

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: P12437-250

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

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P12437-250
Test Lab: COOPER LIGHTING INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: HPWP-GL-250-XX
Description: LUMARK WAL-PAK HID WALL FIXTURE WITH BOROSILICATE PRISMATIC 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: 16598.3 lumens
Efficiency: 55.3%
Efficacy: 66.4 lumens/watt
Luminous Opening: Rectangular w/ Sides (W: 0.48' x L: 1.08' x H: 0.42')
IES Classification: Type IV - Short - Non-Cutoff
BUG Rating: B2 - U5 - G5

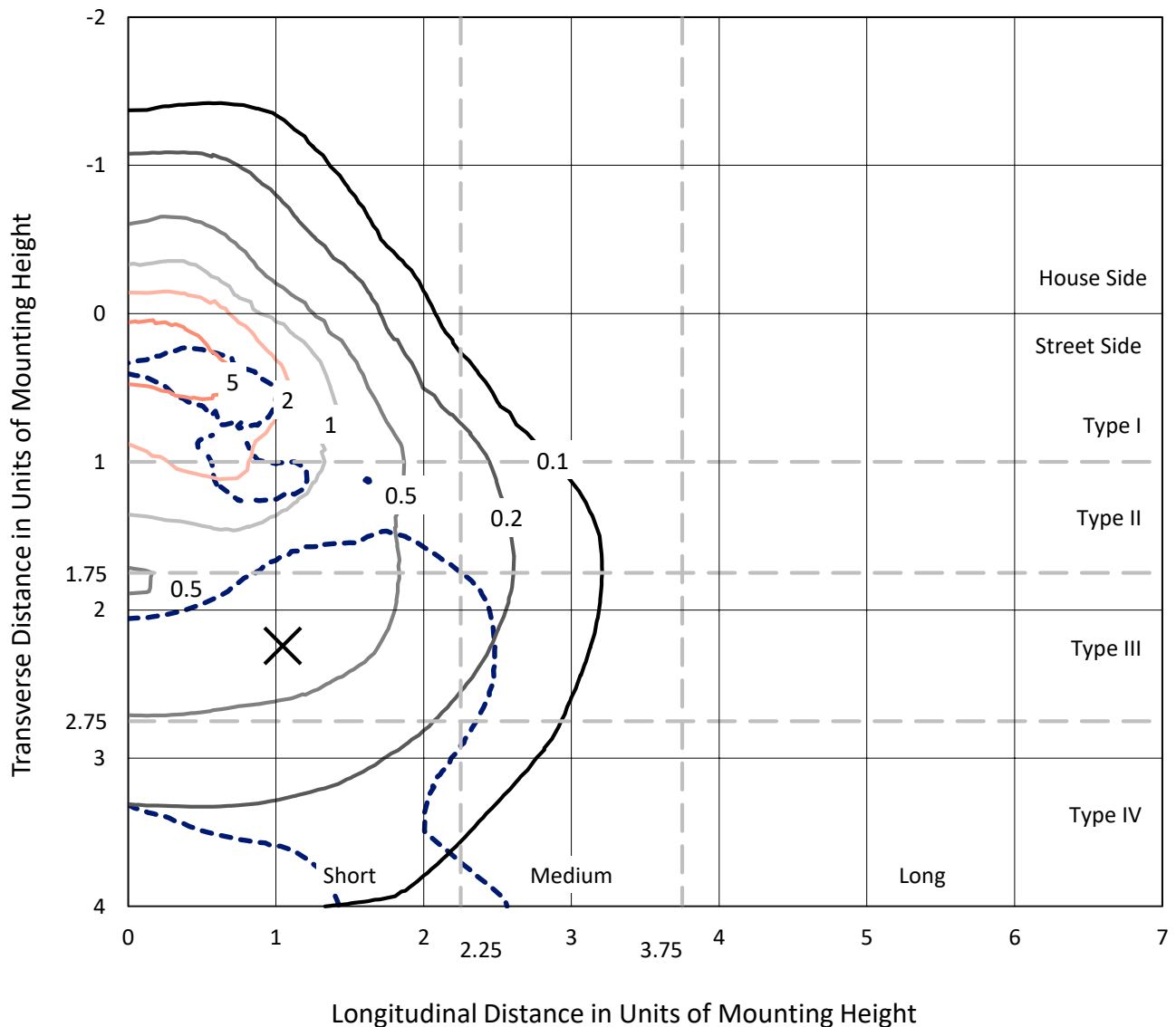
Input Watts (W): 250
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

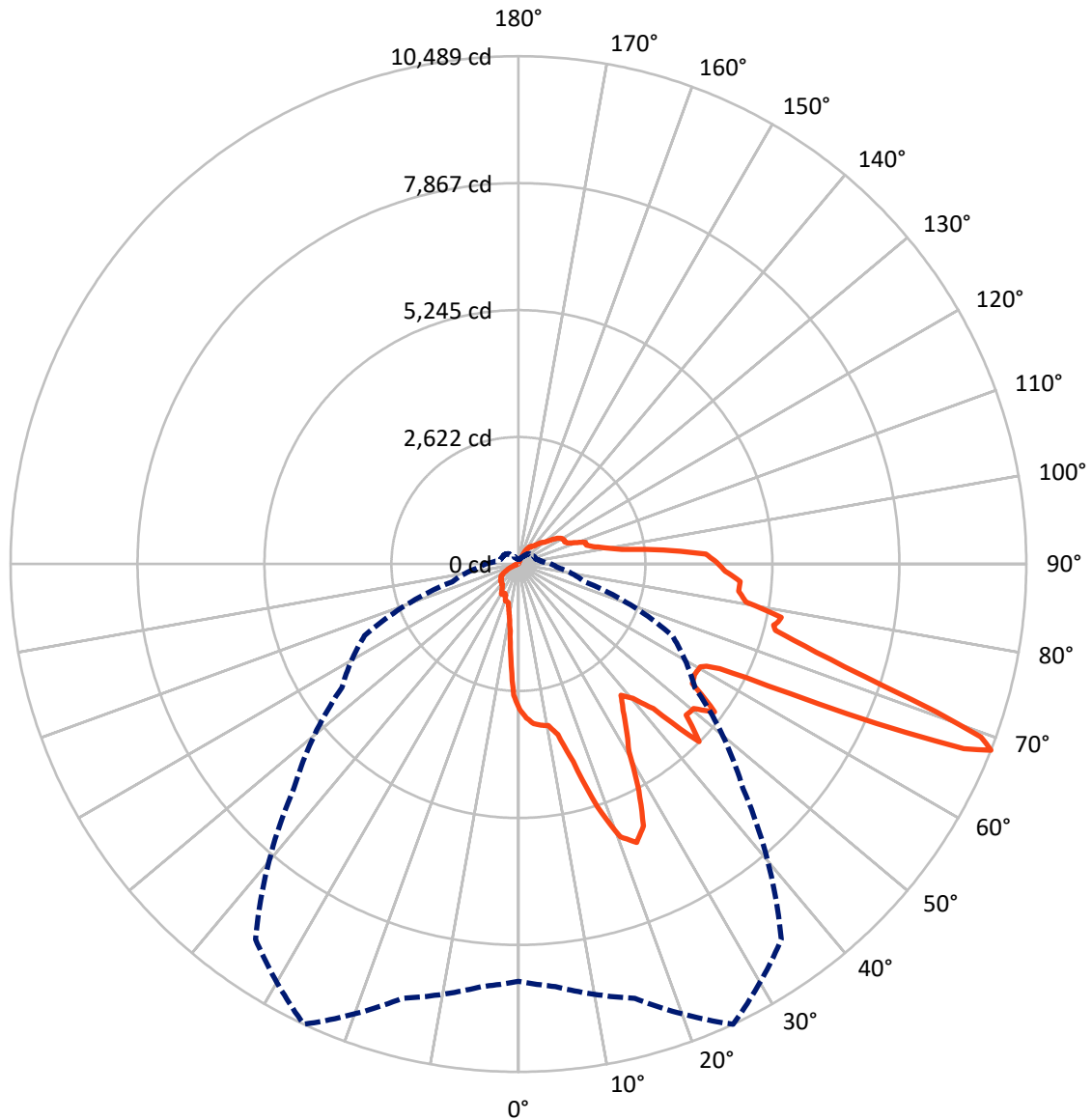
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 9 fc
 Type IV - Short - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 25-Deg Lateral - - - Horizontal Cone Through 68-Deg Vertical

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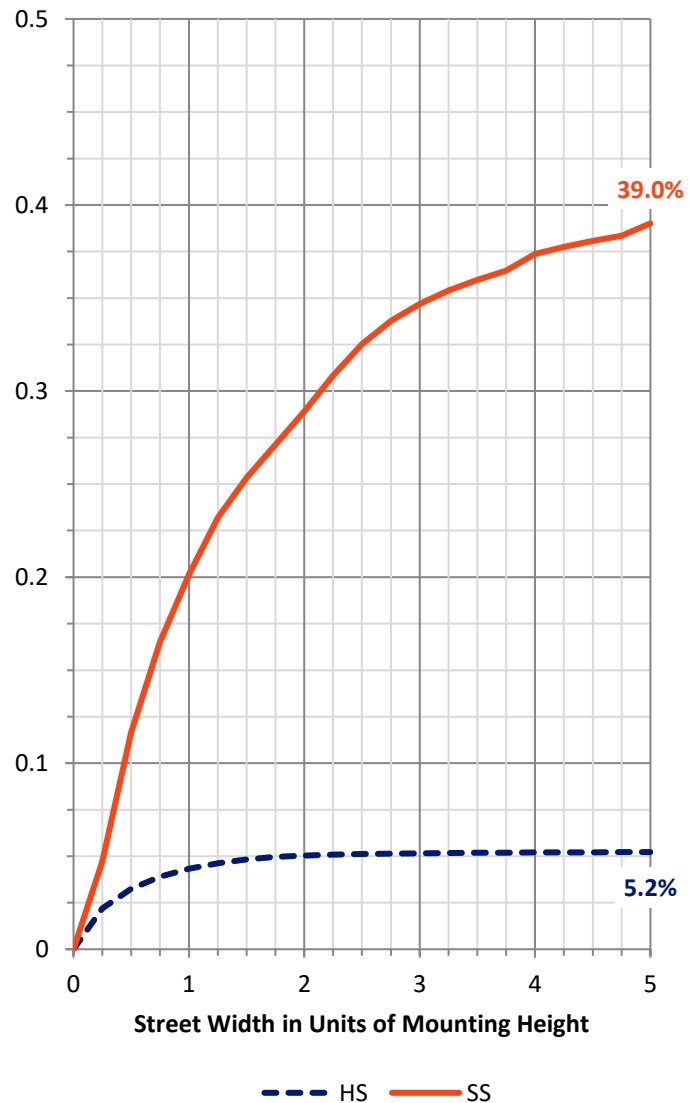
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1582.2	40.7	1622.9
	% Lamp	5.3	0.1	5.4
Street Side	Lumens	12689.8	2285.6	14975.4
	% Lamp	42.3	7.6	49.9
Total	Lumens	14272.0	2326.3	16598.3
	% Lamp	47.6	7.8	55.3

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture	% Lamp
0°-10°	258.0	1.6	0.9
10°-20°	781.8	4.7	2.6
20°-30°	1455.4	8.8	4.9
30°-40°	1736.5	10.5	5.8
40°-50°	1905.1	11.5	6.4
50°-60°	1944.0	11.7	6.5
60°-70°	2536.2	15.3	8.5
70°-80°	2205.4	13.3	7.4
80°-90°	1449.7	8.7	4.8
90°-100°	919.2	5.5	3.1
100°-110°	518.8	3.1	1.7
110°-120°	357.9	2.2	1.2
120°-130°	254.5	1.5	0.8
130°-140°	161.6	1.0	0.5
140°-150°	87.4	0.5	0.3
150°-160°	25.0	0.2	0.1
160°-170°	2.0	0.0	0.0
170°-180°	0.0	0.0	0.0
0°-90°	14272.0	86.0	47.6
0°-180°	16598.3	100.0	55.3

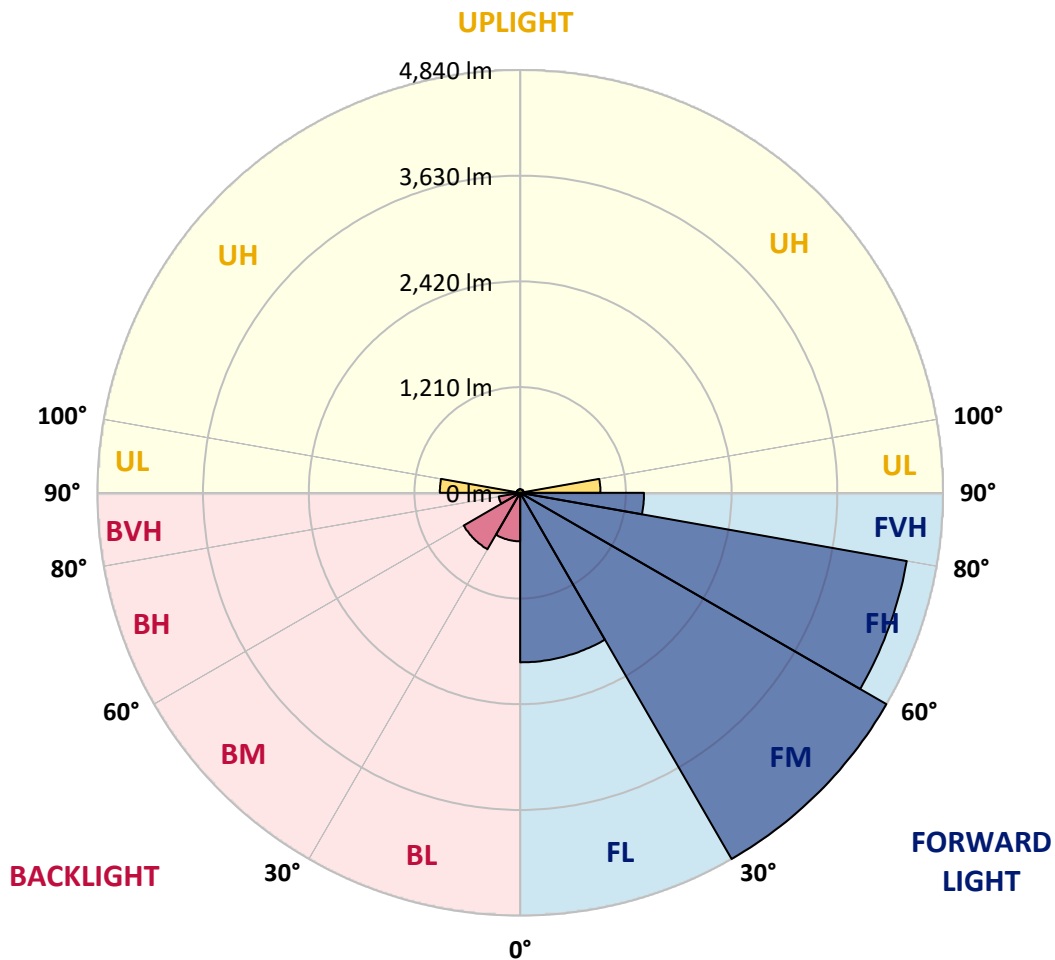


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Lamp	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1940.7	6.5			
FM	(30°-60°)	4839.5	16.1			
FH	(60°-80°)	4492.8	15.0			G2/5000
FVH	(80°-90°)	1416.8	4.7			G5
BL	(0°-30°)	554.5	1.8	B2/1000		
BM	(30°-60°)	746.0	2.5	B1/1000		
BH	(60°-80°)	248.8	0.8	B1/500		G1/500
BVH	(80°-90°)	32.9	0.1			G1/100
UL	(90°-100°)	919.2	3.1		U4/1000	
UH	(100°-180°)	40.7	0.1		U2/50	
Trapped Light		13401.7	44.7			

BUG Rating: B2-U5-G5
 Type IV Short





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 CATALOG NUMBER: HPWP-GL-250-XX

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	3000.6	3000.6	3000.6	3000.6	3000.6	3000.6	3000.6	3000.6	3000.6	3000.6	3000.6
2.5°	3200.4	3202.2	3195.0	3184.2	3175.8	3161.4	3139.8	3114.0	3077.4	3039.6	3019.2
5°	3320.4	3319.8	3321.6	3315.0	3309.6	3302.4	3286.2	3250.8	3190.8	3100.8	3010.2
7.5°	3343.2	3340.2	3352.8	3363.6	3378.6	3393.0	3394.2	3370.8	3313.2	3178.8	3083.4
10°	3384.0	3377.4	3384.6	3392.4	3423.0	3459.6	3493.2	3495.6	3430.2	3267.6	3133.2
12.5°	3734.4	3728.4	3683.4	3612.6	3562.2	3556.8	3592.8	3606.6	3533.4	3337.2	3174.0
15°	4597.8	4590.6	4474.8	4235.4	3957.0	3784.8	3718.8	3718.2	3652.8	3445.8	3233.4
17.5°	5477.4	5474.4	5412.6	5274.6	4811.4	4219.8	3913.2	3840.6	3793.2	3552.6	3281.4
20°	5720.4	5714.4	5922.0	6010.8	5771.4	5025.6	4243.8	4003.8	3946.2	3652.8	3317.4
22.5°	5137.8	5209.8	5668.2	6247.8	6482.4	6016.8	4819.8	4216.8	4075.8	3707.4	3288.6
25°	4325.4	4394.4	4884.0	5995.2	6979.2	7147.8	5778.0	4444.8	4135.8	3676.8	3181.2
27.5°	3615.0	3679.2	4223.4	5293.8	6937.2	8068.2	6837.0	4730.4	4163.4	3581.4	2988.6
30°	3384.0	3411.0	3684.6	4494.0	6445.8	8584.2	7537.2	4910.4	4117.2	3409.2	2715.6
32.5°	3291.0	3331.8	3582.0	4096.8	5722.2	8548.2	7920.6	5052.6	3983.4	3179.4	2394.0
35°	2853.0	2913.6	3201.0	3724.2	5134.2	7893.6	8182.8	5023.2	3766.2	2904.6	2056.2
37.5°	2776.8	2814.0	3056.4	3438.6	4512.0	6955.2	8294.4	4927.2	3584.4	2658.0	1774.2
40°	3003.6	3045.6	3229.8	3645.6	4234.2	5880.0	7947.0	4907.4	3432.6	2421.6	1570.2
42.5°	2885.4	2977.8	3573.6	4084.8	4441.2	5162.4	7107.0	5085.6	3353.4	2187.6	1437.6
45°	3094.8	3204.0	3651.6	5232.0	5632.2	4983.0	6121.2	5278.8	3361.2	1986.0	1386.0
47.5°	3430.2	3480.0	3673.8	4664.4	5870.4	5155.8	5544.0	5188.8	3370.2	1846.2	1367.4
50°	3282.0	3429.0	3939.6	4690.2	5769.6	5005.2	5143.2	4975.8	3292.2	1695.0	1324.2
52.5°	2928.0	3025.8	3567.6	5076.0	5889.0	4627.8	4612.2	4683.6	3109.2	1562.4	1264.2
55°	2972.4	3063.6	3463.8	4358.4	6081.6	5158.2	4180.2	4302.6	2751.0	1387.8	1164.6
57.5°	2420.4	2521.8	3192.6	4294.8	4840.8	6155.4	3956.4	3949.2	2358.6	1230.0	1058.4
60°	2415.6	2501.4	3045.6	4314.0	4612.2	4522.2	4533.6	3634.8	1976.4	1098.0	937.2
61°	2527.8	2621.4	3178.2	4419.6	4606.2	4078.2	4995.6	3537.6	1838.4	1052.4	889.2
62°	2928.6	3010.8	3573.0	4686.0	4732.8	3964.2	5255.4	3487.8	1723.2	999.0	842.4
63°	3751.8	3799.2	4337.4	5263.8	5134.2	4052.4	5273.4	3519.0	1622.4	949.8	805.2
64°	5056.8	5088.6	5479.2	6224.4	5959.2	4351.2	5069.4	3595.2	1552.2	915.0	771.6
65°	6370.8	6473.4	6884.4	7462.2	7094.4	4863.0	4772.4	3643.2	1494.6	878.4	736.8
66°	7494.0	7636.2	8216.4	8718.0	8256.6	5509.2	4554.0	3639.0	1456.8	847.2	716.4
67°	8269.8	8438.4	9025.2	9961.8	9061.2	6147.0	4473.0	3583.2	1436.4	830.4	697.8
68°	8619.6	8760.6	9286.8	10489.2	9466.2	6558.6	4448.4	3506.4	1417.2	812.4	675.0
69°	8239.2	8367.0	8781.6	10200.6	9518.4	6661.8	4480.2	3381.6	1402.2	809.4	653.4
70°	7230.6	7410.6	7758.0	9157.2	9136.8	6567.0	4591.8	3196.2	1362.0	806.4	621.6
71°	6150.0	6361.2	6756.0	7990.8	8190.6	6369.6	4702.8	3118.2	1346.4	813.6	599.4
72°	5466.6	5653.2	6132.6	7067.4	7204.2	6035.4	4719.6	3129.0	1339.8	817.2	565.8
73°	5190.0	5333.4	5864.4	6417.0	6389.4	5589.6	4525.2	3130.2	1382.4	813.0	534.0
74°	5005.8	5079.6	5553.6	5899.2	5705.4	5164.8	4313.4	3070.2	1447.8	796.2	500.4
75°	4591.2	4664.4	5108.4	5482.2	5137.2	4830.0	4018.8	2941.8	1504.2	777.6	466.8
76°	4378.8	4452.6	4944.6	5419.2	4866.0	4586.4	3723.0	2762.4	1509.0	751.2	423.0
77°	4273.2	4355.4	4852.2	5499.0	4954.8	4421.4	3470.4	2533.2	1438.2	713.4	386.4
78°	4111.2	4201.8	4690.8	5541.6	5056.2	4342.8	3264.6	2271.0	1328.4	657.6	346.8
79°	3754.2	3844.2	4228.8	5161.8	5007.0	4234.2	3070.8	2040.0	1203.6	590.4	310.8
80°	3647.4	3756.6	4073.4	4762.8	4639.2	4060.2	2856.6	1863.0	1101.6	528.6	279.6



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CATALOG NUMBER: HPWP-GL-250-XX

CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
82.5°	3623.4	3718.2	4133.4	4585.2	4133.4	3538.2	2368.2	1669.8	983.4	385.8	211.2
85°	3469.8	3570.6	4009.2	4596.0	4121.4	2945.4	1906.2	1507.2	834.0	274.2	150.6
87.5°	3169.8	3246.0	3576.6	4276.2	4015.8	2245.8	1584.0	1305.0	676.8	196.2	110.4
90°	3006.0	3078.0	3328.8	4094.4	3585.0	1765.8	1359.6	1178.4	540.0	141.0	90.6
92.5°	3179.4	3196.8	3351.0	3876.0	2704.8	1516.8	1251.0	1110.6	426.0	118.2	79.2
95°	2887.2	2947.2	3150.6	3013.2	2068.8	1378.8	1194.6	1031.4	361.2	117.0	80.4
97.5°	2033.4	2086.2	2249.4	2157.6	1758.0	1295.4	1150.2	941.4	322.2	109.2	75.6
100°	1582.2	1618.2	1750.2	1821.0	1569.0	1222.8	1194.6	818.4	307.8	112.8	80.4
102.5°	1384.2	1407.0	1508.4	1587.0	1390.8	1120.8	1131.0	669.0	289.8	109.2	76.8
105°	1282.2	1300.8	1396.2	1455.6	1250.4	1050.0	1006.8	599.4	285.0	114.0	76.8
107.5°	1156.8	1189.2	1360.2	1456.8	1273.2	966.6	867.6	552.0	274.8	111.0	75.6
110°	1021.8	1053.0	1229.4	1254.0	1149.6	921.0	753.6	511.8	258.0	106.2	74.4
112.5°	897.0	915.0	1035.6	1107.0	1125.0	888.6	700.8	468.6	248.4	103.8	74.4
115°	810.6	827.4	938.4	1062.0	1095.0	872.4	678.0	424.2	233.4	93.0	65.4
117.5°	809.4	800.4	924.6	1067.4	1085.4	861.0	618.6	405.0	228.6	93.6	66.6
120°	758.4	787.8	885.6	1038.0	1067.4	780.6	577.8	391.2	210.0	84.6	60.6
122.5°	705.0	736.2	874.8	977.4	960.6	710.4	535.8	381.0	202.2	79.2	55.2
125°	645.6	663.6	768.0	882.0	855.0	683.4	523.2	351.6	183.6	69.6	48.0
127.5°	598.2	603.6	666.0	760.8	799.8	675.0	529.8	324.0	166.2	64.2	46.8
130°	547.8	553.8	593.4	687.0	770.4	672.0	513.6	307.8	143.4	55.2	38.4
132.5°	492.6	503.4	556.2	651.0	721.8	660.6	487.2	285.0	114.6	45.6	30.6
135°	463.2	471.6	517.2	588.6	657.0	641.4	475.8	255.6	88.8	39.6	29.4
137.5°	425.4	430.8	457.8	513.0	607.2	611.4	454.8	207.6	63.6	25.8	15.6
140°	400.8	405.6	434.4	484.8	573.6	588.6	423.6	151.2	51.6	23.4	19.8
142.5°	374.4	377.4	411.0	453.0	535.8	531.6	342.0	121.2	34.8	18.0	13.2
145°	339.6	345.6	380.4	433.8	495.0	466.2	267.6	90.6	21.0	13.8	8.4
147.5°	315.0	322.2	346.8	397.8	430.8	372.0	162.6	56.4	12.6	7.2	6.6
150°	307.8	307.8	324.0	346.8	348.6	246.0	108.6	27.6	6.0	4.2	3.0
152.5°	271.2	274.2	278.4	280.8	232.2	138.0	67.8	12.6	4.2	3.0	1.8
155°	206.4	206.4	198.6	182.4	138.0	88.8	34.8	2.4	1.2	0.6	0.0
157.5°	145.2	143.4	135.0	120.0	87.6	51.6	8.4	0.0	0.0	1.2	0.0
160°	101.4	99.6	91.8	76.8	51.6	18.6	0.0	0.0	0.0	0.0	0.0
162.5°	69.0	69.6	61.8	45.0	22.8	2.4	0.0	0.0	0.0	1.2	0.0
165°	28.8	28.2	24.6	8.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
167.5°	0.0	1.2	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	0.6	0.0	0.0	0.0	0.6	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°	3000.6	3000.6	3000.6	3000.6	3000.6	3000.6	3000.6	3000.6	3000.6	3000.6
2.5°	2992.2	2946.0	2889.0	2839.2	2785.2	2737.8	2711.4	2674.8	2659.8	2669.4
5°	2970.0	2811.6	2627.4	2424.6	2236.2	2079.0	1962.6	1868.4	1827.0	1834.2
7.5°	2969.4	2674.2	2322.6	1984.2	1720.2	1521.6	1390.8	1318.8	1286.4	1274.4
10°	2958.6	2516.4	2035.2	1640.4	1378.8	1213.2	1113.6	1038.6	1011.0	1006.8
12.5°	2941.8	2352.6	1776.0	1402.8	1189.2	1045.2	950.4	884.4	848.4	844.8
15°	2934.0	2199.6	1600.8	1279.8	1083.6	934.8	829.8	781.2	758.4	755.4
17.5°	2906.4	2036.4	1477.2	1192.8	975.0	851.4	808.2	778.8	763.8	760.8
20°	2835.6	1863.6	1375.8	1095.0	913.2	867.0	808.2	741.6	711.6	709.8
22.5°	2697.6	1710.0	1289.4	1005.6	948.6	852.0	709.8	645.0	652.2	651.6
25°	2478.6	1551.0	1167.0	999.6	947.4	777.0	666.0	662.4	614.4	607.2
27.5°	2205.6	1414.8	1071.6	1022.4	877.8	723.6	708.6	655.2	563.4	555.0
30°	1926.0	1281.6	1021.8	959.4	804.0	726.0	711.0	601.2	510.6	493.8
32.5°	1641.0	1147.8	990.0	896.4	763.8	726.6	646.8	546.6	477.0	469.8
35°	1401.0	1026.0	919.2	816.6	732.6	667.8	585.6	493.2	459.6	459.0
37.5°	1251.0	947.4	853.2	781.2	702.0	633.6	548.4	502.2	481.8	480.6
40°	1159.2	891.6	811.2	715.8	649.8	592.2	535.8	488.4	475.2	474.6
42.5°	1110.6	851.4	751.8	663.6	602.4	574.2	517.2	487.2	454.2	449.4
45°	1095.6	816.6	673.2	605.4	567.0	551.4	502.8	460.8	412.8	412.8
47.5°	1097.4	784.8	630.0	583.8	550.2	534.0	502.8	424.8	399.0	393.6
50°	1081.8	738.6	592.2	562.8	527.4	519.0	454.8	408.0	370.8	363.0
52.5°	1051.8	712.8	572.4	541.2	510.6	498.6	451.8	396.6	337.8	328.8
55°	987.6	676.2	551.4	511.8	498.6	483.0	435.6	354.0	289.2	285.0
57.5°	914.4	619.2	535.8	504.0	486.6	480.0	401.4	301.8	261.0	254.4
60°	829.2	554.4	499.2	464.4	458.4	445.8	332.4	257.4	215.4	210.0
61°	795.0	528.6	484.8	452.4	453.0	424.2	307.8	232.2	200.4	193.2
62°	754.8	505.8	464.4	444.0	442.8	390.0	279.0	212.4	177.0	174.0
63°	711.6	478.2	438.0	424.2	429.0	351.6	252.0	191.4	156.6	159.0
64°	674.4	463.2	421.2	415.2	414.0	325.2	230.4	174.0	150.6	145.2
65°	630.0	443.4	408.0	398.4	390.0	296.4	205.8	153.6	132.0	131.4
66°	591.0	420.0	390.6	382.8	361.8	264.0	186.0	136.2	120.6	119.4
67°	546.6	400.8	376.8	360.6	329.4	232.2	163.2	119.4	112.8	107.4
68°	502.2	378.0	358.2	343.8	298.8	204.0	141.0	110.4	96.6	97.8
69°	469.8	360.6	339.0	327.0	264.6	179.4	121.2	100.8	87.6	84.0
70°	430.8	337.2	307.2	289.8	231.6	150.6	104.4	76.8	70.8	66.0
71°	406.2	324.6	295.2	274.2	204.6	136.2	96.6	76.8	67.2	70.2
72°	377.4	303.6	276.6	247.2	182.4	112.2	87.0	65.4	54.0	52.2
73°	351.0	289.2	261.0	223.8	160.2	99.0	76.2	55.8	46.2	46.2
74°	330.0	274.2	243.6	196.8	138.0	82.8	61.8	46.2	31.8	35.4
75°	307.2	261.6	232.2	177.6	126.0	71.4	51.6	34.2	23.4	23.4
76°	282.0	240.6	215.4	160.2	106.2	58.8	37.8	13.8	9.6	9.0
77°	266.4	230.4	209.4	151.8	101.4	51.0	30.6	9.6	4.8	4.2
78°	246.6	218.4	202.2	138.6	87.6	43.2	13.2	0.0	0.0	0.0
79°	228.0	207.0	195.6	126.0	73.2	32.4	0.0	0.0	0.0	0.0
80°	207.0	193.2	182.4	118.2	60.0	18.0	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°
82.5°	162.0	168.0	154.8	93.0	39.6	12.0	0.0	0.0	0.0	0.0
85°	130.2	135.6	130.8	85.2	37.2	7.8	0.0	0.0	0.0	0.0
87.5°	100.2	109.8	109.2	70.8	28.8	4.2	0.0	0.0	0.0	0.0
90°	88.8	89.4	87.6	57.6	27.6	2.4	0.0	0.0	0.0	0.0
92.5°	76.8	73.2	73.8	39.0	17.4	1.8	0.0	0.0	0.0	0.0
95°	79.2	74.4	70.2	36.6	21.0	1.2	0.0	0.0	0.0	0.0
97.5°	72.0	61.2	48.6	22.2	8.4	0.0	0.0	0.0	0.0	0.0
100°	70.8	62.4	46.8	27.0	11.4	0.6	0.0	0.0	0.0	0.0
102.5°	64.2	58.2	41.4	24.6	5.4	0.0	0.0	0.6	0.0	0.0
105°	68.4	59.4	43.2	22.8	6.6	1.2	0.0	0.0	0.0	0.0
107.5°	67.8	53.4	38.4	18.0	5.4	0.0	0.0	0.0	0.0	0.0
110°	62.4	49.2	32.4	14.4	1.8	0.0	0.0	0.0	0.0	0.0
112.5°	61.2	46.8	31.2	13.2	0.0	0.0	0.0	0.0	0.0	0.0
115°	54.0	39.0	20.4	6.0	0.0	0.0	0.0	0.0	0.0	0.0
117.5°	52.8	36.6	24.6	9.6	0.0	0.0	0.0	0.0	0.0	0.0
120°	46.2	31.2	15.6	3.0	0.0	0.0	0.0	0.0	0.0	0.0
122.5°	45.0	29.4	16.8	3.6	0.0	0.0	0.0	0.0	0.0	0.0
125°	36.6	23.4	9.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
127.5°	32.4	23.4	10.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
130°	28.8	16.2	4.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
132.5°	23.4	12.6	1.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
135°	19.2	8.4	1.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
137.5°	12.6	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
140°	12.6	4.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
142.5°	9.6	2.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
145°	6.0	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
147.5°	3.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
150°	1.2	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)