

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: P12436-250

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

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P12436-250
Test Lab: COOPER LIGHTING INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: HPWP-FC-250-XX
Description: LUMARK WAL-PAK HID WALL FIXTURE WITH FULL CUTOFF DOOR CLEAR FLAT GLASS LENS
Light Source: MOGUL BASE CLEAR ED18 250W HIGH PRESSURE SODIUM LAMP 250 WATTS
Ballast/Driver: -

Summary

Lumens per Lamp: 30000 (1 lamp)
Luminaire Lumens: 15685.5 lumens
Efficiency: 52.3%
Efficacy: 62.7 lumens/watt
Luminous Opening: Rectangular w/ Sides (W: 0.73' x L: 1.15' x H: 0.1')
IES Classification: Type I - Short - Cutoff
BUG Rating: B4 - U1 - G2

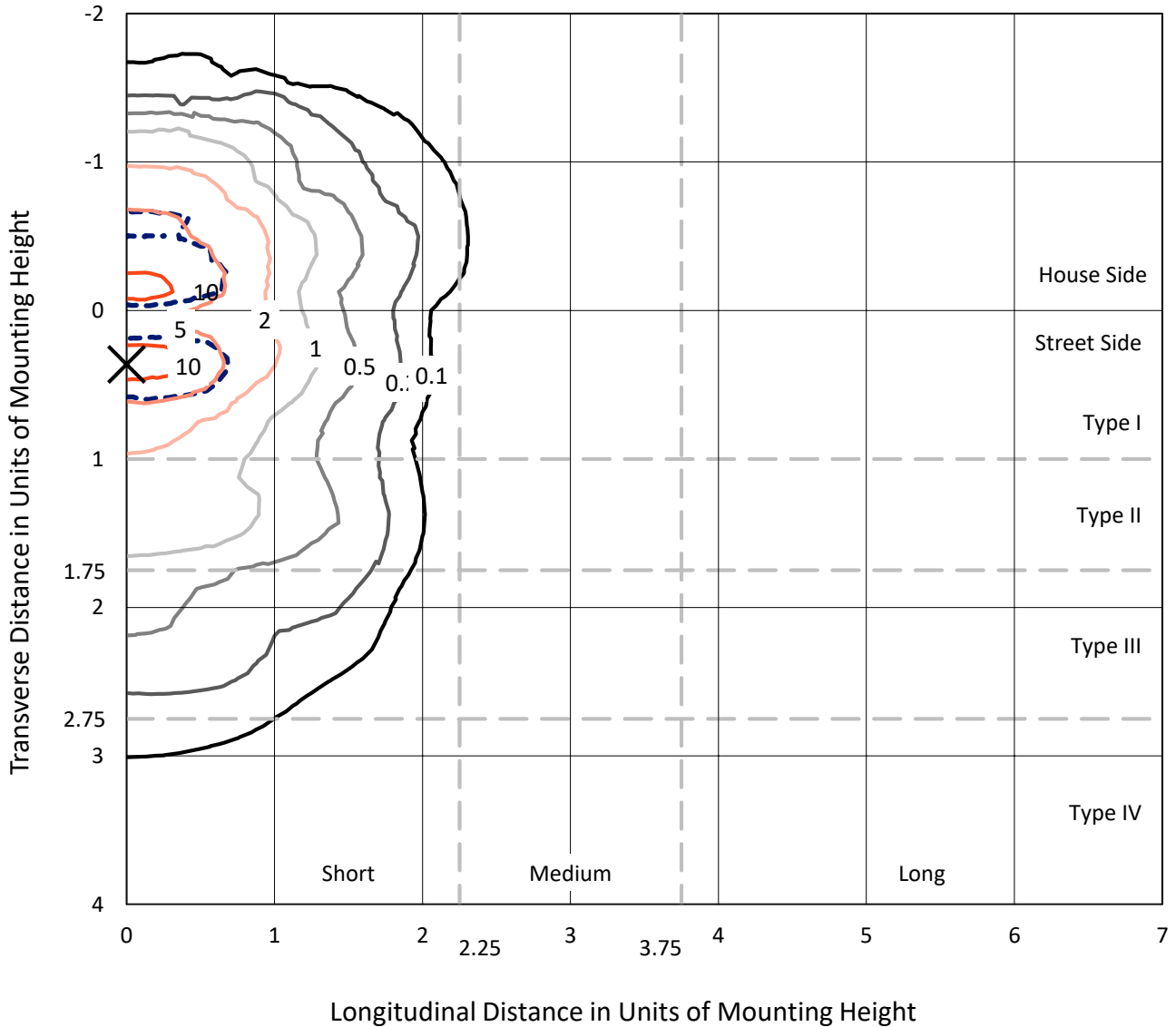
Input Watts (W): 250
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

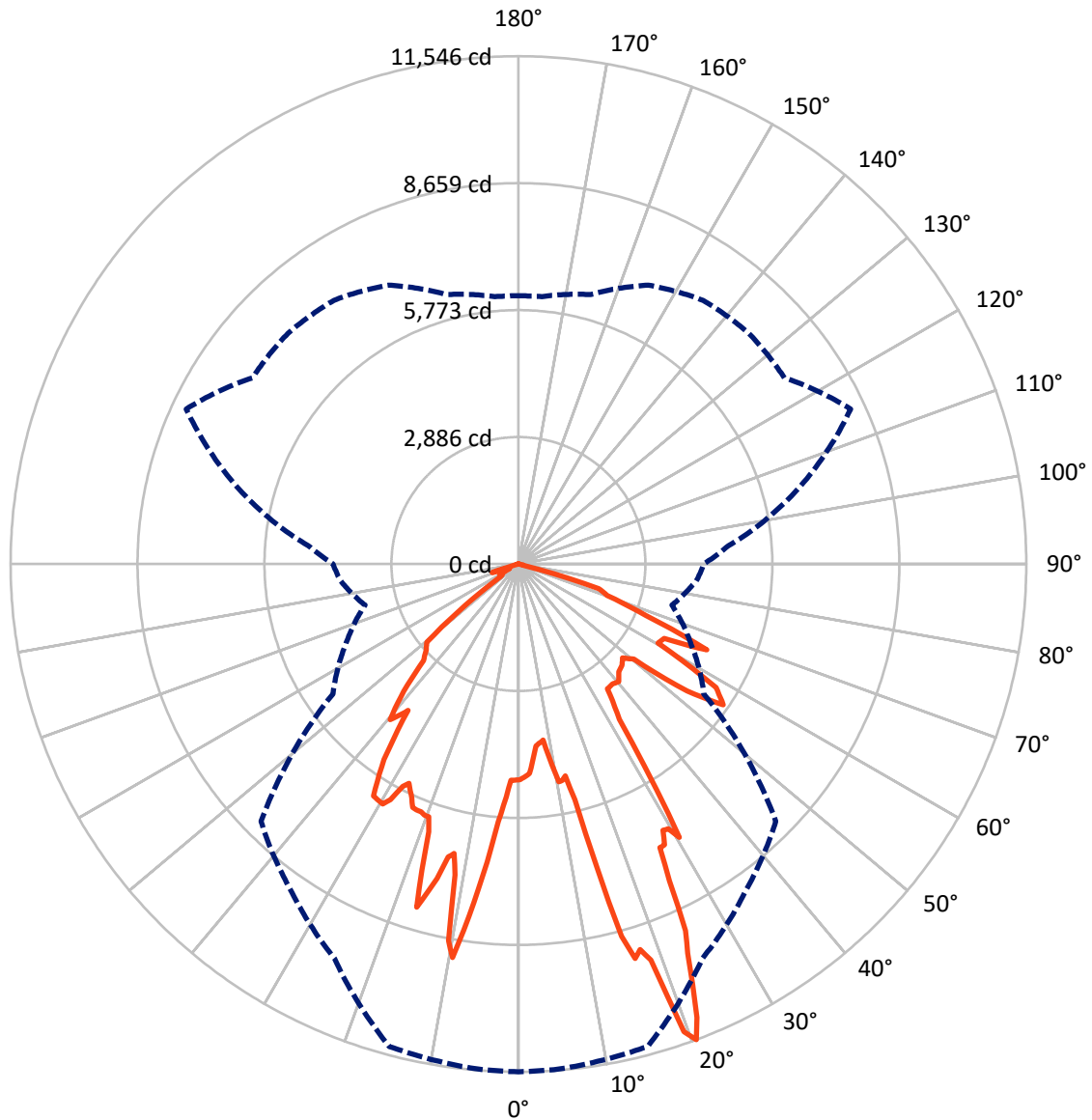
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 14.8 fc
 Type I - Short - Cutoff

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Luminous Intensity Polar Plot



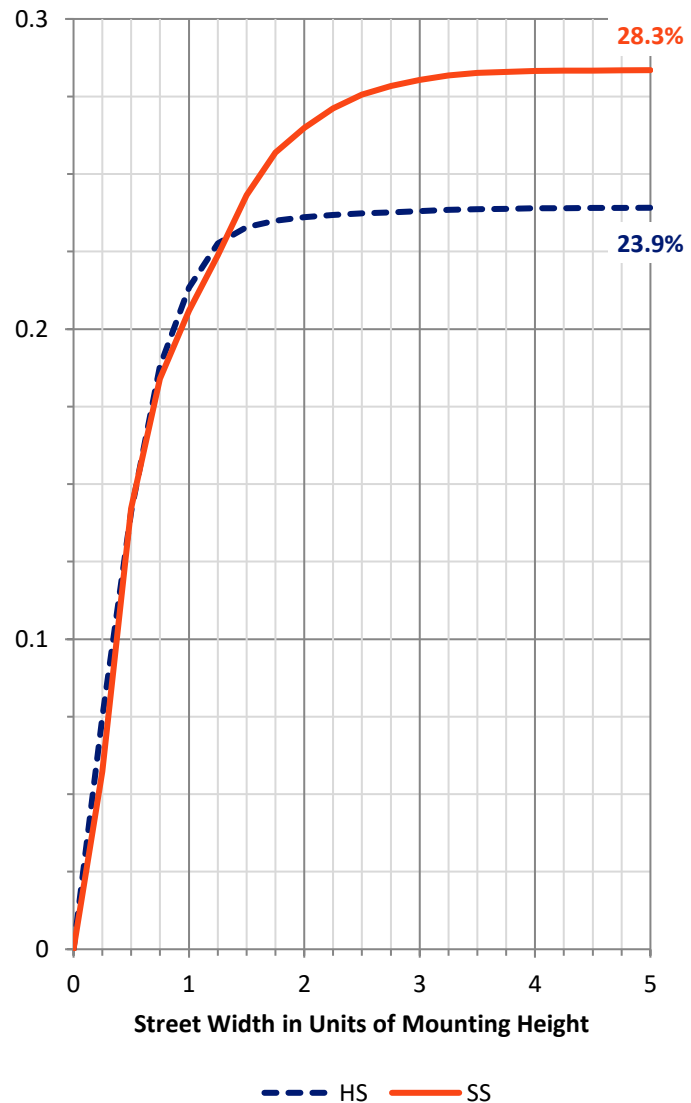
— Vertical Plane Through 0-Deg Lateral - - - Horizontal Cone Through 20-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	7218.3	0.1	7218.3
	% Lamp	24.1	0.0	24.1
Street Side	Lumens	8467.1	0.0	8467.2
	% Lamp	28.2	0.0	28.2
Total	Lumens	15685.4	0.1	15685.5
	% Lamp	52.3	0.0	52.3

Coefficient of Utilization



ZONAL LUMENS:

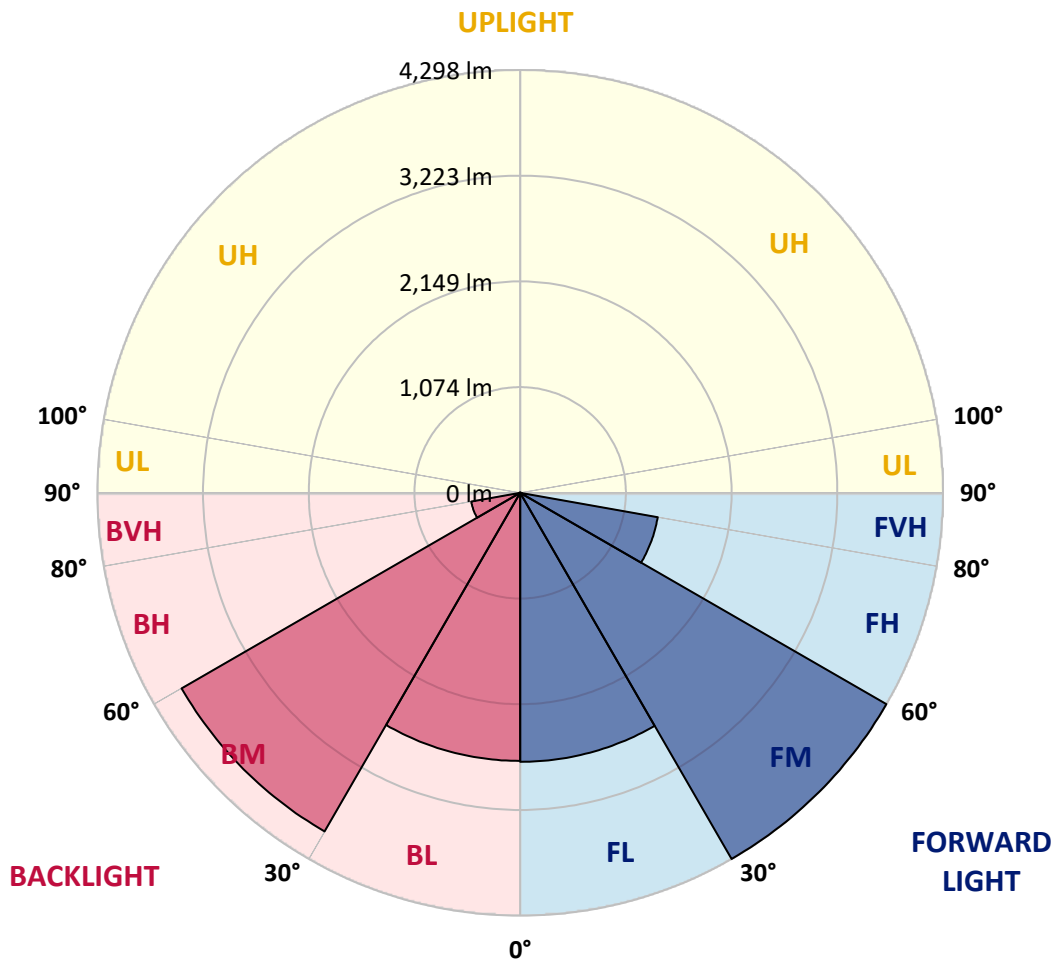
Zone	Lumens	% Fixture	% Lamp
0°-10°	504.5	3.2	1.7
10°-20°	1846.3	11.8	6.2
20°-30°	3108.5	19.8	10.4
30°-40°	3273.0	20.9	10.9
40°-50°	2694.4	17.2	9.0
50°-60°	2304.2	14.7	7.7
60°-70°	1436.0	9.2	4.8
70°-80°	489.8	3.1	1.6
80°-90°	28.8	0.2	0.1
90°-100°	0.1	0.0	0.0
100°-110°	0.0	0.0	0.0
110°-120°	0.0	0.0	0.0
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°	15685.4	100.0	52.3
0°-180°	15685.5	100.0	52.3

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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°)	2734.2	9.1			
FM (30°-60°)	4297.7	14.3			
FH (60°-80°)	1420.4	4.7			G1/1800
FVH (80°-90°)	14.9	0.0			G1/100
BL (0°-30°)	2725.1	9.1	B4/5000		
BM (30°-60°)	3973.9	13.2	B3/5000		
BH (60°-80°)	505.4	1.7	B2/1000		G2/1000
BVH (80°-90°)	13.8	0.0			G1/100
UL (90°-100°)	0.1	0.0		U1/10	
UH (100°-180°)	0.1	0.0		U1/10	
Trapped Light	14314.5	47.7			

BUG Rating: B4-U1-G2
 Type I Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	4903.8	4903.8	4903.8	4903.8	4903.8	4903.8	4903.8	4903.8	4903.8	4903.8	4903.8
2.5°	4770.6	4758.6	4762.8	4762.8	4767.0	4789.8	4830.0	4876.2	4936.2	4974.6	4983.0
5°	4155.6	4131.6	4179.6	4288.2	4479.6	4660.8	4798.2	4805.4	4873.2	5065.8	5081.4
7.5°	4039.2	4050.6	3969.0	3843.0	3855.0	3999.6	4186.8	4635.6	4747.2	4907.4	4994.4
10°	5036.4	5038.2	5062.8	5109.6	4843.2	4080.6	3913.2	4148.4	4676.4	4762.8	4894.8
11°	5019.0	5025.0	5020.8	5028.6	5112.6	4584.0	3898.2	3994.2	4619.4	4724.4	4852.2
12°	4935.0	4924.8	4934.4	5007.6	5013.0	4964.4	4060.2	3882.6	4540.2	4681.2	4798.2
13°	5513.4	5448.6	5136.0	4926.0	4996.8	4998.0	4395.0	3817.8	4440.0	4612.2	4743.6
14°	7140.0	6975.6	6323.4	5400.0	4926.6	4896.6	4728.0	3802.2	4318.8	4558.2	4675.2
15°	8781.0	8718.0	8142.0	6724.2	5258.4	4893.6	4818.6	3887.4	4193.4	4483.2	4597.8
16°	9355.2	9316.8	9144.6	8295.0	6186.0	4932.0	4726.8	4008.0	4051.8	4406.4	4503.0
17°	9192.0	9214.2	9289.8	9125.4	7692.0	5247.6	4636.8	4157.4	3895.8	4311.0	4411.8
18°	9492.6	9429.0	9177.6	9222.0	8780.4	6030.6	4691.4	4315.2	3763.8	4235.4	4356.0
19°	11280.0	11176.2	10131.6	9141.0	9121.8	7120.2	4841.4	4370.4	3654.6	4153.2	4289.4
20°	11545.8	11515.8	11355.0	9895.8	9036.0	8274.6	5147.4	4333.8	3611.4	4077.6	4212.6
21°	11077.2	11075.4	11229.0	10870.2	9173.4	8789.4	5657.4	4277.4	3606.0	4030.8	4142.4
22°	10341.6	10405.8	10805.4	11106.6	9705.6	8849.4	6340.2	4230.0	3616.2	3988.8	4078.8
23°	9652.8	9695.4	10131.6	10815.0	10352.4	8742.0	7167.6	4257.6	3640.8	3946.8	4017.6
24°	9162.0	9237.6	9500.4	10261.8	10713.6	9000.0	7835.4	4366.8	3678.6	3888.0	3943.2
25°	7979.4	8168.4	8989.2	9658.2	10559.4	9149.4	8200.8	4536.0	3726.0	3831.0	3880.2
26°	7206.6	7241.4	7866.0	9139.8	10290.6	9529.8	8235.0	4822.8	3787.8	3791.4	3805.2
27°	7197.6	7206.6	7254.0	8413.2	9772.8	9861.6	8221.2	5238.6	3811.2	3754.8	3739.8
28°	6889.2	6919.2	7054.8	7596.0	9172.8	9894.6	8419.8	5709.6	3828.0	3709.8	3718.8
29°	6916.8	6902.4	6822.0	7082.4	8629.8	9820.2	8411.4	6244.2	3823.8	3652.2	3618.0
30°	7209.6	7213.2	7021.2	6786.6	7944.0	9636.6	8374.8	6655.2	3800.4	3580.8	3549.0
32.5°	4212.0	4329.0	5769.6	6723.6	6549.6	8420.4	8400.6	6588.6	3585.0	3360.6	3423.6
35°	3487.2	3452.4	3418.2	4140.0	6122.4	6765.6	7698.6	5978.4	3718.2	3244.8	3407.4
37.5°	3462.6	3447.6	3398.4	3248.4	4287.0	5579.4	6362.4	5251.2	4116.0	3177.6	3382.8
40°	3514.2	3488.4	3355.2	3190.8	3027.6	4502.4	4507.2	4744.8	4248.0	3122.4	3254.4
42.5°	3346.2	3337.8	3313.2	3148.2	2941.2	3029.4	3735.6	4125.0	4336.8	3171.6	3153.0
45°	3297.6	3291.6	3197.4	3048.6	2904.6	2784.6	3038.4	3931.8	4370.4	3054.6	2849.4
47.5°	3188.4	3171.6	3163.2	2961.0	2834.4	2669.4	2535.0	3819.6	3901.8	2770.8	2539.2
50°	3399.6	3358.8	3217.8	2994.0	2742.0	2628.6	2367.6	3220.8	3438.6	2536.8	2278.2
52.5°	4798.2	4732.8	4261.2	3290.4	2737.2	2491.2	2241.6	2800.2	3046.8	2254.2	2020.2
55°	5649.0	5548.8	5343.6	4693.8	3066.6	2400.6	2115.6	2194.8	2738.4	1966.2	1809.6
57.5°	5296.8	5288.4	5230.2	5083.8	4236.6	2454.0	2002.2	1776.6	2394.6	1692.6	1541.4
60°	3646.2	3636.0	4183.8	4900.8	4353.0	3265.2	1887.0	1494.0	1951.8	1302.6	1208.4
62.5°	3721.2	3623.4	3148.2	2766.0	4192.8	3703.2	1670.4	1108.8	1279.2	885.0	876.6
65°	4710.6	4438.2	3521.4	2448.0	2419.2	3402.6	1539.0	742.8	732.0	634.2	663.0
67.5°	3129.0	3329.4	3721.8	2122.2	2505.0	2129.4	1224.6	505.8	481.2	510.6	543.0
70°	2138.4	2150.4	2123.4	1810.8	1952.4	981.0	796.2	601.2	516.6	517.8	528.6
72.5°	1911.6	1896.6	1789.8	1587.6	841.2	501.6	779.4	964.2	667.2	600.6	593.4
75°	127.8	135.6	390.0	928.2	292.2	482.4	825.0	763.2	673.8	502.2	447.0
77.5°	100.2	94.8	79.8	80.4	54.0	553.2	908.4	403.2	527.4	376.2	326.4
80°	21.6	23.4	23.4	40.8	48.0	31.2	265.8	195.6	202.2	283.8	234.0



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CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
82.5°	18.0	22.2	20.4	14.4	31.8	15.6	49.8	30.6	41.4	33.0	41.4
85°	27.6	16.2	21.6	13.8	8.4	10.2	13.2	9.6	13.8	12.0	31.2
87.5°	5.4	3.6	4.8	3.6	4.2	4.8	4.2	6.0	5.4	13.8	15.6
90°	0.0	0.0	0.0	0.0	0.0	1.2	0.0	0.6	1.2	0.6	1.8
92.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
95°	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.6	0.0	0.0
97.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
102.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
105°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
107.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
112.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
115°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
117.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
120°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
122.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
125°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
127.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
130°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
132.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
135°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
137.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
140°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
142.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
145°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
147.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
150°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
152.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
155°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
157.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
160°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
162.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	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):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	4903.8	4903.8	4903.8	4903.8	4903.8	4903.8	4903.8	4903.8	4903.8	4903.8
2.5°	4975.8	4960.2	4950.6	4929.0	4908.6	4909.8	4908.6	4926.6	4924.8	4921.2
5°	5005.2	4878.6	4924.2	5145.6	5322.0	5509.8	5683.8	5823.0	5923.8	5877.6
7.5°	4917.6	4863.0	5384.4	5888.4	6535.2	6922.2	7101.0	7245.0	7398.6	7438.2
10°	4848.0	5134.2	6062.4	6902.4	7544.4	8502.0	9009.0	9091.8	9078.0	9074.4
11°	4824.6	5340.6	6419.4	7138.8	8221.2	8937.6	8974.8	8889.6	8710.8	8709.6
12°	4796.4	5554.8	6707.4	7497.0	8729.4	8943.6	8571.6	7723.8	7227.0	7216.8
13°	4780.2	5769.0	6867.6	7975.2	8892.0	8611.2	7322.4	6796.8	6733.2	6741.0
14°	4781.4	5964.0	7014.6	8437.2	8826.0	7582.2	6816.0	6761.4	6826.8	6846.6
15°	4765.2	6174.6	7179.0	8663.4	8364.0	6957.0	6875.4	7146.6	7336.8	7380.6
16°	4750.8	6370.8	7384.8	8754.0	7603.2	6858.0	7229.4	7632.0	7732.8	7755.0
17°	4744.2	6494.4	7619.4	8715.6	7096.2	7128.0	7679.4	7860.0	8108.4	8140.2
18°	4789.2	6574.8	7903.2	8324.4	6894.6	7507.8	7744.8	7758.0	7334.4	7286.4
19°	4803.6	6583.8	8148.6	7822.8	7137.0	7689.6	7398.0	6895.8	6466.2	6416.4
20°	4794.0	6574.2	8334.6	7381.2	7413.0	7318.2	6994.2	6342.0	6100.8	6096.0
21°	4770.0	6547.2	8436.6	6999.0	7515.6	6883.2	6558.0	6124.2	6086.4	6097.2
22°	4730.4	6514.2	8418.6	6936.6	7209.0	6826.2	6246.0	6071.4	6044.4	6049.2
23°	4684.8	6472.8	8016.6	7201.8	6604.2	6657.6	6106.8	6014.4	6079.2	6053.4
24°	4665.0	6462.6	7454.4	7163.4	6283.8	6387.0	6032.4	6033.0	6036.6	6035.4
25°	4639.8	6459.6	7101.6	7039.8	6472.2	6167.4	6020.4	5979.6	5863.2	5844.6
26°	4618.8	6457.8	6787.2	6770.4	6627.0	6045.0	5981.4	5810.4	5721.0	5707.8
27°	4588.8	6472.2	6427.8	6315.6	6510.6	5929.8	5829.6	5657.4	5572.8	5568.0
28°	4558.8	6484.8	6121.2	5987.4	6304.2	5847.6	5659.8	5584.2	5675.4	5698.2
29°	4515.0	6494.4	6037.2	5991.0	6128.4	5727.0	5611.8	5768.4	6057.0	6094.2
30°	4460.4	6562.2	6130.8	6148.8	6039.0	5625.6	5678.4	6083.4	6240.6	6271.2
32.5°	4229.4	6569.4	6248.4	6061.2	5467.2	5502.0	6135.0	6211.8	6209.4	6217.8
35°	3941.4	6187.8	5352.0	5605.8	5239.2	5835.0	6046.8	5884.8	5467.2	5395.8
37.5°	3611.4	5790.0	4960.2	5436.6	5239.2	5749.8	5328.6	4188.6	4144.2	4169.4
40°	3302.4	5017.8	4591.8	4995.0	5228.4	5179.8	4217.4	4647.0	4568.4	4590.0
42.5°	3031.8	4216.2	4345.8	4645.8	4998.0	4005.0	4457.4	4456.8	4159.2	3895.2
45°	2730.0	3341.4	4070.4	4363.8	3915.6	3725.4	4350.6	3003.0	3051.0	3077.4
47.5°	2433.0	2895.6	3740.4	4078.2	2458.2	3640.2	3016.2	3240.6	2902.8	2868.0
50°	2091.6	2836.8	3389.4	3541.8	2448.6	3012.0	2972.4	2698.2	2689.2	2737.8
52.5°	1827.0	2892.0	3207.6	2093.4	2566.2	2976.6	2556.0	2626.8	1700.4	1530.6
55°	1669.2	2787.0	3099.0	1547.4	2636.4	2428.2	1591.2	619.2	517.2	509.4
57.5°	1515.0	2518.2	2685.0	1306.2	1998.0	1840.2	515.4	456.6	427.8	435.6
60°	1320.6	2143.2	1708.2	1251.6	1247.4	1297.2	465.0	592.2	501.6	493.2
62.5°	1192.8	1679.4	1015.8	1254.6	1109.4	339.0	549.0	495.0	273.6	263.4
65°	990.0	1295.4	974.4	1051.2	696.6	343.2	409.2	316.8	231.6	231.6
67.5°	919.2	1040.4	1089.6	909.0	247.8	388.8	307.8	222.0	214.8	215.4
70°	878.4	824.4	981.6	421.2	262.8	205.2	196.8	205.8	268.2	272.4
72.5°	745.2	706.2	714.0	157.2	118.8	150.0	229.8	463.8	615.0	631.8
75°	432.6	395.4	231.6	171.6	119.4	151.8	268.8	66.0	50.4	51.0
77.5°	294.0	268.8	307.8	99.0	111.6	111.0	84.0	35.4	36.0	34.2
80°	219.6	133.8	229.2	26.4	100.8	38.4	21.6	31.2	37.2	27.6



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CANDELA DISTRIBUTION (continued):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
82.5°	81.0	48.0	75.0	30.6	12.0	12.0	16.2	17.4	18.6	18.0
85°	63.6	22.8	26.4	16.2	4.8	6.0	9.6	7.8	12.0	12.6
87.5°	3.6	6.0	19.8	1.2	0.0	0.0	0.0	0.0	0.0	0.0
90°	1.8	1.8	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
92.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
95°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8	0.0	0.0
97.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
102.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
105°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
107.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
112.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
115°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
117.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
120°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
122.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
125°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
127.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
130°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
132.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
135°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
137.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
140°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
142.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
145°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
147.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
150°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
152.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
155°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
157.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
160°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
162.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)