

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: P146892

Luminaire Tested: **LDRL-T4-E06-E-7060**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P146892
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33696)
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: LDRL-T4-E06-E-7060
Description: RL LED ROADWAY LARGE CUTOFF COBRAHEAD LUMINAIRE
(6) LIGHTBARS WITH AccuLED OPTICS - TYPE 4 SHORT
Light Source: (126) 5700K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 18091.9 lumens
Efficiency: N/A
Efficacy: 120.2 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

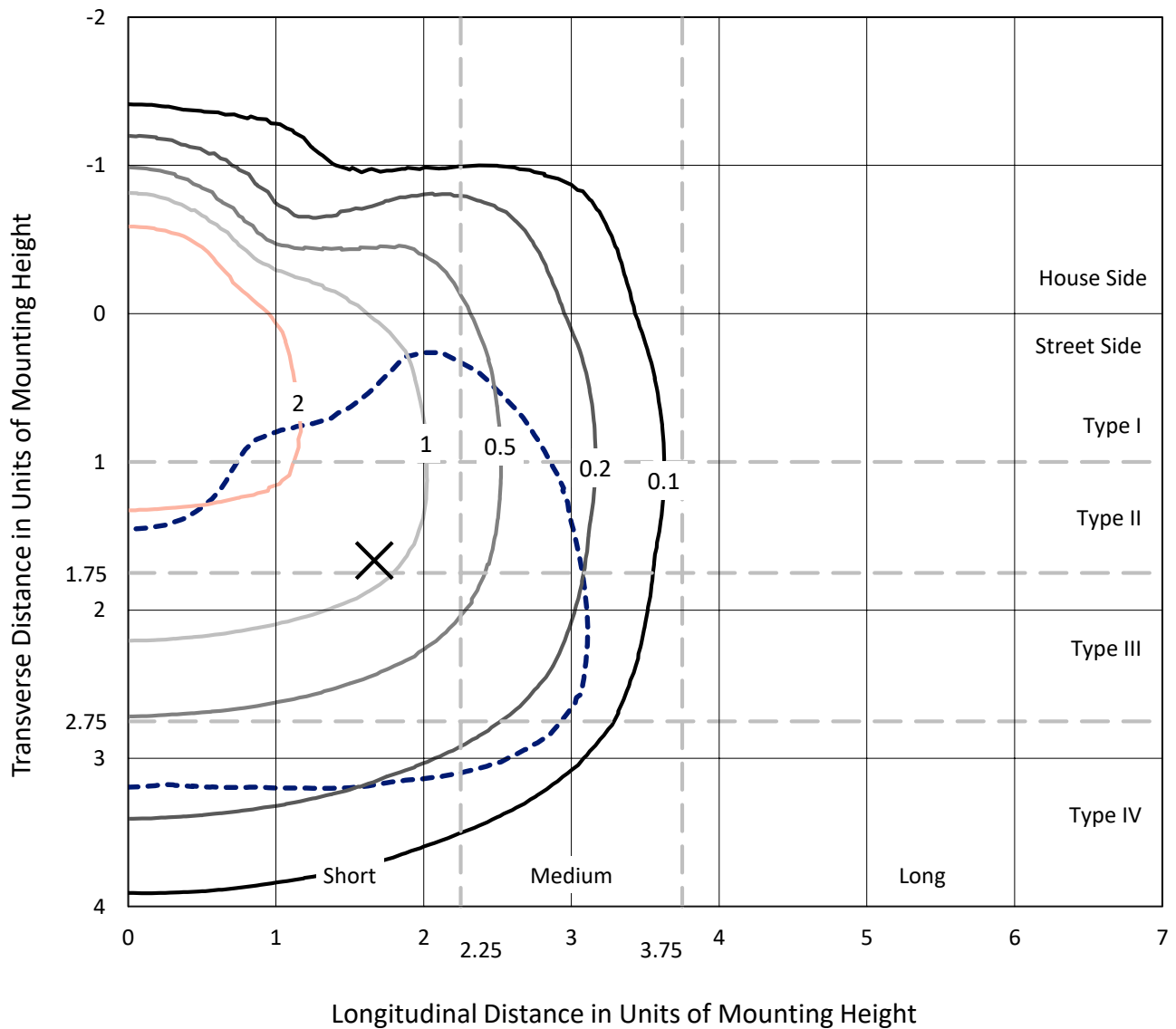
Input Watts (W): 150.5
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

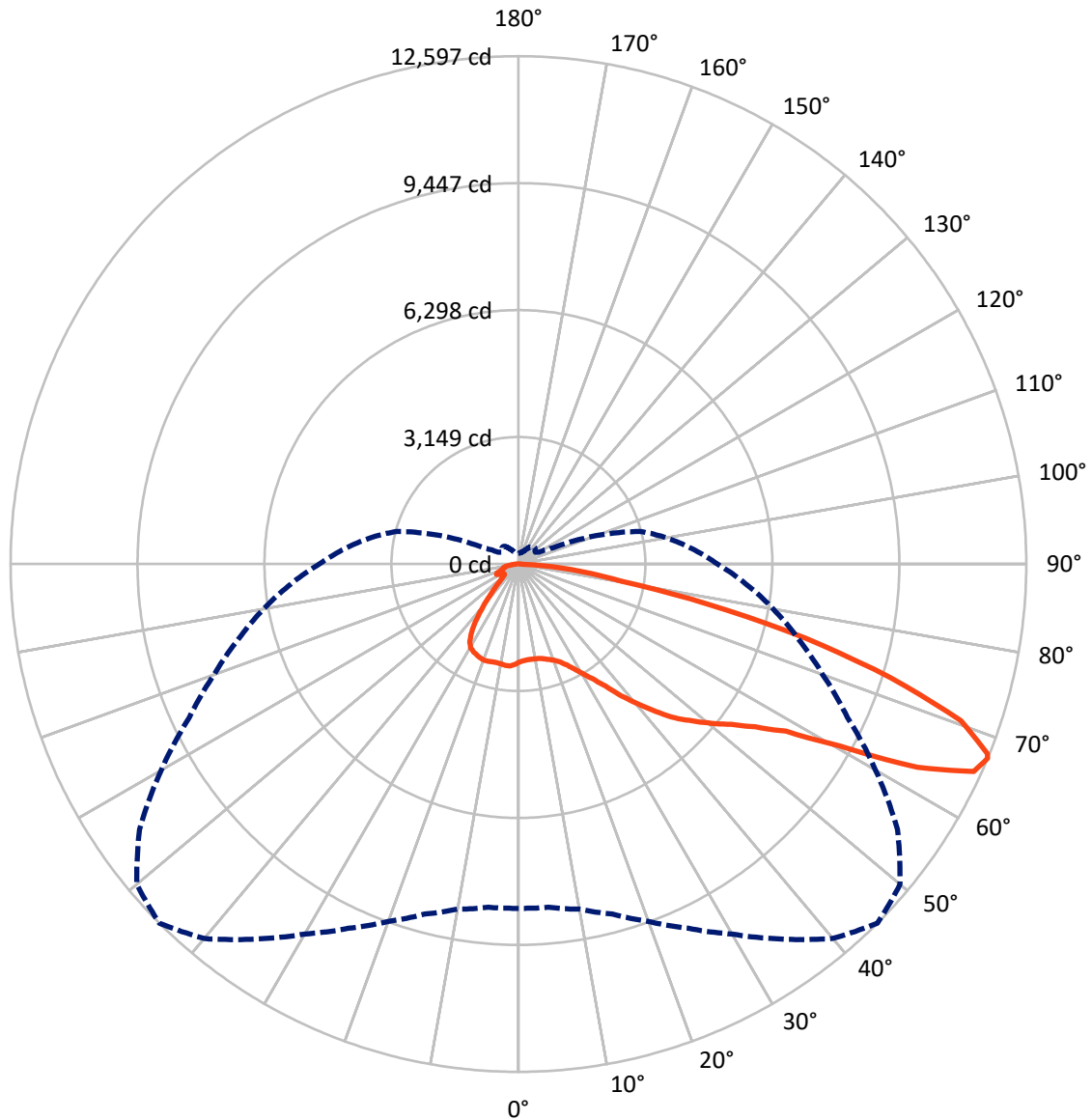
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4 fc
 Type IV - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral - - - Horizontal Cone Through 67-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	3665.9	0.0	3665.9
	% Fixture	20.3	0.0	20.3
Street Side	Lumens	14426.1	0.0	14426.1
	% Fixture	79.7	0.0	79.7
Total	Lumens	18091.9	0.0	18091.9
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	234.7	1.3
10°-20°	704.9	3.9
20°-30°	1198.0	6.6
30°-40°	1800.5	10.0
40°-50°	2341.1	12.9
50°-60°	3214.3	17.8
60°-70°	5070.6	28.0
70°-80°	3063.7	16.9
80°-90°	464.1	2.6
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°	18091.9	100.0
0°-180°	18091.9	100.0



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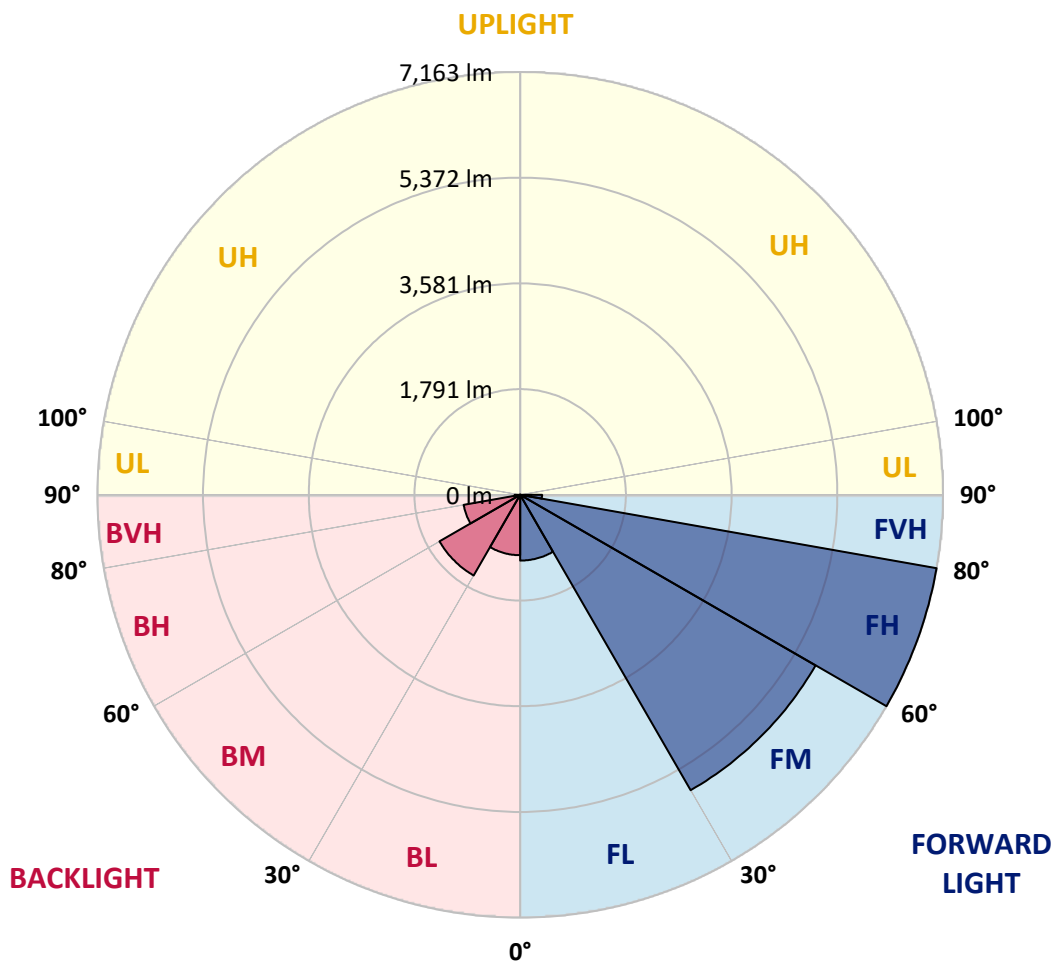
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1114.1	6.2			
FM	(30°-60°)	5778.4	31.9			
FH	(60°-80°)	7162.9	39.6			G3/7500
FVH	(80°-90°)	370.6	2.0			G3/500
BL	(0°-30°)	1023.5	5.7	B3/2500		
BM	(30°-60°)	1577.5	8.7	B2/2500		
BH	(60°-80°)	971.4	5.4	B2/1000		G2/1000
BVH	(80°-90°)	93.5	0.5			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°	45°	50°
0°	2435.6	2435.6	2435.6	2435.6	2435.6	2435.6	2435.6	2435.6	2435.6	2435.6	2435.6
2.5°	2381.4	2386.3	2382.6	2382.6	2383.8	2385.1	2387.5	2392.5	2393.7	2401.1	2402.3
5°	2333.4	2334.6	2334.6	2335.8	2343.2	2349.4	2355.5	2364.1	2371.5	2385.1	2393.7
7.5°	2316.1	2321.1	2319.8	2322.3	2329.7	2335.8	2343.2	2355.5	2374.0	2385.1	2397.4
10°	2344.4	2348.1	2344.4	2345.7	2346.9	2353.1	2355.5	2364.1	2378.9	2388.8	2399.9
12.5°	2409.7	2409.7	2406.0	2403.5	2399.9	2401.1	2396.2	2394.9	2402.3	2403.5	2404.8
15°	2495.9	2505.7	2493.4	2483.6	2478.7	2473.7	2457.7	2451.6	2450.3	2439.3	2428.2
17.5°	2583.3	2585.8	2578.4	2567.3	2559.9	2548.8	2535.3	2523.0	2508.2	2491.0	2468.8
20°	2680.6	2681.8	2672.0	2656.0	2647.4	2633.8	2616.6	2595.6	2577.2	2550.1	2525.5
22.5°	2816.0	2814.8	2795.1	2781.6	2769.3	2753.2	2728.6	2700.3	2670.7	2638.7	2604.3
25°	2971.2	2971.2	2957.6	2935.5	2929.3	2905.9	2878.8	2845.6	2814.8	2769.3	2727.4
27.5°	3148.5	3149.7	3125.1	3112.8	3099.2	3074.6	3056.2	3030.3	2988.4	2942.9	2899.8
30°	3359.1	3352.9	3333.2	3307.3	3302.4	3282.7	3256.9	3238.4	3186.7	3154.7	3106.6
32.5°	3558.5	3568.4	3563.5	3533.9	3538.8	3519.1	3497.0	3483.4	3429.2	3398.5	3354.1
35°	3856.5	3865.1	3872.5	3861.4	3867.6	3856.5	3838.0	3802.3	3758.0	3717.4	3655.8
37.5°	4088.0	4096.6	4101.5	4128.6	4168.0	4206.2	4223.4	4205.0	4207.4	4145.9	4063.4
40°	4277.6	4298.6	4328.1	4379.8	4458.6	4531.3	4570.7	4601.5	4617.5	4559.6	4452.5
42.5°	4467.3	4489.4	4530.1	4612.5	4720.9	4825.6	4908.1	5002.9	5020.1	5005.3	4914.2
45°	4665.5	4691.4	4741.8	4835.4	4962.2	5098.9	5231.9	5366.1	5433.8	5444.9	5334.1
47.5°	4904.4	4941.3	4988.1	5094.0	5217.1	5371.0	5537.3	5709.7	5815.6	5815.6	5687.5
50°	5202.4	5244.2	5283.6	5389.5	5512.6	5671.5	5863.6	6055.7	6199.7	6208.3	6053.2
52.5°	5619.8	5625.9	5649.3	5746.6	5853.7	6031.0	6213.3	6436.1	6602.4	6609.8	6431.2
55°	6127.1	6127.1	6154.2	6235.4	6335.2	6481.7	6670.1	6917.6	7092.4	7130.6	6901.6
57.5°	6794.5	6819.1	6832.6	6927.4	6995.2	7150.3	7307.9	7577.6	7800.5	7825.1	7592.4
60°	7880.5	7833.7	7908.8	7992.5	8151.4	8264.7	8533.1	8804.0	9088.4	9156.1	8906.2
62.5°	8950.5	9001.0	9093.3	9244.8	9516.9	9770.6	10154.7	10566.0	11008.1	11099.2	10908.3
65°	9017.0	9047.8	9175.8	9436.9	9808.7	10260.6	10790.1	11409.5	12068.2	12409.3	12089.2
67°	8539.2	8547.9	8693.2	8989.9	9435.7	9971.3	10598.0	11354.1	12127.3	12596.5	12357.6
67.5°	8387.8	8403.8	8546.6	8849.5	9300.2	9848.1	10487.2	11264.2	12055.9	12546.0	12330.5
70°	7498.8	7498.8	7652.7	7958.1	8380.4	8914.8	9583.4	10367.8	11228.5	11641.0	11457.5
72.5°	6383.2	6342.6	6516.2	6747.7	7092.4	7559.1	8097.2	8716.6	9364.2	9664.7	9592.0
75°	4639.6	4716.0	4805.9	4977.0	5276.2	5644.4	5959.6	6512.5	7021.0	7353.5	7266.1
77.5°	2531.6	2561.2	2809.9	2912.1	3174.4	3447.7	3793.7	4181.6	4581.8	4791.1	4706.1
80°	1504.7	1562.6	1710.3	1832.2	1973.8	2181.9	2433.1	2518.1	2596.9	2591.9	2438.0
82.5°	950.6	1020.8	1180.8	1285.5	1359.4	1480.1	1616.7	1723.9	1747.3	1631.5	1453.0
85°	153.9	254.9	666.1	783.1	829.9	895.2	996.1	1041.7	972.7	849.6	880.4
87.5°	60.3	72.6	203.2	257.3	272.1	142.8	247.5	290.6	147.8	75.1	169.9
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):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	2435.6	2435.6	2435.6	2435.6	2435.6	2435.6	2435.6	2435.6	2435.6	2435.6	2435.6
2.5°	2409.7	2415.9	2422.0	2429.4	2431.9	2438.0	2449.1	2447.9	2456.5	2460.2	2466.3
5°	2404.8	2418.3	2428.2	2441.7	2446.6	2460.2	2475.0	2479.9	2491.0	2499.6	2507.0
7.5°	2414.6	2429.4	2441.7	2457.7	2468.8	2479.9	2491.0	2504.5	2514.4	2520.5	2525.5
10°	2418.3	2434.3	2449.1	2462.7	2475.0	2483.6	2495.9	2507.0	2516.8	2520.5	2521.8
12.5°	2419.6	2430.6	2445.4	2460.2	2471.3	2482.4	2491.0	2503.3	2510.7	2511.9	2509.4
15°	2429.4	2430.6	2440.5	2457.7	2468.8	2479.9	2486.0	2492.2	2497.1	2493.4	2489.7
17.5°	2459.0	2450.3	2450.3	2459.0	2465.1	2470.0	2471.3	2470.0	2465.1	2457.7	2451.6
20°	2507.0	2489.7	2476.2	2471.3	2461.4	2449.1	2433.1	2418.3	2399.9	2391.2	2390.0
22.5°	2582.1	2556.2	2531.6	2507.0	2475.0	2439.3	2402.3	2370.3	2344.4	2330.9	2332.1
25°	2710.1	2672.0	2643.7	2600.6	2548.8	2498.4	2450.3	2407.2	2376.5	2351.8	2356.8
27.5°	2882.5	2839.4	2814.8	2765.6	2706.5	2642.4	2585.8	2526.7	2482.4	2451.6	2457.7
30°	3084.5	3072.2	3031.5	2982.3	2926.9	2854.2	2769.3	2680.6	2600.6	2550.1	2540.2
32.5°	3328.3	3314.7	3270.4	3228.5	3157.1	3077.1	2966.3	2825.9	2700.3	2604.3	2562.4
35°	3628.7	3595.5	3541.3	3500.7	3420.6	3317.2	3174.4	2984.7	2793.9	2649.8	2545.2
37.5°	4003.0	3920.5	3830.7	3724.8	3606.6	3481.0	3316.0	3094.3	2857.9	2653.5	2467.6
40°	4360.1	4227.1	4078.2	3910.7	3766.6	3615.2	3444.0	3190.4	2901.0	2627.7	2350.6
42.5°	4757.8	4551.0	4349.0	4118.8	3929.2	3749.4	3553.6	3258.1	2909.6	2557.5	2199.1
45°	5140.8	4874.8	4603.9	4319.5	4078.2	3878.7	3655.8	3316.0	2907.2	2483.6	2048.9
47.5°	5481.9	5164.2	4829.3	4509.1	4228.4	4009.2	3765.4	3394.8	2940.4	2462.7	1949.2
50°	5800.8	5433.8	5041.1	4685.2	4379.8	4155.7	3904.5	3519.1	3042.6	2510.7	1934.4
52.5°	6129.5	5730.6	5281.2	4898.2	4579.3	4319.5	4065.8	3678.0	3185.4	2609.2	1967.7
55°	6558.0	6100.0	5621.0	5196.2	4830.5	4551.0	4257.9	3870.1	3339.4	2723.7	2030.5
57.5°	7195.9	6660.2	6116.0	5659.2	5236.8	4888.4	4567.0	4122.5	3594.2	2896.1	2168.4
60°	8341.0	7747.5	7117.1	6519.9	6033.5	5625.9	5217.1	4665.5	4064.6	3287.6	2484.8
62.5°	10211.4	9390.1	8518.3	7732.7	7064.1	6512.5	5936.2	5273.8	4573.1	3762.9	2963.8
65°	11335.6	10202.8	9093.3	8182.2	7391.7	6684.9	5987.9	5276.2	4597.8	3889.8	3179.3
67°	11474.7	10232.3	9004.7	8034.4	7187.3	6417.7	5661.6	4933.9	4326.9	3733.4	3120.2
67.5°	11432.9	10173.2	8921.0	7940.8	7085.1	6340.1	5596.4	4851.4	4260.4	3666.9	3075.9
70°	10607.9	9375.3	8136.6	7183.6	6363.5	5601.3	4898.2	4152.0	3695.2	3270.4	2759.4
72.5°	8804.0	7842.3	6804.3	6010.1	5302.1	4642.1	4024.0	3399.7	3032.8	2732.3	2372.8
75°	6528.5	5646.9	4768.9	4291.2	3742.0	3213.8	2736.0	2274.3	2132.7	2061.2	1849.5
77.5°	4031.4	3239.6	2578.4	2146.2	1706.6	1337.2	1063.9	865.6	902.6	1050.3	1118.0
80°	2007.1	1482.5	1147.6	912.4	737.6	596.0	437.1	320.1	382.9	454.4	514.7
82.5°	1207.9	954.3	754.8	639.1	519.6	401.4	284.4	216.7	240.1	322.6	354.6
85°	749.9	600.9	480.2	401.4	332.5	246.3	161.3	160.1	169.9	214.3	245.0
87.5°	220.4	149.0	118.2	123.1	136.7	113.3	85.0	72.6	89.9	123.1	137.9
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):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	2435.6	2435.6	2435.6	2435.6	2435.6	2435.6	2435.6	2435.6	2435.6	2435.6	2435.6
2.5°	2467.6	2476.2	2479.9	2481.1	2482.4	2489.7	2489.7	2497.1	2499.6	2499.6	2502.1
5°	2514.4	2523.0	2526.7	2527.9	2530.4	2534.1	2532.8	2537.8	2540.2	2539.0	2539.0
7.5°	2531.6	2534.1	2534.1	2537.8	2541.5	2537.8	2535.3	2537.8	2536.5	2537.8	2537.8
10°	2525.5	2523.0	2523.0	2520.5	2524.2	2516.8	2516.8	2519.3	2518.1	2520.5	2524.2
12.5°	2510.7	2509.4	2505.7	2504.5	2509.4	2504.5	2505.7	2509.4	2511.9	2516.8	2523.0
15°	2489.7	2486.0	2486.0	2491.0	2503.3	2507.0	2511.9	2518.1	2519.3	2521.8	2524.2
17.5°	2454.0	2460.2	2475.0	2492.2	2515.6	2524.2	2526.7	2523.0	2510.7	2500.8	2491.0
20°	2404.8	2431.9	2470.0	2507.0	2535.3	2534.1	2518.1	2494.7	2465.1	2444.2	2430.6
22.5°	2362.9	2415.9	2475.0	2519.3	2537.8	2514.4	2477.4	2441.7	2407.2	2376.5	2349.4
25°	2392.5	2443.0	2493.4	2520.5	2519.3	2478.7	2429.4	2390.0	2343.2	2300.1	2254.6
27.5°	2488.5	2519.3	2534.1	2525.5	2499.6	2445.4	2391.2	2335.8	2275.5	2223.8	2170.8
30°	2553.8	2553.8	2539.0	2504.5	2459.0	2398.6	2332.1	2260.7	2189.3	2129.0	2068.6
32.5°	2532.8	2484.8	2441.7	2394.9	2343.2	2278.0	2201.6	2124.0	2042.8	1972.6	1920.9
35°	2441.7	2338.3	2248.4	2181.9	2127.7	2050.2	1961.5	1872.8	1806.4	1758.3	1728.8
37.5°	2279.2	2114.2	1983.7	1902.4	1818.7	1738.6	1636.4	1595.8	1536.7	1507.1	1496.1
40°	2082.2	1840.8	1677.1	1572.4	1483.7	1384.0	1315.1	1289.2	1267.0	1260.9	1256.0
42.5°	1855.6	1553.9	1359.4	1251.0	1143.9	1071.3	1040.5	1024.5	1020.8	1020.8	1026.9
45°	1620.4	1262.1	1038.0	950.6	861.9	823.8	816.4	809.0	810.2	806.5	809.0
47.5°	1438.2	1013.4	783.1	703.1	657.5	645.2	636.6	634.1	634.1	628.0	620.6
50°	1343.4	847.2	614.4	551.6	525.8	517.2	517.2	512.2	502.4	496.2	480.2
52.5°	1318.8	761.0	531.9	477.8	455.6	448.2	440.8	433.4	418.7	405.1	386.6
55°	1338.5	733.9	506.1	455.6	431.0	422.3	416.2	403.9	382.9	363.2	342.3
57.5°	1421.0	751.1	515.9	461.7	439.6	433.4	427.3	408.8	382.9	354.6	331.2
60°	1646.3	832.4	557.8	495.0	476.5	477.8	469.1	445.7	408.8	368.2	333.7
62.5°	1936.9	945.7	612.0	541.8	539.3	551.6	551.6	511.0	450.7	389.1	342.3
65°	2103.1	981.4	619.4	547.9	568.9	604.6	602.1	547.9	465.4	389.1	338.6
67°	2061.2	943.2	588.6	512.2	536.9	577.5	572.6	520.9	443.3	373.1	328.8
67.5°	2028.0	930.9	581.2	503.6	528.2	561.5	561.5	509.8	433.4	368.2	325.1
70°	1785.4	822.5	544.2	470.4	470.4	479.0	472.8	435.9	384.2	338.6	310.3
72.5°	1488.7	719.1	514.7	447.0	423.6	418.7	410.0	384.2	350.9	318.9	294.3
75°	1153.8	636.6	491.3	422.3	391.6	380.5	371.9	352.2	326.3	299.2	278.3
77.5°	807.8	545.5	460.5	401.4	368.2	359.5	346.0	323.8	302.9	279.5	259.8
80°	501.1	450.7	401.4	362.0	327.5	315.2	298.0	278.3	261.0	247.5	232.7
82.5°	357.1	331.2	299.2	278.3	242.6	205.6	220.4	221.6	210.6	201.9	198.2
85°	238.9	215.5	199.5	181.0	160.1	144.1	147.8	158.8	160.1	156.4	156.4
87.5°	130.5	110.8	107.1	110.8	96.0	91.1	92.3	102.2	103.4	103.4	104.7
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):

	165°	170°	175°	180°
0°	2435.6	2435.6	2435.6	2435.6
2.5°	2503.3	2507.0	2505.7	2508.2
5°	2541.5	2543.9	2542.7	2543.9
7.5°	2535.3	2540.2	2542.7	2539.0
10°	2525.5	2532.8	2537.8	2537.8
12.5°	2527.9	2540.2	2547.6	2547.6
15°	2525.5	2535.3	2537.8	2537.8
17.5°	2487.3	2487.3	2488.5	2483.6
20°	2420.8	2413.4	2410.9	2402.3
22.5°	2326.0	2308.7	2297.7	2291.5
25°	2217.6	2190.5	2173.3	2163.4
27.5°	2127.7	2104.3	2087.1	2077.2
30°	2028.0	2000.9	1991.1	1983.7
32.5°	1883.9	1858.1	1850.7	1844.5
35°	1696.8	1688.1	1668.4	1654.9
37.5°	1480.1	1469.0	1461.6	1456.7
40°	1253.5	1254.7	1248.6	1237.5
42.5°	1026.9	1039.2	1026.9	1024.5
45°	806.5	820.1	820.1	823.8
47.5°	621.8	619.4	624.3	625.5
50°	470.4	463.0	460.5	456.8
52.5°	373.1	364.5	359.5	353.4
55°	328.8	318.9	314.0	312.8
57.5°	314.0	301.7	294.3	293.1
60°	310.3	293.1	283.2	280.7
62.5°	310.3	289.4	278.3	274.6
65°	306.6	285.7	275.8	272.1
67°	301.7	283.2	273.4	270.9
67.5°	299.2	282.0	273.4	269.7
70°	293.1	278.3	268.4	264.7
72.5°	279.5	267.2	257.3	254.9
75°	264.7	253.7	247.5	245.0
77.5°	247.5	237.6	230.3	224.1
80°	221.6	210.6	199.5	197.0
82.5°	188.4	176.1	167.5	166.2
85°	151.5	141.6	131.8	131.8
87.5°	105.9	99.7	93.6	87.4
90°	0.0	0.0	0.0	0.0

(END OF REPORT)