

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: P145469

Luminaire Tested: **LDRL-SL4-E06-E-7030**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P145469
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-7030
Description: RL LED ROADWAY LARGE CUTOFF COBRAHEAD LUMINAIRE
(6) LIGHTBARS WITH AccuLED OPTICS - TYPE 4 W/ SPILL LIGHT CONTROL
Light Source: (126) 3000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 15793.8 lumens
Efficiency: N/A
Efficacy: 104.9 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short - Semi-Cutoff
BUG Rating: B3 - U0 - G3

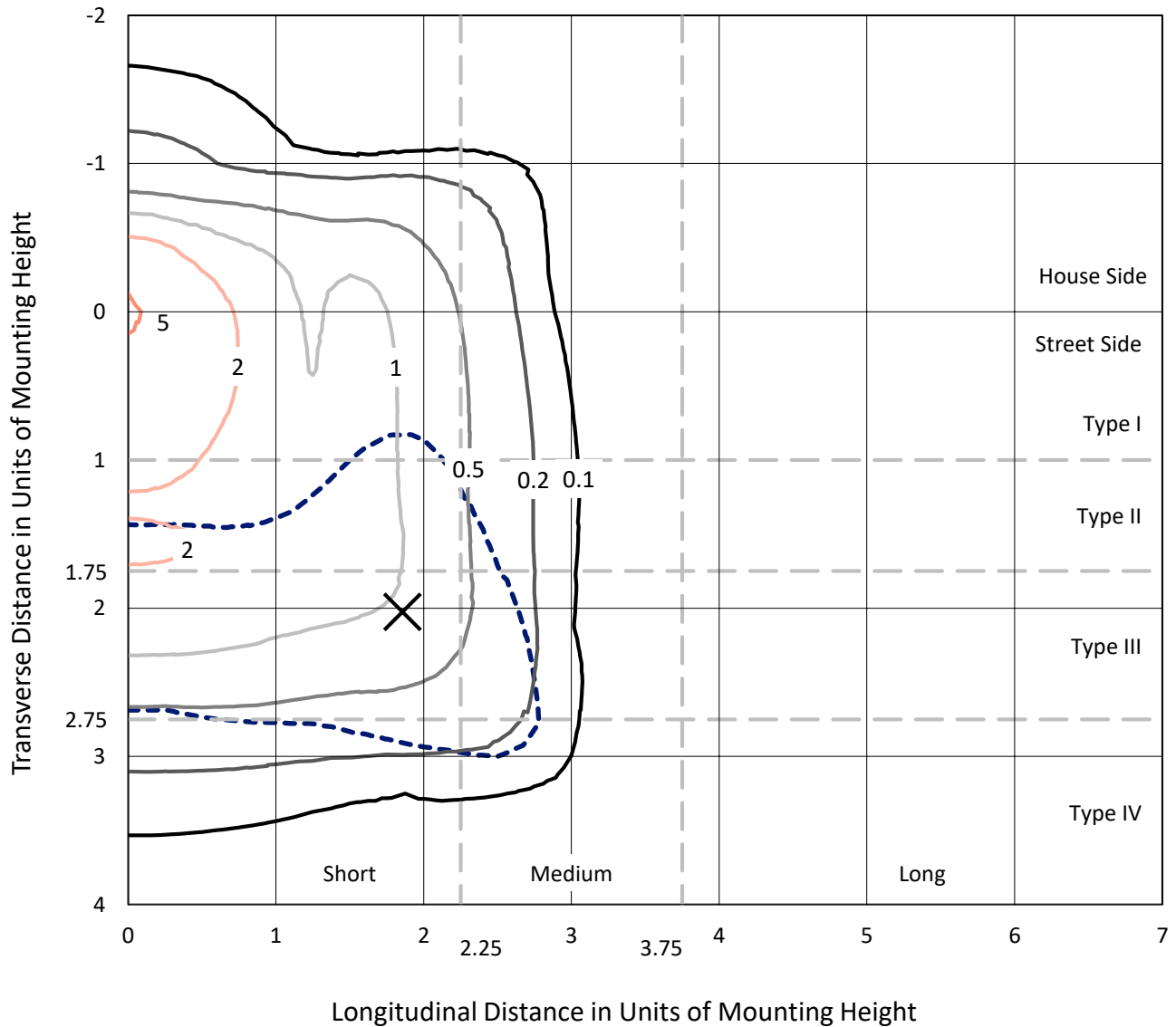
Input Watts (W): 150.5
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

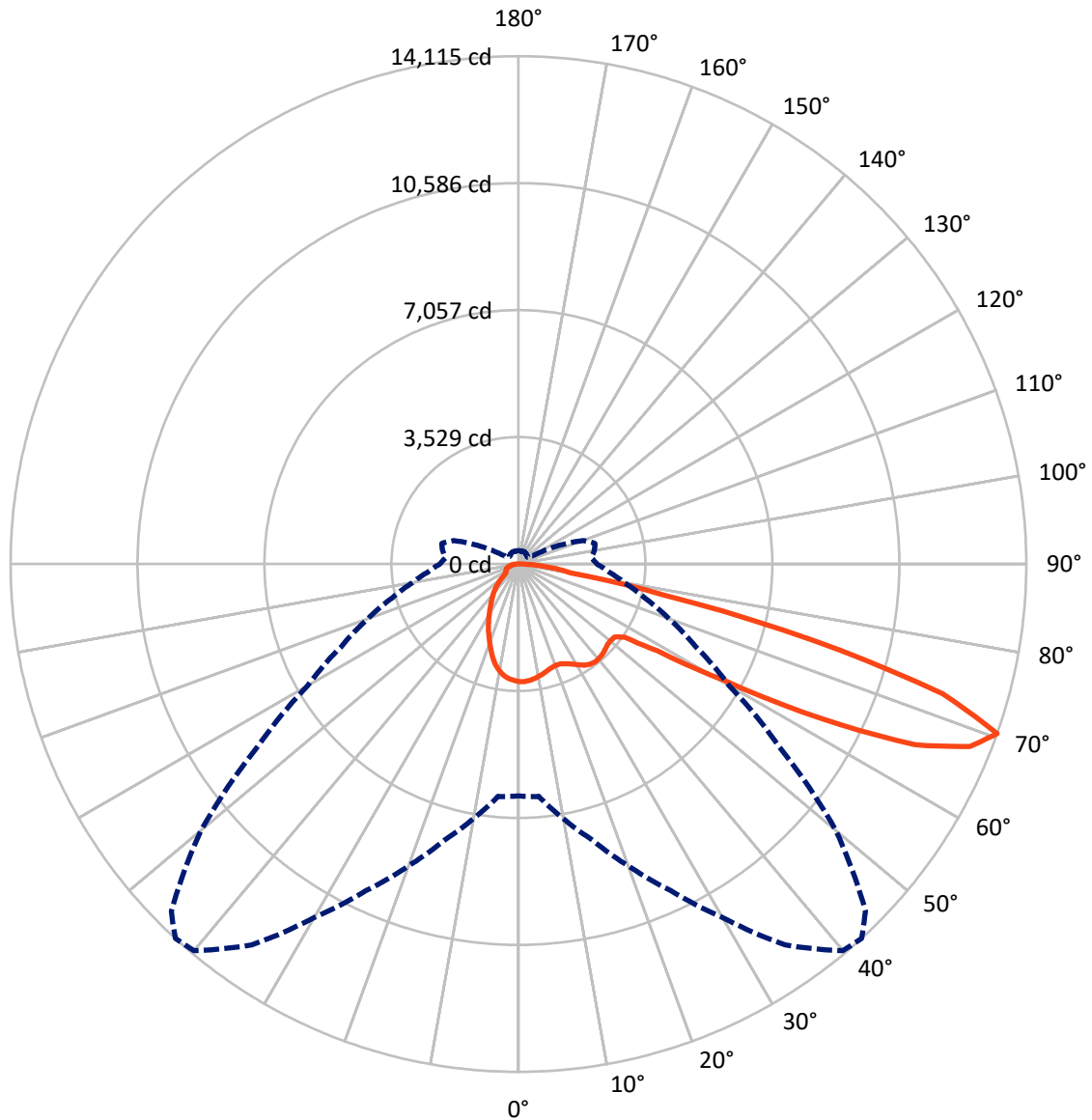
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 5.2 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	3411.8	0.0	3411.8
	% Fixture	21.6	0.0	21.6
Street Side	Lumens	12382.0	0.0	12382.0
	% Fixture	78.4	0.0	78.4
Total	Lumens	15793.8	0.0	15793.8
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	303.9	1.9
10°-20°	818.6	5.2
20°-30°	1194.1	7.6
30°-40°	1523.0	9.6
40°-50°	1777.6	11.3
50°-60°	2718.5	17.2
60°-70°	4927.9	31.2
70°-80°	2191.1	13.9
80°-90°	339.1	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°	15793.8	100.0
0°-180°	15793.8	100.0



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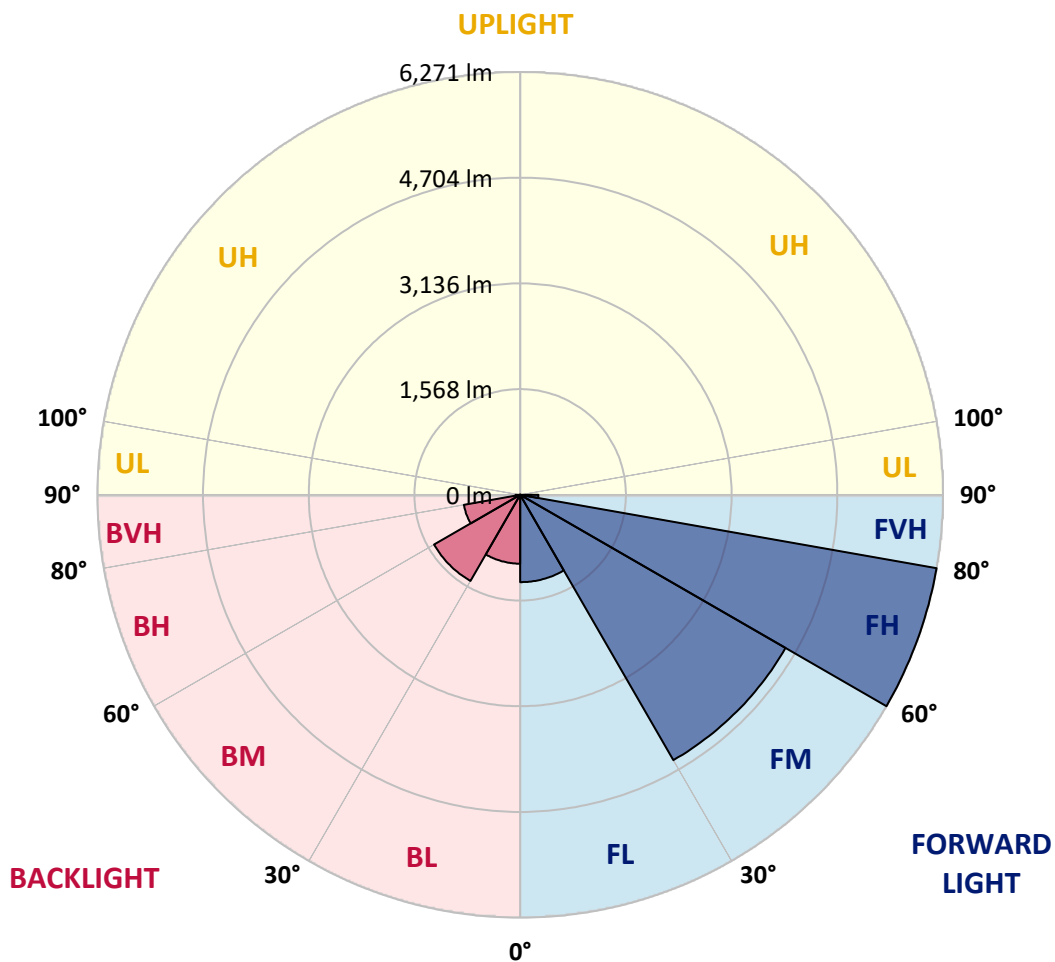
CATALOG NUMBER: LDRL-SL4-E06-E-7030

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1295.5	8.2			
FM	(30°-60°)	4544.3	28.8			
FH	(60°-80°)	6271.4	39.7			G3/7500
FVH	(80°-90°)	270.9	1.7			G3/500
BL	(0°-30°)	1021.2	6.5	B3/2500		
BM	(30°-60°)	1474.8	9.3	B2/2500		
BH	(60°-80°)	847.6	5.4	B2/1000		G2/1000
BVH	(80°-90°)	68.2	0.4			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-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°	3266.1	3266.1	3266.1	3266.1	3266.1	3266.1	3266.1	3266.1	3266.1	3266.1	3266.1
2.5°	3281.5	3278.2	3280.4	3282.6	3282.6	3283.7	3273.8	3274.9	3270.5	3271.6	3272.7
5°	3269.4	3266.1	3268.3	3268.3	3268.3	3267.2	3254.1	3253.0	3247.5	3247.5	3245.3
7.5°	3246.4	3234.4	3240.9	3242.0	3239.8	3234.4	3226.7	3219.0	3215.7	3215.7	3208.1
10°	3211.3	3198.2	3201.5	3203.7	3202.6	3191.6	3188.3	3180.7	3171.9	3168.6	3159.8
12.5°	3166.4	3157.6	3162.0	3160.9	3160.9	3151.1	3145.6	3134.6	3123.7	3118.2	3107.2
15°	3137.9	3126.9	3131.3	3131.3	3126.9	3117.1	3109.4	3089.7	3071.0	3064.5	3050.2
17.5°	3155.4	3144.5	3148.9	3145.6	3137.9	3117.1	3097.4	3065.6	3036.0	3018.4	2999.8
20°	3225.6	3214.6	3217.9	3215.7	3204.8	3170.8	3134.6	3079.8	3025.0	2998.7	2970.2
22.5°	3337.4	3328.6	3334.1	3330.8	3313.3	3269.4	3215.7	3136.8	3054.6	3015.2	2974.6
25°	3502.9	3500.7	3509.5	3499.6	3474.4	3408.6	3330.8	3224.5	3117.1	3067.8	3010.8
27.5°	3702.4	3683.7	3696.9	3688.1	3670.6	3587.3	3482.1	3347.2	3210.2	3145.6	3077.6
30°	3882.1	3865.7	3889.8	3885.4	3859.1	3773.6	3641.0	3483.2	3328.6	3246.4	3168.6
32.5°	4090.3	4069.5	4088.2	4088.2	4048.7	3933.6	3782.4	3601.5	3439.3	3351.6	3258.5
35°	4308.5	4286.5	4304.1	4298.6	4228.4	4076.1	3886.5	3690.3	3511.6	3421.8	3326.4
37.5°	4511.2	4507.9	4512.3	4476.1	4378.6	4183.5	3956.6	3737.4	3547.8	3453.6	3353.8
40°	4714.0	4706.3	4687.7	4624.1	4481.6	4247.1	3992.8	3753.9	3550.0	3451.4	3350.5
42.5°	4841.1	4826.9	4795.1	4708.5	4529.9	4262.4	3981.8	3728.7	3523.7	3422.9	3324.2
45°	4885.0	4870.7	4832.4	4734.8	4530.9	4238.3	3939.1	3678.2	3474.4	3382.3	3282.6
47.5°	4848.8	4840.0	4805.0	4707.4	4495.9	4193.4	3885.4	3627.8	3427.3	3337.4	3244.2
50°	4787.4	4781.9	4751.2	4661.4	4463.0	4166.0	3860.2	3603.7	3414.1	3330.8	3243.1
52.5°	4940.9	4924.4	4869.6	4763.3	4532.0	4215.3	3899.6	3639.9	3444.8	3360.4	3270.5
55°	6827.1	6705.5	6433.6	5924.0	5210.5	4657.0	4191.2	3877.7	3667.3	3585.1	3499.6
57.5°	8978.6	8851.5	8738.6	8349.5	7502.3	6456.7	5516.3	4966.1	4589.0	4552.9	4518.9
60°	9807.2	9847.7	9837.9	9693.2	9259.2	8762.7	7975.7	7325.8	6605.7	6576.1	6618.9
62.5°	10378.2	10412.2	10416.6	10372.7	10231.4	10065.9	9901.4	9693.2	9556.2	9497.0	9114.5
65°	10613.9	10663.2	10771.7	10852.8	10875.8	10932.8	11081.9	11648.5	12120.9	12117.6	11669.3
67.5°	9714.0	9773.2	10184.2	10587.6	10926.2	11318.6	11922.5	12844.3	13555.6	13533.7	13166.5
70°	6446.8	6484.1	7182.2	7941.8	8927.1	10016.5	11336.1	12925.4	14028.0	14114.6	13641.1
72.5°	3954.4	4039.9	4267.9	4575.9	5102.0	6111.4	8073.3	10789.2	12407.0	12325.8	11948.8
75°	2669.9	2674.3	2667.7	2700.6	2730.2	2934.0	3724.3	5932.8	8404.3	8448.1	8285.9
77.5°	1824.9	1849.0	1862.1	1853.4	1883.0	1874.2	1920.2	2033.1	3221.2	4111.2	3778.0
80°	1594.7	1604.6	1618.8	1598.0	1543.2	1512.5	1555.3	1514.7	1427.0	1474.1	1411.7
82.5°	1009.4	1039.0	1042.3	1114.7	1222.1	1226.4	1281.2	1240.7	1128.9	1055.5	965.6
85°	725.6	736.5	756.3	760.6	723.4	691.6	711.3	677.3	610.5	571.0	505.3
87.5°	423.1	434.0	453.8	441.7	404.4	358.4	323.3	278.4	220.3	206.1	181.9
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°	3266.1	3266.1	3266.1	3266.1	3266.1	3266.1	3266.1	3266.1	3266.1	3266.1	3266.1
2.5°	3273.8	3268.3	3263.9	3261.8	3266.1	3261.8	3257.4	3255.2	3250.8	3251.9	3246.4
5°	3243.1	3235.5	3228.9	3223.4	3227.8	3220.1	3213.5	3209.1	3203.7	3202.6	3197.1
7.5°	3200.4	3188.3	3179.6	3169.7	3158.7	3152.2	3144.5	3136.8	3124.8	3123.7	3121.5
10°	3144.5	3134.6	3117.1	3101.7	3086.4	3070.0	3053.5	3041.5	3027.2	3021.7	3014.1
12.5°	3088.6	3068.9	3048.0	3023.9	3005.3	2979.0	2957.1	2934.0	2913.2	2900.1	2885.8
15°	3022.8	3002.0	2972.4	2949.4	2923.1	2893.5	2865.0	2831.0	2797.0	2776.2	2756.5
17.5°	2965.8	2939.5	2915.4	2882.5	2856.2	2822.3	2779.5	2743.3	2702.8	2668.8	2632.6
20°	2922.0	2892.4	2863.9	2834.3	2802.5	2764.2	2717.0	2665.5	2614.0	2565.8	2512.1
22.5°	2904.5	2857.3	2825.5	2798.1	2765.3	2721.4	2668.8	2605.2	2541.7	2480.3	2417.8
25°	2919.8	2849.7	2800.3	2769.6	2740.1	2695.1	2635.9	2563.6	2489.1	2411.2	2336.7
27.5°	2961.4	2872.7	2802.5	2754.3	2720.3	2676.5	2610.7	2535.1	2450.7	2363.0	2283.0
30°	3021.7	2911.0	2823.3	2754.3	2703.9	2653.5	2582.2	2496.7	2408.0	2315.9	2226.0
32.5°	3087.5	2953.8	2848.6	2757.6	2679.8	2616.2	2541.7	2458.4	2364.1	2266.6	2170.1
35°	3136.8	2984.5	2859.5	2745.5	2645.8	2565.8	2485.8	2404.7	2312.6	2214.0	2117.5
37.5°	3157.6	2996.5	2857.3	2720.3	2598.7	2511.0	2427.7	2346.6	2257.8	2164.6	2075.9
40°	3158.7	2996.5	2844.2	2686.3	2549.3	2454.0	2366.3	2290.7	2207.4	2127.4	2048.5
42.5°	3137.9	2981.2	2820.1	2654.6	2513.2	2405.8	2315.9	2238.1	2171.2	2100.0	2033.1
45°	3100.6	2950.5	2798.1	2637.0	2500.0	2393.7	2297.3	2223.8	2163.5	2100.0	2041.9
47.5°	3072.1	2933.0	2799.2	2662.2	2531.8	2422.2	2318.1	2240.3	2188.8	2138.3	2096.7
50°	3077.6	2939.5	2812.4	2682.0	2553.7	2443.0	2342.2	2275.3	2244.6	2228.2	2218.3
52.5°	3106.1	2965.8	2869.4	2782.8	2741.1	2673.2	2617.3	2566.9	2574.6	2535.1	2484.7
55°	3399.9	3352.7	3463.4	3543.4	3582.9	3651.9	3751.7	3656.3	3643.2	3521.5	3159.8
57.5°	4564.9	4676.7	4846.6	4967.2	4979.2	4958.4	4876.2	4797.3	4669.0	4486.0	3979.7
60°	6519.1	6492.8	6335.0	6123.5	5959.1	5743.1	5526.1	5343.1	5137.0	4856.5	4317.2
62.5°	8574.2	7940.7	7378.4	6899.4	6492.8	6132.2	5804.5	5529.4	5246.6	4843.3	4269.0
65°	10233.5	9014.8	8024.0	7253.5	6648.5	6138.8	5715.7	5336.5	4958.4	4491.5	3934.7
67.5°	11419.4	9486.1	7991.1	6907.1	6058.8	5357.3	4741.4	4309.6	3921.6	3554.4	3303.4
70°	11513.7	8833.9	6760.3	5434.1	4455.3	3631.1	2992.1	2520.8	2183.3	2030.9	2139.4
72.5°	9839.0	6535.6	4494.8	3326.4	2640.3	2051.8	1649.5	1318.5	1046.7	913.0	931.6
75°	5794.7	3137.9	2024.3	1508.1	1231.9	984.2	851.6	719.0	634.6	508.6	406.6
77.5°	2206.3	1364.5	1021.5	848.3	605.0	435.1	343.1	295.9	271.8	268.5	254.3
80°	1271.4	1000.7	700.4	458.1	335.4	283.9	243.3	208.2	194.0	190.7	196.2
82.5°	803.4	623.6	384.7	294.8	244.4	210.4	175.4	152.3	140.3	135.9	143.6
85°	415.4	312.4	234.5	201.7	187.4	171.0	140.3	117.3	116.2	121.7	140.3
87.5°	153.4	133.7	105.2	91.0	97.5	91.0	65.8	57.0	51.5	68.0	98.6
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):

	105°	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°
0°	3266.1	3266.1	3266.1	3266.1	3266.1	3266.1	3266.1	3266.1	3266.1	3266.1	3266.1
2.5°	3246.4	3244.2	3245.3	3243.1	3243.1	3246.4	3242.0	3238.7	3244.2	3244.2	3247.5
5°	3196.0	3198.2	3198.2	3197.1	3199.3	3204.8	3203.7	3203.7	3212.4	3215.7	3220.1
7.5°	3116.0	3119.3	3120.4	3123.7	3124.8	3132.4	3137.9	3144.5	3157.6	3160.9	3170.8
10°	3007.5	3005.3	3013.0	3011.9	3021.7	3028.3	3032.7	3046.9	3066.7	3077.6	3087.5
12.5°	2879.2	2879.2	2883.6	2884.7	2893.5	2902.3	2907.7	2925.3	2941.7	2956.0	2977.9
15°	2743.3	2739.0	2729.1	2728.0	2731.3	2740.1	2752.1	2765.3	2790.5	2811.3	2829.9
17.5°	2600.9	2587.7	2575.6	2560.3	2559.2	2558.1	2564.7	2574.6	2614.0	2634.8	2661.1
20°	2474.8	2446.3	2417.8	2386.0	2367.4	2358.6	2361.9	2375.1	2412.3	2439.7	2467.1
22.5°	2361.9	2319.2	2274.2	2223.8	2193.1	2174.5	2176.7	2182.2	2209.6	2226.0	2240.3
25°	2265.5	2206.3	2143.8	2079.2	2036.4	2007.9	2006.8	2006.8	1994.8	1996.9	1989.3
27.5°	2199.7	2117.5	2037.5	1961.9	1906.0	1877.5	1839.1	1811.7	1787.6	1754.7	1740.5
30°	2136.1	2051.8	1960.8	1877.5	1810.6	1754.7	1683.5	1624.3	1577.2	1532.2	1493.9
32.5°	2079.2	1991.5	1904.9	1813.9	1721.8	1625.4	1532.2	1464.3	1397.4	1328.4	1282.3
35°	2028.7	1946.5	1859.9	1756.9	1627.6	1501.5	1396.3	1304.3	1225.4	1142.1	1075.2
37.5°	2000.2	1925.7	1835.8	1695.5	1533.3	1389.8	1272.5	1169.5	1064.2	964.5	882.3
40°	1986.0	1920.2	1810.6	1633.1	1448.9	1295.5	1165.1	1041.2	917.4	800.1	714.6
42.5°	1983.8	1920.2	1773.4	1569.5	1376.6	1212.2	1066.4	917.4	767.2	653.2	577.6
45°	2003.5	1918.0	1733.9	1512.5	1311.9	1137.7	962.3	786.9	632.4	532.7	491.0
47.5°	2060.5	1925.7	1703.2	1464.3	1250.6	1055.5	843.9	642.3	510.7	465.8	464.7
50°	2152.6	1960.8	1696.6	1429.2	1190.3	952.4	704.7	514.0	450.5	448.3	460.3
52.5°	2298.4	2026.5	1713.1	1405.1	1117.9	818.7	557.9	443.9	431.8	443.9	459.2
55°	2619.5	2143.8	1735.0	1362.4	1000.7	648.8	459.2	420.9	426.4	440.6	454.8
57.5°	3203.7	2387.1	1758.0	1265.9	811.1	498.7	413.2	412.1	422.0	434.0	447.2
60°	3574.1	2687.4	1813.9	1123.4	612.7	412.1	395.7	406.6	418.7	427.4	438.4
62.5°	3586.2	2766.4	1843.5	971.1	455.9	377.0	380.3	401.1	415.4	418.7	424.2
65°	3354.9	2617.3	1709.8	790.2	378.1	357.3	369.4	388.0	402.2	404.4	408.8
67.5°	2930.8	2308.2	1448.9	596.2	344.2	342.0	355.1	369.4	379.2	388.0	394.6
70°	2207.4	1904.9	1165.1	462.5	323.3	321.1	334.3	346.3	355.1	366.1	377.0
72.5°	1119.0	1318.5	883.4	378.1	294.8	297.0	311.3	322.2	328.8	338.7	349.6
75°	381.4	575.4	559.0	305.8	263.0	271.8	278.4	290.4	300.3	306.9	312.4
77.5°	238.9	249.9	288.3	246.6	232.4	234.5	245.5	256.5	267.4	271.8	274.0
80°	199.5	200.6	201.7	197.3	198.4	205.0	211.5	223.6	234.5	236.7	237.8
82.5°	157.8	168.8	167.7	166.6	172.1	178.7	183.0	187.4	191.8	194.0	197.3
85°	139.2	137.0	138.1	141.4	137.0	132.6	131.5	131.5	138.1	145.8	149.1
87.5°	127.1	108.5	81.1	76.7	76.7	74.5	70.1	70.1	76.7	83.3	86.6
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):

	160°	165°	170°	175°	180°
0°	3266.1	3266.1	3266.1	3266.1	3266.1
2.5°	3246.4	3247.5	3246.4	3246.4	3251.9
5°	3222.3	3226.7	3224.5	3227.8	3231.1
7.5°	3173.0	3183.9	3186.1	3194.9	3191.6
10°	3101.7	3109.4	3120.4	3129.1	3125.9
12.5°	2988.8	3007.5	3023.9	3033.8	3031.6
15°	2845.3	2871.6	2893.5	2901.2	2892.4
17.5°	2691.8	2708.3	2734.6	2740.1	2748.8
20°	2497.8	2496.7	2519.8	2519.8	2515.4
22.5°	2244.6	2261.1	2261.1	2245.7	2238.1
25°	1986.0	1991.5	1975.0	1978.3	1957.5
27.5°	1726.2	1712.0	1698.8	1704.3	1689.0
30°	1478.5	1447.8	1434.7	1436.9	1420.4
32.5°	1240.7	1204.5	1191.4	1173.8	1159.6
35°	1024.8	967.8	933.8	925.0	934.9
37.5°	813.2	772.7	732.1	702.5	705.8
40°	643.4	601.7	575.4	563.4	561.2
42.5°	531.6	507.5	502.0	503.1	503.1
45°	482.2	483.3	487.7	492.1	493.2
47.5°	472.4	479.0	486.6	492.1	493.2
50°	471.3	477.9	483.3	489.9	492.1
52.5°	470.2	474.6	477.9	481.2	484.4
55°	465.8	468.0	466.9	469.1	472.4
57.5°	454.8	455.9	453.8	454.8	461.4
60°	445.0	446.1	441.7	447.2	448.3
62.5°	432.9	431.8	429.6	432.9	432.9
65°	415.4	408.8	411.0	414.3	415.4
67.5°	394.6	388.0	388.0	390.2	393.5
70°	368.3	365.0	365.0	369.4	373.7
72.5°	338.7	340.9	347.4	354.0	360.6
75°	314.6	320.0	326.6	343.1	352.9
77.5°	283.9	285.0	290.4	306.9	324.4
80°	241.1	240.0	241.1	243.3	246.6
82.5°	190.7	188.5	181.9	184.1	179.7
85°	140.3	137.0	129.3	123.9	122.8
87.5°	81.1	81.1	77.8	73.4	69.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)