3018.1	3018.1	3018.1	3018.1
2.5°	2999.9	3000.9	2999.9	2999.9	3004.9
5°	2977.6	2981.7	2979.6	2982.7	2985.7
7.5°	2932.0	2942.2	2944.2	2952.3	2949.2
10°	2866.2	2873.3	2883.4	2891.5	2888.5
12.5°	2761.9	2779.1	2794.3	2803.4	2801.4
15°	2629.2	2653.5	2673.8	2680.9	2672.8
17.5°	2487.4	2502.6	2526.9	2532.0	2540.1
20°	2308.1	2307.1	2328.4	2328.4	2324.4
22.5°	2074.2	2089.4	2089.4	2075.2	2068.1
25°	1835.2	1840.2	1825.0	1828.1	1808.8
27.5°	1595.1	1582.0	1569.8	1574.9	1560.7
30°	1366.3	1337.9	1325.7	1327.8	1312.6
32.5°	1146.5	1113.1	1100.9	1084.7	1071.5
35°	947.0	894.3	862.9	854.8	863.9
37.5°	751.5	714.0	676.5	649.2	652.2
40°	594.5	556.0	531.7	520.6	518.5
42.5°	491.2	468.9	463.9	464.9	464.9
45°	445.6	446.6	450.7	454.7	455.8
47.5°	436.5	442.6	449.7	454.7	455.8
50°	435.5	441.6	446.6	452.7	454.7
52.5°	434.5	438.5	441.6	444.6	447.7
55°	430.4	432.5	431.4	433.5	436.5
57.5°	420.3	421.3	419.3	420.3	426.4
60°	411.2	412.2	408.2	413.2	414.2
62.5°	400.1	399.0	397.0	400.1	400.1
65°	383.8	377.8	379.8	382.8	383.8
67.5°	364.6	358.5	358.5	360.6	363.6
70°	340.3	337.3	337.3	341.3	345.4
72.5°	313.0	315.0	321.1	327.1	333.2
75°	290.7	295.7	301.8	317.0	326.1
77.5°	262.3	263.3	268.4	283.6	299.8
80°	222.8	221.8	222.8	224.8	227.9
82.5°	176.2	174.2	168.1	170.1	166.1
85°	129.6	126.6	119.5	114.4	113.4
87.5°	74.9	74.9	71.9	67.9	63.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)