

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: P12448-250

Luminaire Tested: **MPWP-FC-250-XX**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P12448-250
Test Lab: COOPER LIGHTING INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: MPWP-FC-250-XX
Description: LUMARK WAL-PAK OUTDOOR HID WALL FIXTURE WITH FULL-CUTOFF DOOR WITH CLEAR GLASS LENS
Light Source: MOGUL BASE CLEAR QUARTZ ED28 PULSE START METAL HALIDE LAMP 250 WATTS
Ballast/Driver: -

Summary

Lumens per Lamp: 22000 (1 lamp)
Luminaire Lumens: 10489.3 lumens
Efficiency: 47.7%
Efficacy: 42.0 lumens/watt
Luminous Opening: Rectangular w/ Sides (W: 0.73' x L: 1.15' x H: 0.1')
IES Classification: Type II - Short - Full Cutoff
BUG Rating: B3 - U0 - G1

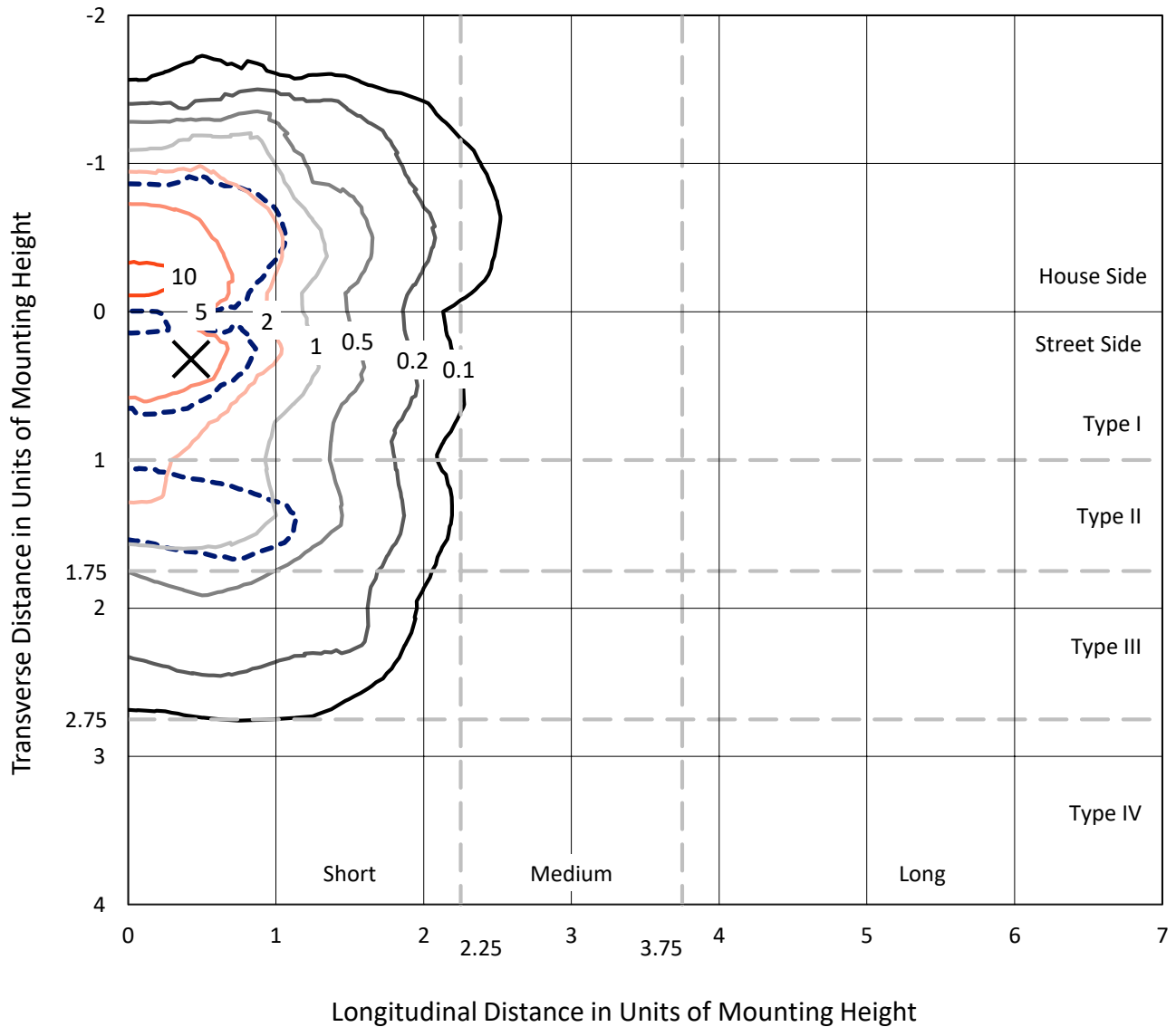
Input Watts (W): 250
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

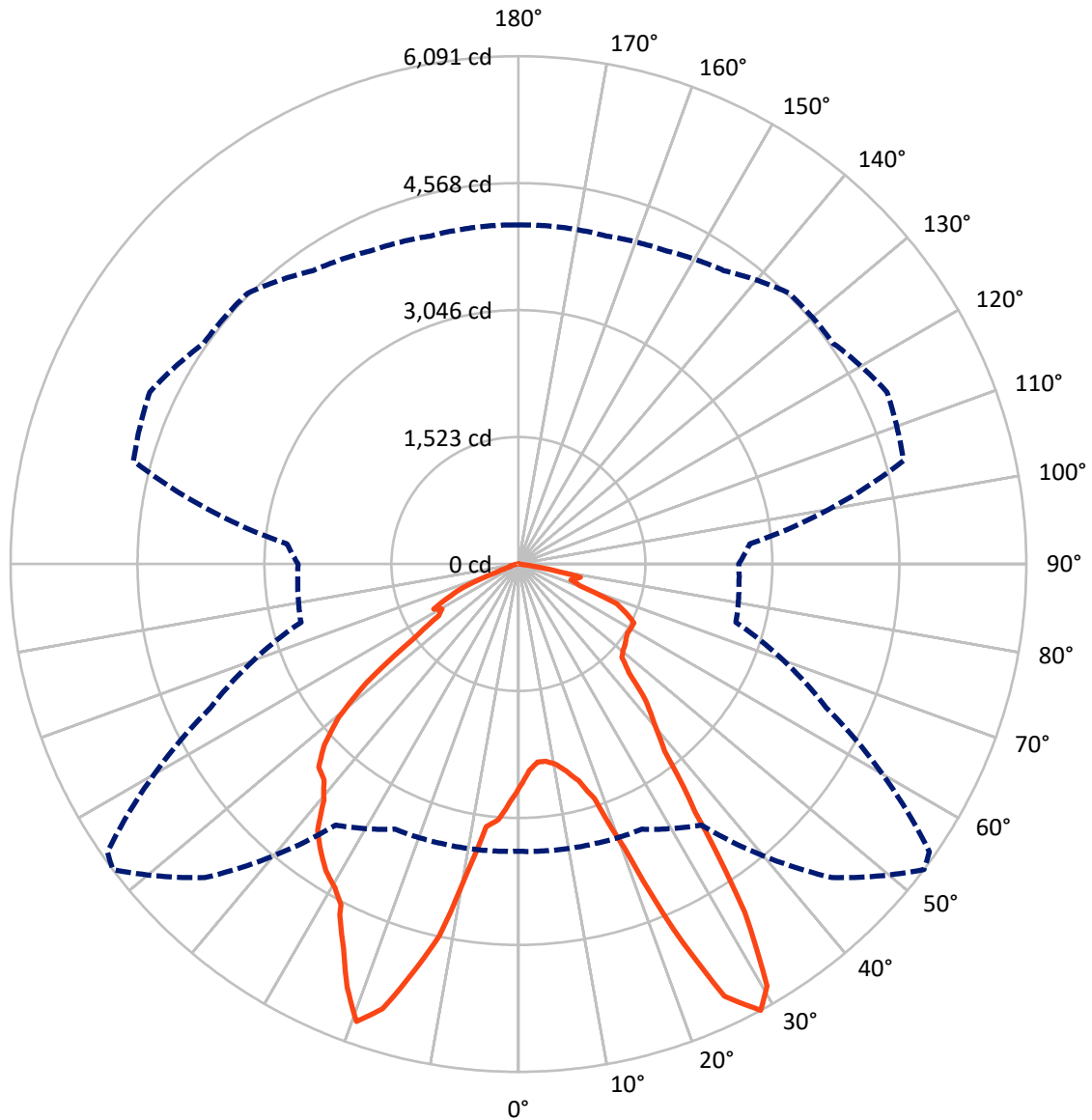
✕ Max cd
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 11.9 fc
 Type II - Short - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 53-Deg Lateral - - - Horizontal Cone Through 28-Deg Vertical

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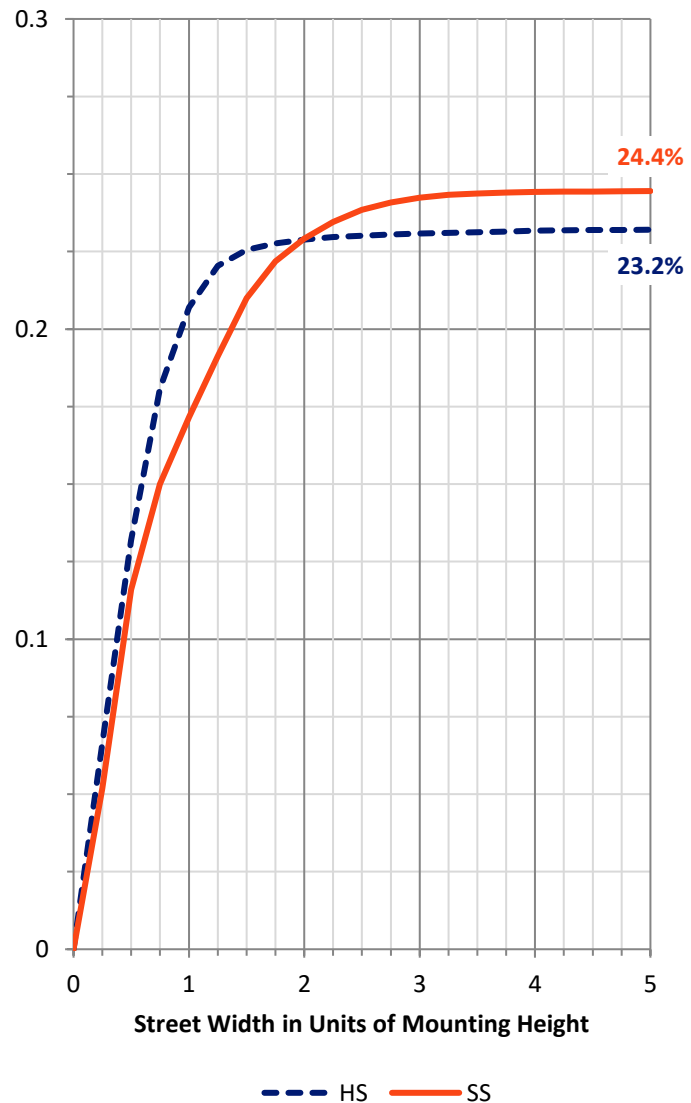
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	5131.3	0.0	5131.3
	% Lamp	23.3	0.0	23.3
Street Side	Lumens	5358.0	0.0	5358.0
	% Lamp	24.4	0.0	24.4
Total	Lumens	10489.3	0.0	10489.3
	% Lamp	47.7	0.0	47.7

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture	% Lamp
0°-10°	282.1	2.7	1.3
10°-20°	1136.1	10.8	5.2
20°-30°	1942.5	18.5	8.8
30°-40°	2196.0	20.9	10.0
40°-50°	1884.9	18.0	8.6
50°-60°	1652.2	15.8	7.5
60°-70°	1031.4	9.8	4.7
70°-80°	335.2	3.2	1.5
80°-90°	28.8	0.3	0.1
90°-100°	0.0	0.0	0.0
100°-110°	0.0	0.0	0.0
110°-120°	0.0	0.0	0.0
120°-130°	0.0	0.0	0.0
130°-140°	0.0	0.0	0.0
140°-150°	0.0	0.0	0.0
150°-160°	0.0	0.0	0.0
160°-170°	0.0	0.0	0.0
170°-180°	0.0	0.0	0.0
0°-90°	10489.3	100.0	47.7
0°-180°	10489.3	100.0	47.7



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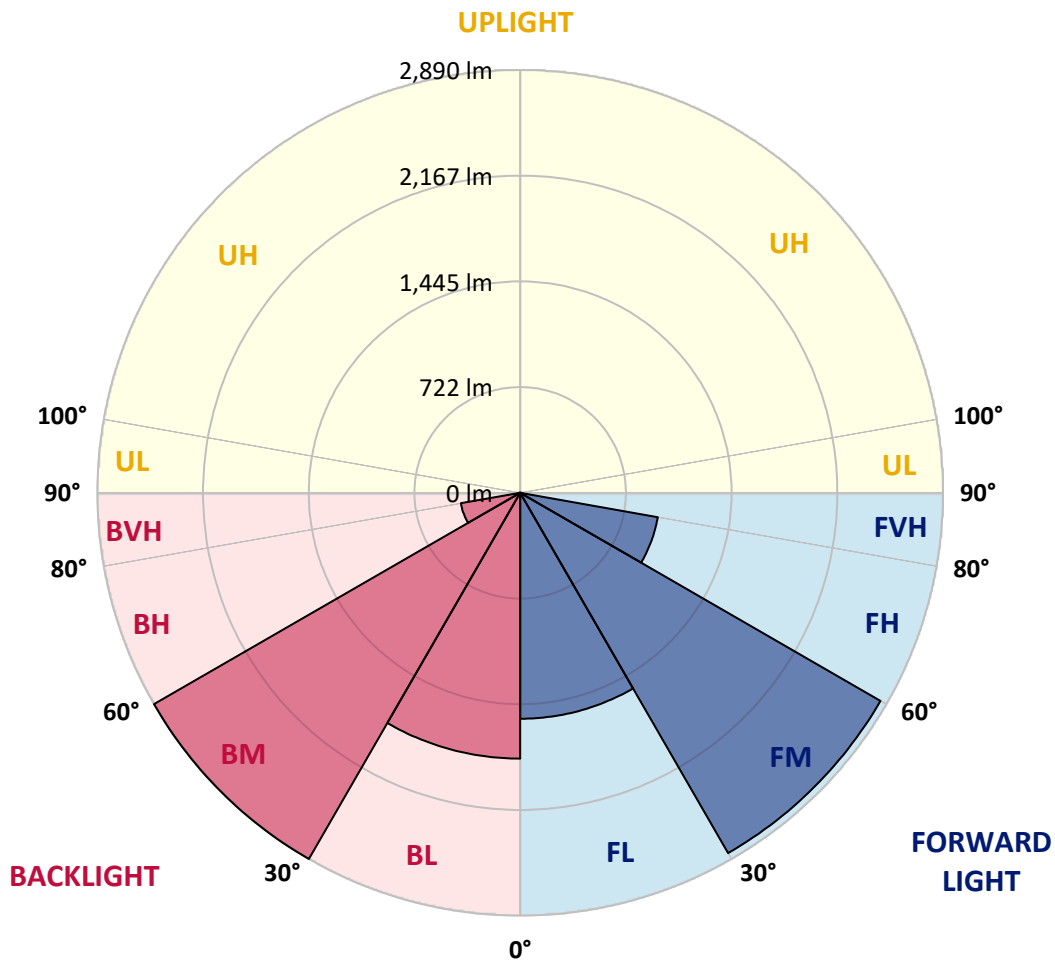
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Lamp	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1543.9	7.0			
FM	(30°-60°)	2843.2	12.9			
FH	(60°-80°)	955.2	4.3			G1/1800
FVH	(80°-90°)	15.6	0.1			G1/100
BL	(0°-30°)	1816.8	8.3	B3/2500		
BM	(30°-60°)	2889.9	13.1	B3/5000		
BH	(60°-80°)	411.4	1.9	B1/500		G1/500
BVH	(80°-90°)	13.2	0.1			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	
Trapped Light		11510.7	52.3			

BUG Rating: B3-U0-G1

Type II Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	53°	55°	65°	75°	85°
0°	2664.0	2664.0	2664.0	2664.0	2664.0	2664.0	2664.0	2664.0	2664.0	2664.0	2664.0
2.5°	2397.5	2392.5	2402.0	2418.5	2433.0	2450.5	2480.0	2483.5	2523.0	2575.0	2634.0
5°	2346.5	2347.5	2355.0	2354.0	2359.5	2367.5	2386.0	2387.5	2428.5	2495.5	2613.0
7.5°	2456.0	2455.5	2440.0	2412.5	2388.0	2383.0	2389.5	2382.0	2401.0	2456.5	2582.5
10°	2927.0	2921.5	2891.0	2778.0	2621.0	2474.5	2441.0	2436.0	2434.5	2471.0	2586.5
12.5°	3484.0	3471.5	3352.0	3147.0	2931.5	2684.5	2546.5	2522.0	2521.5	2544.0	2635.5
15°	4905.5	4872.5	4633.5	4162.0	3511.0	2936.0	2695.5	2653.5	2645.0	2678.5	2731.0
17.5°	5157.5	5165.0	5197.5	5274.5	4737.5	3642.0	2959.0	2853.5	2750.0	2824.0	2837.5
20°	4855.5	4856.5	4994.5	5261.5	5542.0	4858.0	3637.5	3368.0	2838.5	2931.5	2938.5
22.5°	4084.5	4129.0	4334.0	4736.5	5437.5	5693.5	4757.0	4334.0	3001.0	2907.5	2931.0
25°	3514.5	3526.0	3578.0	3989.5	4876.5	5799.5	5741.0	5412.5	3300.0	2818.5	2864.0
27.5°	3430.0	3432.5	3480.5	3538.5	4059.5	5512.5	6031.5	5927.0	3852.0	2715.0	2711.5
28°	3446.0	3454.5	3475.5	3508.5	3822.0	5319.0	6091.0	6017.5	4072.5	2699.5	2656.0
30°	3388.0	3416.0	3484.0	3449.5	3543.5	4686.5	5875.0	5960.0	4587.5	2665.5	2555.5
32.5°	2694.5	2808.5	3430.0	3582.5	3412.0	3740.5	4985.0	5255.0	4717.5	2722.0	2451.5
35°	2263.5	2274.0	2375.5	2853.0	3367.0	3295.0	3652.0	3912.5	4290.0	2979.0	2405.5
37.5°	2295.5	2296.5	2260.5	2227.0	2748.0	2985.5	2844.5	2866.5	3743.0	3359.5	2376.0
40°	2335.5	2347.0	2331.0	2216.5	2072.5	2579.0	2502.0	2519.0	3088.0	3019.0	2231.0
42.5°	2378.5	2377.0	2331.0	2220.0	2046.0	1938.5	2236.5	2206.0	2354.5	2639.5	2106.5
45°	2476.0	2465.0	2375.5	2223.0	2033.5	1849.0	1860.0	1812.0	2128.0	2749.5	1955.5
47.5°	2852.0	2817.0	2529.5	2245.0	2029.5	1823.5	1670.5	1653.5	2147.5	2602.0	1795.0
50°	3279.5	3265.0	2920.5	2459.5	2038.5	1819.0	1627.0	1585.0	1997.5	2247.0	1616.5
52.5°	3536.0	3566.0	3433.0	2895.0	2183.0	1814.0	1602.5	1553.5	1774.5	1952.5	1432.5
55°	3537.5	3597.5	3689.0	3351.5	2531.5	1838.5	1569.0	1504.0	1465.0	1779.5	1295.5
57.5°	2431.5	2628.0	3446.5	3741.0	2870.5	1957.5	1548.0	1469.5	1219.0	1585.5	1173.0
60°	1677.0	1856.5	2384.0	3158.5	3244.0	2222.5	1551.5	1449.0	1111.0	1365.5	1004.5
62.5°	1488.5	1660.0	2217.5	2326.5	2608.5	2480.5	1556.0	1353.0	870.0	1048.0	709.5
65°	1350.0	1458.5	2124.5	2119.0	1872.0	2148.5	1421.5	1219.5	687.0	790.5	541.5
67.5°	1276.0	1372.5	1901.0	1895.0	1808.5	1418.5	1275.0	1203.0	565.5	649.0	472.0
70°	865.0	888.5	1229.5	1467.5	2170.0	1036.0	786.5	766.5	530.0	474.5	382.5
72.5°	420.0	450.0	793.0	1162.5	809.5	485.0	660.0	603.5	347.5	445.0	343.5
75°	85.0	87.5	150.5	280.0	249.5	342.5	703.0	630.0	417.0	512.0	347.0
77.5°	50.5	51.0	61.5	50.0	55.5	335.0	759.0	669.5	298.5	434.5	289.0
80°	25.5	24.5	33.0	39.5	31.5	73.5	293.0	296.0	164.0	197.5	198.0
82.5°	13.5	15.5	15.5	20.5	23.0	19.5	25.0	32.0	59.0	81.0	67.0
85°	8.0	8.0	6.5	8.5	6.5	10.0	12.5	12.0	15.0	13.5	13.5
87.5°	6.0	8.5	6.0	7.0	6.5	7.0	6.0	7.0	6.0	6.0	20.5
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):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	2664.0	2664.0	2664.0	2664.0	2664.0	2664.0	2664.0	2664.0	2664.0	2664.0	2664.0
2.5°	2660.5	2686.5	2737.5	2796.5	2844.5	2891.0	2926.0	2961.0	2989.5	2995.5	3000.0
5°	2675.5	2745.0	2881.0	2995.0	3069.5	3114.0	3128.5	3157.5	3181.0	3182.5	3189.5
7.5°	2665.0	2752.5	2922.0	3048.0	3133.0	3327.0	3680.5	4099.0	4352.0	4462.0	4478.5
10°	2679.5	2771.5	2948.0	3093.5	3615.5	4357.5	4740.5	5014.5	5195.0	5295.0	5318.5
12.5°	2714.0	2795.5	2954.5	3428.0	4453.0	4984.5	5428.5	5590.5	5544.0	5469.0	5486.0
15°	2779.0	2823.0	3032.0	4044.5	4923.0	5630.5	5683.5	5431.5	5003.0	4739.0	4727.0
17.5°	2838.5	2830.5	3137.5	4623.0	5527.5	5782.0	5220.5	4753.5	4665.0	4642.0	4649.5
20°	2904.0	2854.0	3481.5	5025.0	5941.5	5337.5	4873.0	4638.5	4529.0	4502.0	4495.5
22.5°	2879.5	2849.0	3906.0	5427.5	5608.0	4959.0	4609.0	4486.5	4397.5	4361.0	4374.5
25°	2807.5	2834.0	4329.0	5533.5	5157.0	4662.0	4422.0	4347.0	4224.0	4150.5	4152.0
27.5°	2679.0	2815.0	4664.5	5028.0	4770.0	4509.0	4292.0	4193.0	4104.5	4058.5	4073.0
28°	2643.0	2786.0	4780.0	4878.5	4611.0	4593.0	4296.0	4149.5	4073.0	4070.5	4067.0
30°	2553.0	2746.5	4737.0	4405.0	4416.5	4669.0	4181.5	4060.0	4085.5	4078.0	4083.5
32.5°	2519.5	2690.0	4612.5	3807.5	4336.0	4398.0	4031.5	4242.5	4281.5	4370.5	4389.0
35°	2465.5	2545.0	4481.5	3808.0	4217.5	4052.5	4202.5	4323.5	4306.0	4304.0	4326.5
37.5°	2329.0	2367.0	4036.5	3698.5	4006.5	3976.5	4253.5	4178.0	3774.0	3437.0	3401.0
40°	2164.0	2122.5	3405.0	3535.0	3605.5	3912.5	4104.0	3505.0	2886.5	2668.0	2656.5
42.5°	1985.5	1869.5	2893.5	3406.5	3433.5	3684.5	3454.5	2923.5	2466.0	2512.0	2572.5
45°	1767.5	1646.5	2542.0	3355.5	3449.5	3281.0	2786.5	2801.5	2120.5	1516.5	1554.5
47.5°	1581.5	1492.0	2193.5	3168.5	3268.5	2829.5	2599.0	2594.5	1445.0	1148.0	1108.5
50°	1457.5	1384.0	2071.0	2673.5	2900.0	2577.0	2494.5	2552.5	1236.0	1233.5	1276.5
52.5°	1304.5	1244.0	2125.0	2167.0	2298.0	2384.5	2681.5	1802.0	1068.0	765.5	701.0
55°	1178.5	1148.0	1979.0	2059.5	1427.0	1985.5	2542.0	823.0	371.0	274.0	266.0
57.5°	1071.0	1062.0	1804.0	1959.5	1118.5	1240.0	1796.5	461.0	316.5	242.5	242.0
60°	930.5	965.5	1587.0	1566.0	1099.0	926.0	921.0	357.5	316.5	282.5	284.5
62.5°	664.5	789.0	1294.0	1181.0	1176.0	1039.5	313.5	349.0	390.0	243.0	226.5
65°	511.0	773.0	1065.5	936.0	1004.5	645.0	248.5	357.5	251.0	184.0	191.0
67.5°	460.0	743.0	1009.5	940.0	837.0	243.0	311.0	256.0	172.5	164.5	167.5
70°	346.5	571.0	790.5	760.0	297.5	218.5	252.0	166.5	158.5	165.5	162.5
72.5°	323.5	459.5	589.0	492.0	108.5	94.0	115.0	159.0	179.0	199.0	200.5
75°	355.5	337.5	384.5	165.0	113.5	26.0	56.0	178.0	274.0	180.5	171.5
77.5°	236.0	231.5	218.0	168.5	107.0	69.0	89.0	73.0	34.0	24.0	24.0
80°	155.5	188.0	144.5	168.0	35.0	72.0	61.0	20.0	16.5	17.5	15.0
82.5°	67.5	100.5	93.0	36.5	34.5	24.5	11.0	15.5	13.5	13.5	13.0
85°	18.5	25.5	47.0	20.5	10.5	3.5	5.0	7.0	11.0	6.5	6.5
87.5°	25.0	14.5	6.0	12.0	4.5	3.0	2.5	2.0	1.0	1.0	4.0
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)