

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: INVUE

Report Number: P140770

Luminaire Tested: **ECM-E04-LED-E1-RW**

Issue Date: 03/03/2020

Test Information

Test Method: LM-79-08
Report Number: P140770
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33689)
Test Lab: INNOVATION CENTER-P3
Issue Date: 03/03/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: ECM-E04-LED-E1-RW
Description: EPIC CLASSICAL MEDIUM DECORATIVE LED LUMINAIRE
(4) LIGHTBARS WITH AccuLED OPTICS - RECTANGULAR WIDE
Light Source: (84) 4000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 11829.3 lumens
Efficiency: N/A
Efficacy: 121.7 lumens/watt
Luminous Opening: Rectangular (W 0.67' x L: 1' x H: 0')
IES Classification: Type I - Short - Full Cutoff
BUG Rating: B3 - U0 - G3

Input Watts (W): 97.2
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

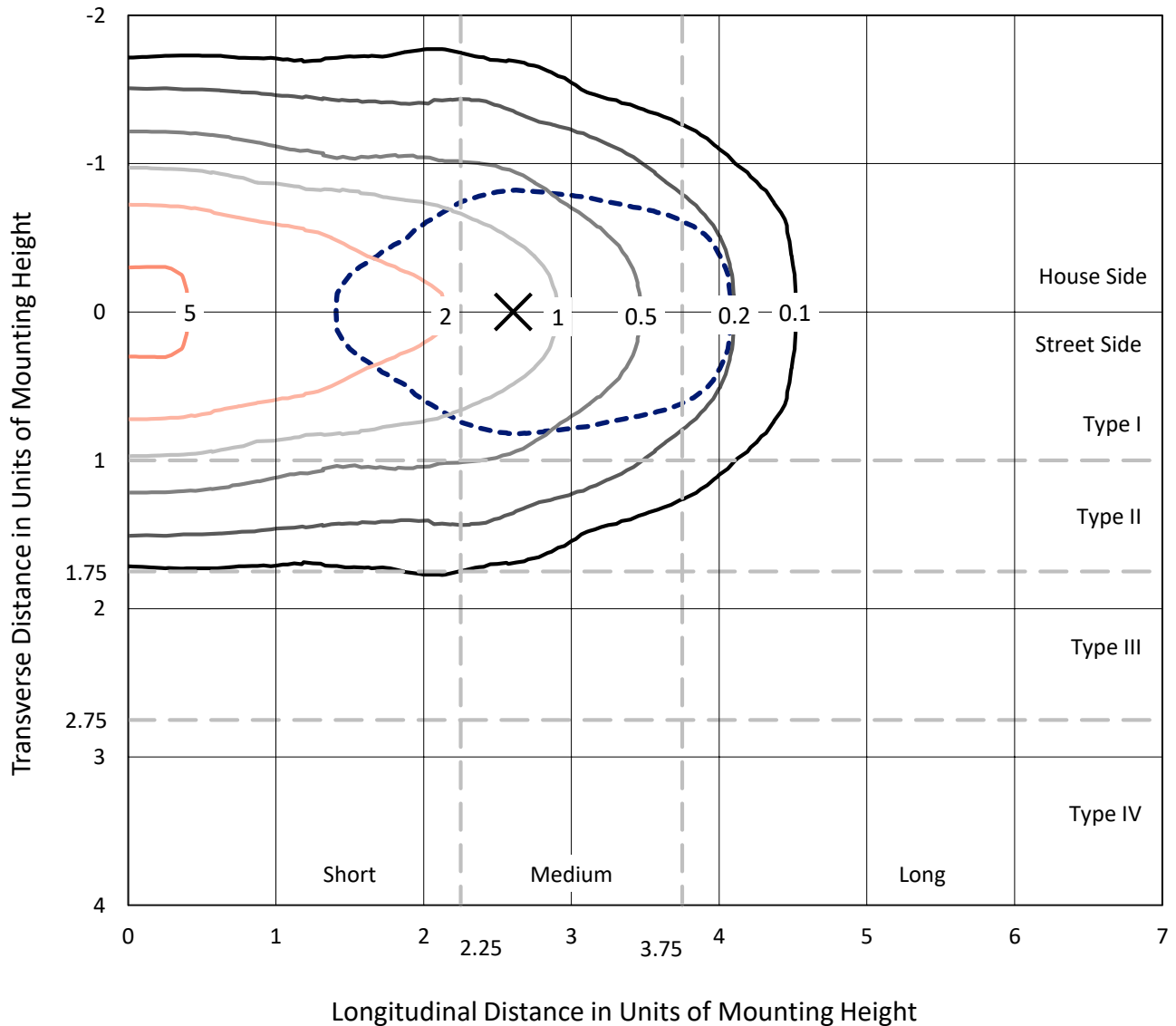


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

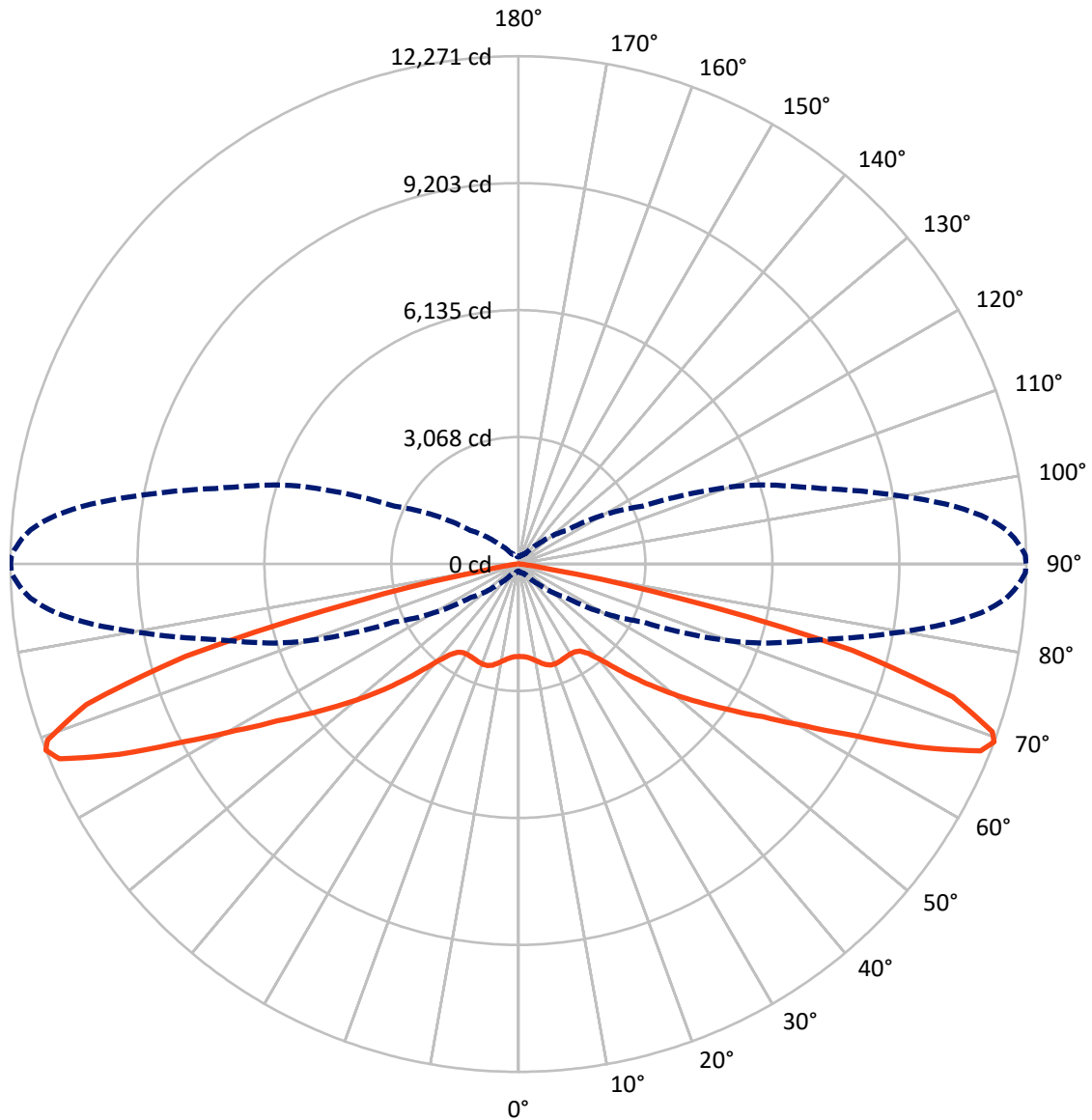


Based on 20 foot mounting height. Maximum calculated value = 5.7 fc
 Type I - Short - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 90-Deg Lateral - - - Horizontal Cone Through 69-Deg Vertical

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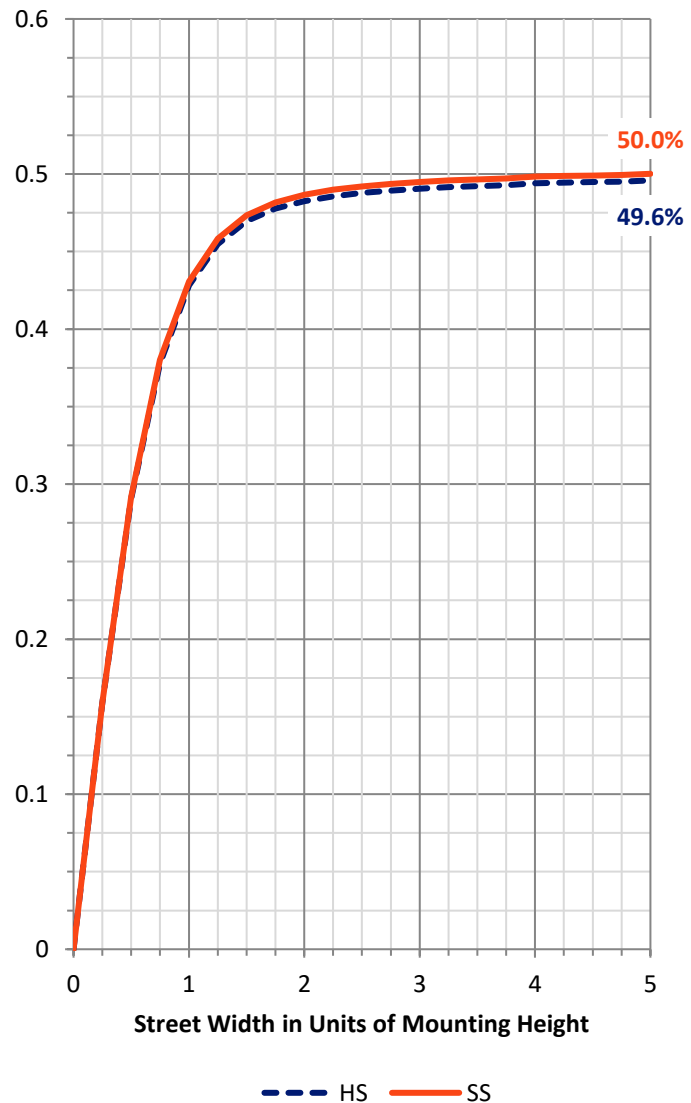
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	5914.6	0.0	5914.6
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	5914.6	0.0	5914.6
	% Fixture	50.0	0.0	50.0
Total	Lumens	11829.3	0.0	11829.3
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	218.7	1.8
10°-20°	687.4	5.8
20°-30°	1111.7	9.4
30°-40°	1388.6	11.7
40°-50°	1736.8	14.7
50°-60°	2140.2	18.1
60°-70°	2649.6	22.4
70°-80°	1731.8	14.6
80°-90°	164.6	1.4
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°	11829.3	100.0
0°-180°	11829.3	100.0



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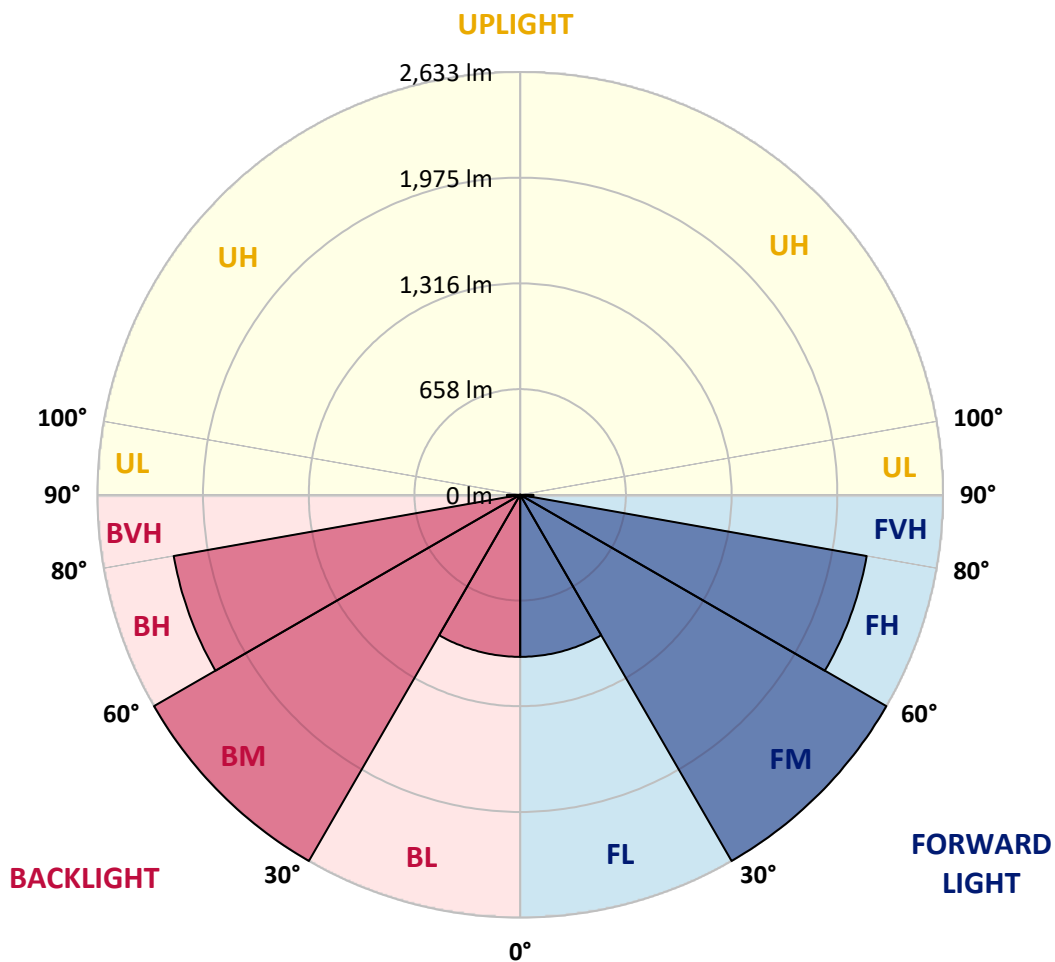
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1008.9	8.5			
FM	(30°-60°)	2632.8	22.3			
FH	(60°-80°)	2190.7	18.5			G2/5000
FVH	(80°-90°)	82.3	0.7			G1/100
BL	(0°-30°)	1008.9	8.5	B3/2500		
BM	(30°-60°)	2632.8	22.3	B3/5000		
BH	(60°-80°)	2190.7	18.5	B3/2500		G3/2500
BVH	(80°-90°)	82.3	0.7			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 I Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	66°	67°	68°
0°	2233.3	2233.3	2233.3	2233.3	2233.3	2233.3	2233.3	2233.3	2233.3	2233.3	2233.3
2.5°	2248.0	2249.4	2245.4	2246.7	2248.0	2246.7	2244.6	2244.6	2244.0	2243.3	2242.7
5°	2262.6	2263.3	2261.4	2264.6	2265.4	2267.3	2267.3	2268.0	2267.6	2267.2	2266.8
7.5°	2283.3	2286.0	2284.0	2288.6	2293.4	2300.0	2303.4	2311.4	2311.2	2311.1	2311.0
10°	2302.6	2305.3	2305.4	2316.0	2327.3	2340.0	2353.3	2366.0	2366.8	2367.6	2368.4
12.5°	2317.4	2319.4	2322.6	2342.0	2367.4	2388.6	2412.0	2432.0	2432.8	2433.6	2434.4
15°	2311.4	2316.0	2331.4	2362.0	2406.6	2442.0	2470.7	2494.6	2496.2	2497.9	2499.4
17.5°	2290.6	2298.0	2320.0	2372.0	2440.6	2497.4	2531.4	2538.0	2539.1	2540.1	2541.2
20°	2246.0	2256.7	2291.3	2365.4	2466.7	2543.4	2577.4	2565.4	2564.3	2563.2	2562.1
22.5°	2171.4	2185.3	2228.6	2334.0	2468.7	2576.6	2610.0	2576.6	2572.9	2569.2	2565.5
25°	2071.4	2082.7	2132.0	2256.6	2438.0	2582.7	2630.6	2584.0	2578.0	2572.0	2566.0
27.5°	1950.0	1959.4	2020.7	2153.4	2362.0	2552.0	2644.0	2596.6	2588.9	2581.2	2573.5
30°	1813.3	1821.3	1888.6	2030.0	2255.4	2484.6	2642.6	2625.3	2616.1	2606.9	2597.7
32.5°	1677.4	1680.6	1740.6	1896.0	2136.6	2385.3	2620.7	2669.3	2660.4	2651.5	2642.5
35°	1528.0	1538.7	1602.6	1772.0	2002.7	2276.0	2591.3	2730.6	2725.6	2720.5	2715.5
37.5°	1408.0	1411.3	1480.0	1656.0	1894.0	2176.6	2554.0	2809.4	2812.9	2816.5	2820.1
40°	1288.0	1288.0	1356.0	1538.6	1785.3	2087.4	2522.6	2906.0	2924.3	2942.5	2960.8
42.5°	1156.6	1166.0	1232.6	1414.6	1680.0	2011.4	2506.7	3022.0	3056.4	3090.8	3125.2
45°	1034.0	1040.0	1108.0	1286.0	1548.6	1924.6	2502.0	3151.4	3203.6	3255.9	3308.1
47.5°	913.3	922.0	986.6	1150.0	1405.4	1809.4	2496.0	3298.6	3365.5	3432.3	3499.1
50°	801.3	806.7	878.7	1027.3	1264.0	1660.0	2456.6	3463.4	3545.0	3626.6	3708.2
52.5°	682.6	693.3	752.7	906.0	1121.4	1499.4	2353.4	3642.6	3741.3	3840.0	3938.7
55°	558.6	556.0	627.4	771.3	996.6	1345.4	2162.6	3798.0	3917.1	4036.1	4155.2
57.5°	409.4	418.0	483.4	629.4	852.0	1216.0	1938.0	3878.6	4027.2	4175.7	4324.3
60°	293.3	305.4	362.0	477.4	708.0	1089.4	1708.6	3822.7	4019.5	4216.3	4413.1
62.5°	229.4	234.7	283.4	358.0	552.0	956.6	1554.6	3677.3	3948.6	4220.0	4491.3
65°	200.0	206.0	249.3	288.0	419.4	830.7	1462.0	3561.4	3919.5	4277.6	4635.7
67.5°	182.0	189.4	226.6	253.4	344.0	723.4	1440.0	3466.7	3886.8	4306.9	4727.1
69°	173.4	180.6	215.4	240.0	319.4	689.3	1414.6	3307.4	3733.8	4160.2	4586.6
70°	169.3	175.4	208.7	232.0	311.3	669.4	1357.3	3125.3	3537.4	3949.6	4361.7
72.5°	156.0	159.4	190.0	212.6	294.6	560.0	1075.3	2339.3	2683.7	3028.1	3372.5
75°	138.0	143.4	171.4	194.6	236.7	358.6	705.3	1414.0	1669.1	1924.1	2179.2
77.5°	118.6	123.3	147.3	186.0	182.0	217.4	405.4	790.0	927.9	1065.7	1203.6
80°	102.6	107.4	129.4	172.7	148.0	160.7	273.3	515.3	567.7	620.1	672.5
82.5°	80.6	84.0	108.6	140.6	114.6	119.4	204.7	450.0	481.6	513.2	544.8
85°	51.4	53.4	79.4	96.0	80.0	70.6	128.7	330.0	354.9	379.9	404.8
87.5°	18.0	25.3	35.4	33.4	33.4	25.3	45.4	122.0	131.7	141.5	151.2
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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CATALOG NUMBER: ECM-E04-LED-E1-RW

CANDELA DISTRIBUTION (continued):

	69°	70°	71°	72°	73°	74°	75°	76°	77°	78°	79°
0°	2233.3	2233.3	2233.3	2233.3	2233.3	2233.3	2233.3	2233.3	2233.3	2233.3	2233.3
2.5°	2242.0	2241.4	2242.0	2242.0	2241.4	2240.7	2240.6	2240.0	2238.6	2238.6	2238.0
5°	2266.4	2266.0	2267.4	2266.6	2267.3	2266.6	2266.6	2266.0	2266.6	2264.0	2263.4
7.5°	2310.8	2310.7	2310.6	2312.6	2311.4	2310.6	2312.0	2312.0	2312.0	2310.6	2310.6
10°	2369.2	2370.0	2371.3	2372.6	2372.6	2372.6	2375.4	2373.4	2377.4	2373.4	2375.4
12.5°	2435.2	2436.0	2439.4	2440.6	2442.0	2442.0	2442.0	2446.0	2448.6	2448.0	2448.6
15°	2501.0	2502.6	2503.4	2505.4	2505.3	2506.0	2508.7	2513.3	2512.0	2514.6	2514.7
17.5°	2542.3	2543.4	2542.7	2542.6	2544.0	2546.0	2548.6	2551.4	2550.7	2552.6	2554.0
20°	2561.1	2560.0	2558.0	2556.7	2556.0	2557.3	2557.3	2558.0	2559.4	2559.3	2559.3
22.5°	2561.7	2558.0	2553.3	2550.6	2547.4	2545.4	2546.7	2545.4	2545.3	2545.4	2544.0
25°	2560.0	2554.0	2546.6	2541.4	2536.0	2532.6	2529.4	2528.0	2525.4	2525.4	2525.4
27.5°	2565.7	2558.0	2550.6	2540.6	2533.4	2529.4	2524.6	2520.0	2517.4	2514.6	2514.7
30°	2588.5	2579.3	2570.0	2558.0	2548.0	2544.6	2536.0	2531.4	2524.7	2521.3	2520.0
32.5°	2633.6	2624.7	2612.0	2598.7	2590.6	2580.6	2573.4	2563.4	2556.0	2551.4	2545.4
35°	2710.4	2705.4	2694.6	2686.0	2674.0	2662.6	2648.0	2642.6	2627.4	2624.6	2617.4
37.5°	2823.7	2827.3	2825.4	2818.6	2810.7	2800.7	2794.6	2783.4	2777.4	2771.4	2764.6
40°	2979.0	2997.3	3003.4	3010.6	3012.6	3021.3	3011.3	3010.0	3002.0	3008.7	3004.6
42.5°	3159.6	3194.0	3212.6	3234.7	3258.6	3280.7	3298.0	3327.4	3324.0	3346.6	3362.6
45°	3360.4	3412.6	3460.6	3497.4	3543.3	3594.0	3638.7	3680.0	3726.6	3753.4	3792.7
47.5°	3565.9	3632.7	3701.4	3769.3	3834.6	3900.0	3980.0	4052.6	4123.4	4171.4	4232.0
50°	3789.8	3871.4	3954.0	4037.3	4130.0	4232.6	4322.0	4416.6	4514.0	4612.6	4682.0
52.5°	4037.3	4136.0	4226.0	4314.0	4428.7	4537.3	4653.3	4772.0	4919.4	5026.6	5122.0
55°	4274.2	4393.3	4492.0	4597.4	4717.3	4838.0	4980.0	5128.6	5284.6	5439.4	5579.4
57.5°	4472.8	4621.4	4738.6	4843.4	4972.0	5111.4	5264.0	5448.0	5626.0	5818.0	5998.6
60°	4609.9	4806.6	4948.0	5074.0	5223.3	5378.0	5577.4	5794.6	6028.6	6267.4	6499.3
62.5°	4762.7	5034.0	5227.4	5407.3	5584.0	5756.0	5980.7	6250.6	6568.0	6856.6	7164.0
65°	4993.9	5352.0	5637.4	5866.6	6117.3	6368.0	6630.0	6945.4	7306.0	7727.4	8085.3
67.5°	5147.2	5567.3	5930.0	6258.7	6551.3	6856.0	7186.6	7564.0	7999.4	8429.4	8874.6
69°	5013.0	5439.4	5822.6	6184.6	6505.4	6833.3	7169.4	7549.4	7994.0	8469.3	8939.3
70°	4773.9	5186.0	5582.0	5963.4	6276.7	6619.4	6950.0	7312.0	7762.6	8238.0	8749.4
72.5°	3716.9	4061.3	4468.0	4836.0	5210.0	5522.6	5821.4	6184.6	6639.4	7092.0	7590.0
75°	2434.3	2689.4	3061.4	3364.0	3687.4	3980.7	4197.4	4558.0	4834.0	5260.0	5722.6
77.5°	1341.5	1479.4	1672.6	1919.4	2058.6	2224.0	2440.6	2572.0	2768.0	3066.0	3204.6
80°	724.9	777.4	858.6	910.0	951.4	910.6	888.7	928.0	911.3	906.6	862.0
82.5°	576.4	608.0	650.0	680.0	660.6	573.3	480.6	413.3	370.0	311.4	266.7
85°	429.7	454.6	470.6	490.7	487.4	440.6	352.6	272.7	214.0	170.6	148.7
87.5°	160.9	170.6	175.3	213.4	196.0	186.0	144.6	105.4	80.6	58.6	47.4
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°	86°	87°	88°	89°	90°
0°	2233.3	2233.3	2233.3	2233.3	2233.3	2233.3	2233.3	2233.3	2233.3	2233.3	2233.3
2.5°	2239.3	2238.6	2238.7	2238.7	2239.4	2238.0	2236.7	2238.0	2237.4	2237.3	2237.3
5°	2266.0	2265.4	2265.3	2266.0	2265.3	2266.0	2265.3	2262.6	2264.0	2264.6	2265.3
7.5°	2312.0	2311.4	2311.3	2314.6	2314.0	2313.4	2312.6	2314.0	2312.0	2312.0	2313.3
10°	2375.4	2378.0	2377.3	2379.3	2378.6	2377.4	2376.0	2377.4	2379.4	2380.0	2377.3
12.5°	2452.6	2453.4	2452.0	2455.3	2453.4	2458.0	2452.7	2455.4	2458.0	2454.0	2456.0
15°	2515.4	2515.4	2518.0	2518.6	2518.0	2519.4	2523.4	2521.4	2519.3	2522.6	2524.0
17.5°	2553.3	2555.4	2556.0	2556.6	2558.0	2559.4	2560.0	2559.4	2560.0	2561.3	2564.0
20°	2562.0	2561.4	2562.6	2563.4	2565.4	2565.3	2566.6	2566.0	2568.0	2568.7	2569.3
22.5°	2546.6	2547.4	2548.0	2550.0	2549.4	2550.6	2551.3	2553.4	2552.6	2554.0	2554.7
25°	2526.0	2527.3	2528.0	2527.3	2527.3	2528.0	2528.7	2528.0	2530.7	2532.0	2532.0
27.5°	2512.6	2512.7	2514.6	2514.0	2512.6	2514.0	2513.4	2513.4	2513.4	2514.0	2516.0
30°	2518.0	2516.0	2514.6	2514.6	2514.0	2512.6	2511.4	2509.4	2509.3	2510.0	2509.3
32.5°	2546.6	2542.6	2540.6	2538.7	2537.4	2534.0	2530.0	2528.6	2525.3	2525.4	2524.0
35°	2620.0	2615.4	2615.4	2608.0	2604.0	2602.0	2598.6	2588.6	2589.4	2585.3	2584.0
37.5°	2766.0	2758.0	2754.7	2761.4	2748.7	2754.0	2742.7	2738.0	2740.6	2733.4	2737.3
40°	3011.3	3024.0	3018.6	3026.0	3029.4	3030.6	3030.7	3019.4	3030.6	3012.7	3018.7
42.5°	3365.4	3398.7	3410.6	3414.6	3435.3	3430.0	3424.0	3423.4	3422.7	3431.3	3426.7
45°	3810.6	3815.4	3872.0	3882.6	3894.0	3906.6	3903.4	3918.0	3928.6	3914.0	3916.0
47.5°	4266.0	4313.4	4354.7	4377.4	4402.0	4389.4	4399.4	4405.4	4443.3	4439.4	4436.0
50°	4767.4	4846.6	4868.6	4893.3	4912.6	4951.4	4948.0	4971.3	4967.3	4998.6	5002.7
52.5°	5242.6	5330.0	5418.7	5457.3	5486.6	5531.4	5548.6	5574.0	5564.7	5562.0	5585.3
55°	5715.3	5861.4	5962.6	6062.0	6117.3	6176.6	6202.0	6238.0	6254.0	6261.3	6232.0
57.5°	6184.0	6359.4	6530.6	6653.4	6738.7	6828.0	6875.4	6914.6	6960.6	6976.0	6961.3
60°	6732.0	6988.6	7213.4	7377.4	7534.7	7632.0	7734.0	7808.6	7822.6	7886.0	7926.7
62.5°	7462.0	7774.6	8059.4	8298.0	8542.0	8724.0	8908.0	8981.4	9054.0	9103.4	9133.3
65°	8457.4	8869.4	9262.6	9602.0	9901.3	10204.0	10418.7	10531.3	10676.0	10704.6	10673.3
67.5°	9330.0	9816.0	10304.6	10736.7	11060.0	11374.0	11628.7	11815.4	11950.7	12017.4	12045.3
69°	9426.0	9920.0	10419.4	10850.0	11241.4	11554.7	11815.3	12000.6	12135.3	12250.7	12270.7
70°	9229.3	9784.0	10269.4	10704.0	11107.3	11426.7	11660.0	11872.0	12025.3	12114.0	12145.3
72.5°	8102.0	8600.7	9090.7	9591.3	9937.3	10320.6	10512.6	10682.7	10886.7	11002.7	10977.3
75°	6140.0	6571.3	6998.6	7373.4	7640.0	7781.4	8006.0	8170.6	8140.7	8336.0	8341.3
77.5°	3463.4	3519.3	3809.3	3770.6	3898.6	3902.0	3935.3	3993.4	3882.0	4110.6	3946.7
80°	840.0	828.6	888.6	818.0	812.0	806.0	786.0	825.4	830.6	790.0	797.3
82.5°	246.7	236.0	231.3	225.4	235.4	232.0	234.0	235.4	242.0	233.3	242.7
85°	135.4	127.3	126.6	123.4	122.6	115.3	114.6	114.7	110.0	111.4	110.7
87.5°	52.0	48.7	46.0	44.0	43.3	41.4	39.4	36.0	32.0	28.6	26.7
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)