

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: P30165

Luminaire Tested: **LDWP-GL-4A-ED-EM-LED**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P30165
Test Lab: COOPER LIGHTING INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: LDWP-GL-4A-ED-EM-LED
Description: LUMARK WAL-PAK WITH BOROSILICATE GLASS LENS AND EM-LED INTEGRAL EMERGENCY BATTERY OPTION
Light Source: (4) CHIP LED (5000K, 67 CRI)
4-CHIP LED
Ballast/Driver: CLASS 2 PWR SUPPLY

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1714.1 lumens
Efficiency: N/A
Efficacy: 489.8 lumens/watt
Luminous Opening: Rectangular w/ Sides (W: 1.12' x L: 0.67' x H: 0.1')
IES Classification: Type IV - Short - Non-Cutoff
BUG Rating: B0 - U3 - G2

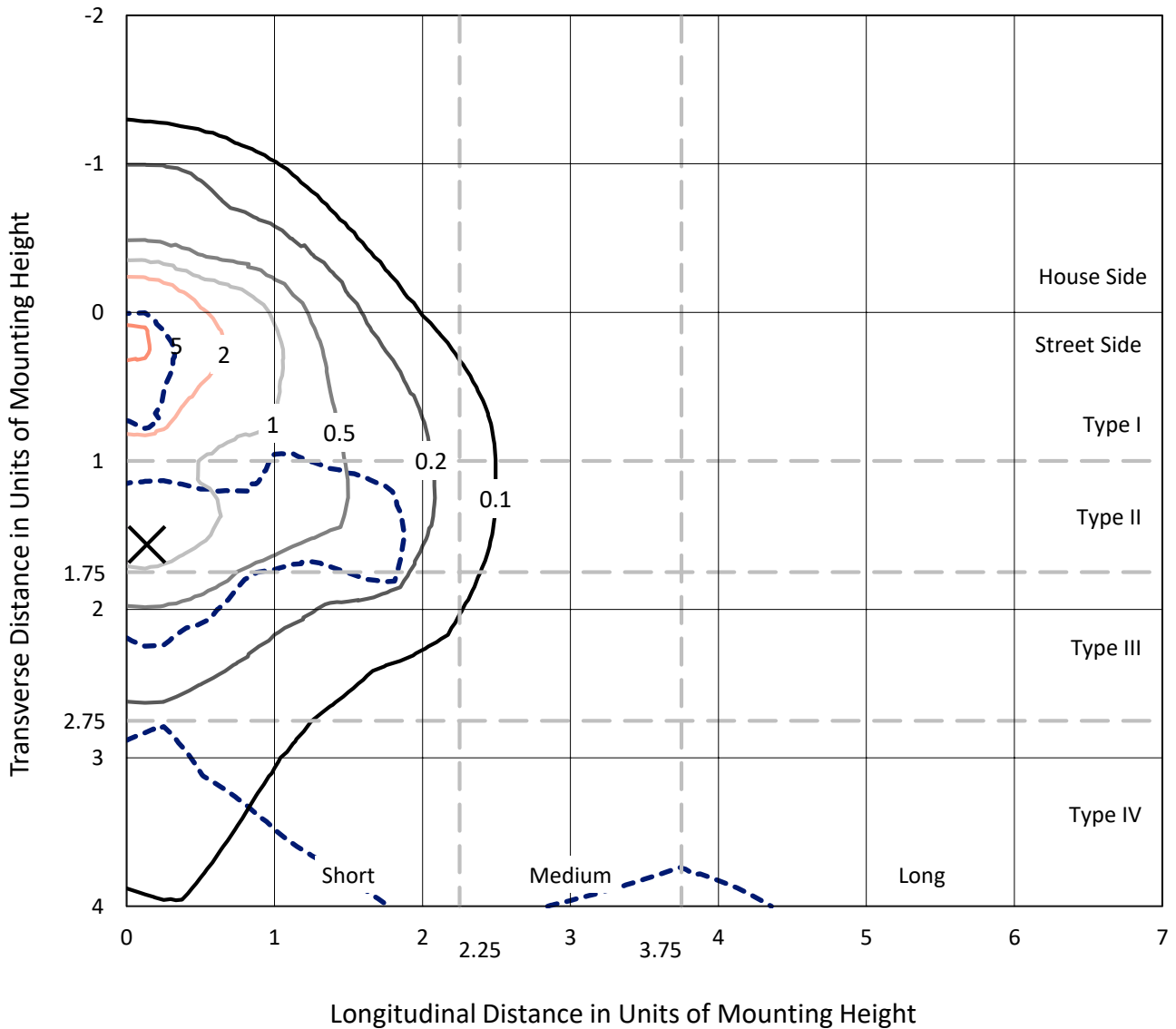
Input Watts (W): 3.5
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

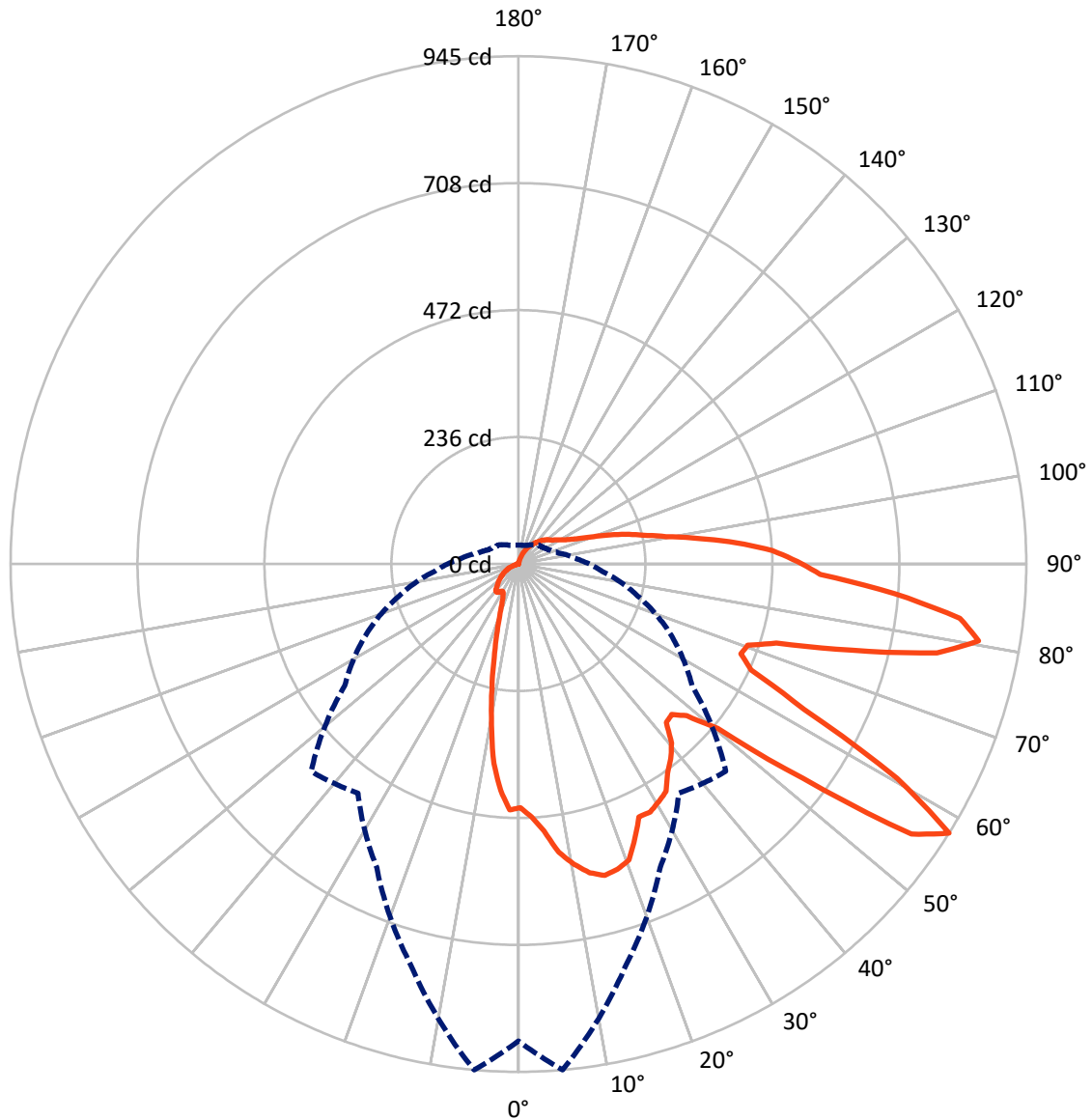
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 5.4 fc
 Type IV - Short - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 5-Deg Lateral - - - Horizontal Cone Through 57.5-Deg Vertical

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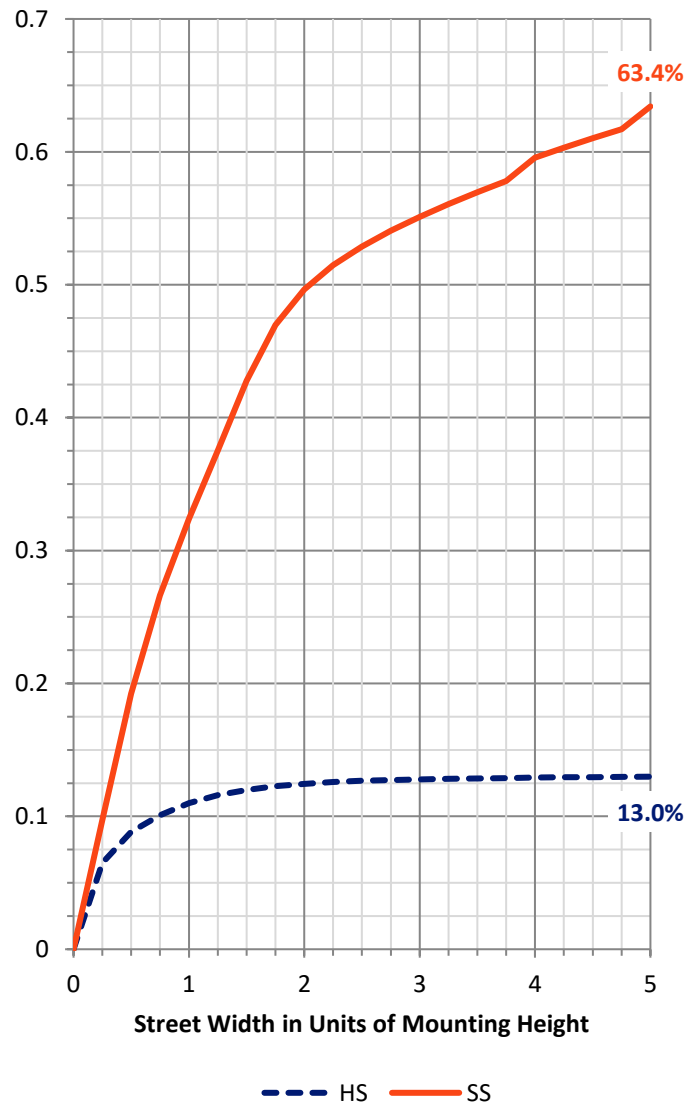
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	226.0	11.9	237.9
	% Fixture	13.2	0.7	13.9
Street Side	Lumens	1230.5	245.8	1476.3
	% Fixture	71.8	14.3	86.1
Total	Lumens	1456.4	257.7	1714.1
	% Fixture	85.0	15.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	44.0	2.6
10°-20°	110.4	6.4
20°-30°	137.8	8.0
30°-40°	156.6	9.1
40°-50°	172.5	10.1
50°-60°	229.2	13.4
60°-70°	211.7	12.4
70°-80°	189.9	11.1
80°-90°	204.4	11.9
90°-100°	104.7	6.1
100°-110°	59.9	3.5
110°-120°	37.8	2.2
120°-130°	26.1	1.5
130°-140°	16.8	1.0
140°-150°	8.7	0.5
150°-160°	3.1	0.2
160°-170°	0.4	0.0
170°-180°	0.0	0.0
0°-90°	1456.4	85.0
0°-180°	1714.1	100.0



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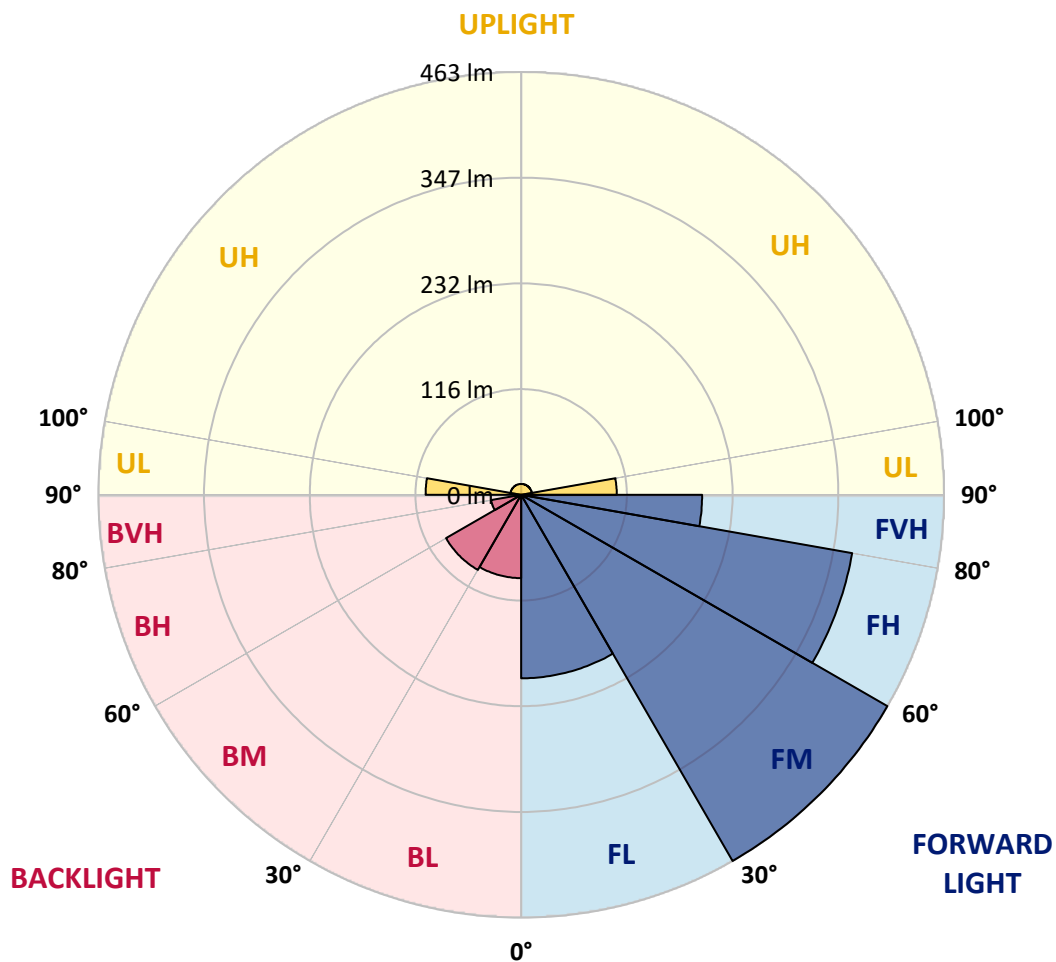
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	201.0	11.7			
FM	(30°-60°)	463.1	27.0			
FH	(60°-80°)	368.2	21.5			G0/660
FVH	(80°-90°)	198.2	11.6			G2/225
BL	(0°-30°)	91.2	5.3	B0/110		
BM	(30°-60°)	95.0	5.5	B0/220		
BH	(60°-80°)	33.4	2.0	B0/110		G0/110
BVH	(80°-90°)	6.3	0.4			G0/10
UL	(90°-100°)	104.7	6.1		U3/500	
UH	(100°-180°)	11.9	0.7		U2/50	

BUG Rating: B0-U3-G2

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	453.1	453.1	453.1	453.1	453.1	453.1	453.1	453.1	453.1	453.1	453.1
2.5°	470.4	471.0	472.3	471.7	470.4	469.1	466.6	462.7	459.5	457.6	457.6
5°	497.9	498.6	498.6	495.4	489.6	484.5	483.2	480.0	471.7	462.7	462.1
7.5°	540.8	541.4	540.2	534.4	524.2	513.3	495.4	477.4	470.4	456.3	455.7
10°	567.0	567.7	573.4	575.4	569.6	536.3	504.3	472.3	452.5	436.5	434.6
12.5°	588.8	589.4	590.7	585.0	571.5	549.1	505.6	464.0	430.1	411.5	407.0
15°	598.4	601.0	601.6	595.8	570.2	533.1	498.6	453.1	415.4	394.9	384.6
17.5°	592.0	597.1	605.4	598.4	556.2	513.3	485.1	451.8	407.7	378.9	365.4
20°	581.1	587.5	601.6	587.5	536.3	489.6	473.0	447.4	397.4	362.9	346.9
22.5°	546.6	554.2	574.1	560.6	509.4	473.0	453.1	433.9	385.9	343.0	325.1
25°	513.9	521.0	548.5	515.2	477.4	453.8	430.7	416.6	372.5	323.8	306.6
27.5°	516.5	522.2	536.3	480.6	443.5	427.5	412.2	396.8	361.0	310.4	293.8
30°	507.5	513.3	524.8	463.4	417.3	401.9	394.2	382.1	357.8	303.4	286.7
32.5°	497.3	504.3	516.5	433.3	395.5	378.9	378.2	373.8	357.8	305.9	287.4
35°	466.6	477.4	499.8	412.8	377.6	361.6	359.7	369.9	367.4	317.4	295.7
37.5°	444.2	460.2	478.7	398.1	357.8	342.4	344.3	378.9	377.6	325.1	302.1
40°	423.0	438.4	457.0	378.9	351.4	329.0	340.5	392.3	380.2	320.6	295.0
42.5°	395.5	403.2	414.7	357.8	339.2	323.8	347.5	397.4	373.1	305.9	277.8
45°	399.4	399.4	389.8	339.2	335.4	326.4	361.6	387.2	354.6	287.4	256.0
47.5°	414.1	421.1	412.2	327.7	324.5	340.5	377.6	364.2	329.6	263.7	229.8
50°	463.4	480.6	469.1	345.0	324.5	364.2	404.5	335.4	301.4	233.0	202.9
52.5°	633.0	661.8	581.1	425.6	354.6	409.0	419.8	313.0	272.6	204.2	174.1
55°	838.4	887.0	726.4	542.7	432.6	487.0	401.9	307.8	246.4	178.6	150.4
57.5°	887.0	944.6	772.5	623.4	520.3	545.3	394.2	313.6	229.8	156.2	131.8
60°	753.3	809.6	692.5	581.1	565.1	576.6	422.4	332.2	221.4	142.1	119.0
62.5°	563.2	596.5	558.1	465.9	526.1	595.8	458.2	340.5	216.3	135.7	110.7
65°	458.9	475.5	451.8	378.2	410.2	578.6	483.2	316.8	207.4	134.4	105.6
67.5°	438.4	446.1	396.8	340.5	330.9	514.6	422.4	279.0	201.6	124.8	98.6
70°	443.5	452.5	385.3	321.9	297.0	391.7	330.9	250.2	191.4	114.6	86.4
72.5°	486.4	501.8	403.8	316.2	293.1	318.1	272.0	233.0	171.5	105.6	76.2
75°	612.5	640.0	483.8	362.9	321.3	306.6	251.5	218.9	169.6	95.4	66.6
77.5°	752.0	796.2	601.0	457.0	406.4	365.4	256.0	211.8	165.8	85.1	57.0
80°	816.6	867.8	685.4	537.0	543.4	495.4	293.8	224.0	156.2	74.9	47.4
82.5°	778.2	827.5	676.5	554.2	622.7	589.4	320.0	220.8	144.0	65.9	39.0
85°	659.2	701.4	562.6	478.7	533.1	500.5	275.8	201.0	137.6	54.4	29.4
87.5°	535.0	561.9	445.4	365.4	380.8	335.4	208.0	173.4	118.4	42.9	23.0
90°	495.4	519.0	408.3	312.3	303.4	238.7	167.7	147.2	97.3	32.0	19.2
92.5°	452.5	473.6	359.7	264.3	247.0	190.1	144.6	124.2	80.6	26.2	17.9
95°	392.3	408.3	304.6	221.4	202.9	164.5	134.4	105.6	66.6	21.8	17.3
97.5°	327.7	339.8	254.1	187.5	171.5	144.0	125.4	96.6	57.0	20.5	16.6
100°	270.1	279.0	215.0	160.6	150.4	128.6	119.0	89.6	49.9	21.1	17.3
102.5°	230.4	237.4	185.0	143.4	130.6	117.1	112.0	80.0	44.2	21.1	16.6
105°	201.6	206.7	163.8	124.8	115.2	108.8	103.7	73.0	42.2	21.8	16.6
107.5°	167.7	172.8	140.2	110.1	102.4	101.8	96.6	67.8	42.2	21.1	16.0
110°	138.9	142.7	119.0	97.9	92.8	95.4	89.6	64.0	41.6	20.5	16.0



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CATALOG NUMBER: LDWP-GL-4A-ED-EM-LED

CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
112.5°	117.1	120.3	104.3	89.0	85.1	89.6	82.6	60.8	41.6	19.8	16.0
115°	103.0	105.6	93.4	83.2	79.4	83.8	76.8	58.2	39.7	19.2	14.7
117.5°	94.1	95.4	87.0	78.7	73.6	78.7	72.3	55.7	36.5	17.3	14.1
120°	86.4	88.3	82.6	73.6	69.1	73.6	68.5	53.1	33.3	16.0	12.2
122.5°	80.6	82.6	79.4	69.1	65.3	71.0	66.6	51.2	30.7	14.7	10.9
125°	76.2	76.2	72.3	64.6	62.7	67.8	63.4	48.0	28.2	12.8	10.2
127.5°	73.0	73.0	68.5	62.7	59.5	62.7	59.5	44.8	25.6	10.9	9.0
130°	69.8	69.8	65.3	60.2	57.6	58.2	55.0	41.0	21.8	9.6	8.3
132.5°	65.9	65.3	61.4	57.0	54.4	53.1	49.3	36.5	17.9	9.0	7.0
135°	62.1	62.1	58.2	55.0	51.8	48.6	44.2	31.4	14.1	7.7	6.4
137.5°	56.3	56.3	55.7	52.5	48.6	43.5	39.0	26.9	12.2	7.0	5.8
140°	51.8	51.8	51.8	48.6	43.5	39.0	34.6	22.4	9.6	5.8	4.5
142.5°	48.0	48.0	46.7	43.5	39.7	35.2	29.4	17.9	7.7	5.1	4.5
145°	43.5	42.9	42.2	39.0	35.2	30.7	24.3	12.8	5.8	3.8	3.2
147.5°	39.0	39.0	37.8	34.6	30.7	26.2	18.6	9.0	4.5	3.2	2.6
150°	35.2	35.2	33.9	30.7	26.9	21.1	13.4	5.8	3.2	2.6	1.9
152.5°	30.7	30.1	29.4	26.9	22.4	16.0	9.0	3.2	2.6	1.9	1.3
155°	25.6	25.6	25.0	22.4	17.3	11.5	5.8	1.3	1.3	1.3	1.3
157.5°	21.1	21.1	19.8	16.6	12.2	7.0	3.2	0.6	1.3	1.3	1.3
160°	15.4	14.7	13.4	10.9	6.4	3.2	1.3	0.6	1.3	0.6	1.3
162.5°	9.0	8.3	7.0	5.1	3.2	1.3	0.6	0.6	1.3	1.3	1.3
165°	3.2	3.2	3.2	1.9	1.3	0.6	0.6	0.6	1.3	0.6	0.6
167.5°	1.3	1.3	0.6	0.0	0.6	0.6	0.6	0.6	1.3	0.6	1.3
170°	0.0	0.0	0.0	0.6	0.6	0.6	1.3	0.6	1.3	1.3	1.3
172.5°	0.0	0.0	0.0	0.6	0.0	0.6	0.6	0.6	1.3	0.6	0.6
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°	453.1	453.1	453.1	453.1	453.1	453.1	453.1	453.1	453.1	453.1
2.5°	458.2	458.2	458.9	459.5	458.9	457.0	456.3	457.0	457.6	457.6
5°	463.4	464.6	465.9	464.0	455.7	444.2	433.9	427.5	422.4	421.8
7.5°	458.2	463.4	461.4	445.4	421.8	403.8	389.8	380.2	373.8	373.1
10°	437.8	438.4	425.6	403.2	382.7	359.0	334.7	314.9	303.4	301.4
12.5°	407.0	394.9	371.2	350.7	321.3	290.6	265.6	248.3	236.8	235.5
15°	380.8	359.0	328.3	289.3	255.4	231.0	209.9	191.4	179.8	179.2
17.5°	357.1	329.0	286.1	239.4	203.5	178.6	160.0	145.9	137.0	135.7
20°	334.1	299.5	248.3	199.0	161.9	137.6	123.5	112.6	105.6	104.3
22.5°	311.0	270.1	212.5	165.1	130.6	109.4	97.3	89.6	83.2	82.6
25°	292.5	242.6	181.8	137.6	107.5	89.0	79.4	74.2	69.8	69.1
27.5°	277.8	220.2	155.5	114.6	90.2	74.9	67.8	65.9	62.1	61.4
30°	268.2	202.2	136.3	97.9	77.4	65.9	61.4	60.2	58.9	58.2
32.5°	266.9	189.4	121.0	86.4	67.8	60.2	57.6	58.2	59.5	59.5
35°	269.4	178.6	110.1	76.8	62.1	56.3	56.3	60.2	63.4	64.6
37.5°	269.4	168.3	101.8	70.4	57.6	54.4	57.6	62.7	65.9	67.2
40°	255.4	157.4	96.6	67.8	55.7	55.7	60.8	65.3	65.9	66.6
42.5°	234.2	144.0	92.2	67.2	55.7	57.0	62.7	64.6	62.1	62.7
45°	212.5	129.9	87.0	65.9	55.0	56.3	60.8	59.5	55.7	55.7
47.5°	188.2	117.8	81.9	64.6	55.7	55.7	56.3	54.4	51.8	52.5
50°	163.8	106.2	76.8	62.7	55.7	52.5	51.8	49.9	48.0	48.6
52.5°	142.7	96.0	71.7	60.2	55.0	49.9	47.4	44.2	42.2	42.9
55°	124.2	87.0	67.2	57.6	53.1	47.4	42.9	40.3	38.4	39.0
57.5°	108.8	78.1	62.1	54.4	50.6	43.5	38.4	35.8	35.2	35.2
60°	97.9	70.4	57.0	51.2	47.4	40.3	34.6	32.0	30.1	30.1
62.5°	90.9	63.4	52.5	48.0	44.2	35.8	30.1	26.9	25.6	25.6
65°	84.5	57.6	48.6	44.8	39.7	32.0	25.0	22.4	22.4	23.0
67.5°	76.2	51.8	46.1	40.3	35.2	27.5	20.5	18.6	19.2	19.2
70°	67.8	47.4	44.2	36.5	30.1	22.4	16.6	14.7	14.1	14.1
72.5°	58.9	42.2	40.3	31.4	25.0	17.9	11.5	10.2	9.6	9.6
75°	49.3	38.4	36.5	26.9	20.5	13.4	8.3	6.4	5.8	6.4
77.5°	41.6	35.2	32.0	21.8	16.0	9.6	3.8	3.2	2.6	2.6
80°	34.6	31.4	28.2	17.9	11.5	5.8	1.3	0.6	0.6	0.6
82.5°	27.5	28.8	24.3	15.4	8.3	3.8	0.6	0.6	0.6	0.6
85°	23.7	25.6	22.4	14.1	7.7	3.2	1.3	1.3	1.3	1.3
87.5°	20.5	22.4	19.8	13.4	6.4	3.2	1.3	1.3	1.3	1.3
90°	19.2	20.5	17.9	11.5	5.8	2.6	1.3	1.3	1.3	1.9
92.5°	17.9	18.6	16.0	10.2	5.1	2.6	1.3	1.9	1.9	1.9
95°	17.3	16.6	14.1	9.0	4.5	1.9	1.3	1.3	1.3	1.3
97.5°	16.0	15.4	12.2	7.7	3.8	1.3	1.3	1.3	1.3	1.3
100°	15.4	14.7	10.9	7.7	3.8	1.3	1.3	1.3	1.3	1.9
102.5°	15.4	13.4	10.2	6.4	3.2	1.3	1.3	1.3	1.3	1.3
105°	14.7	12.8	9.0	5.8	3.2	0.6	1.3	1.3	1.3	1.3
107.5°	14.7	12.2	9.0	5.8	2.6	0.6	1.3	1.3	1.3	1.3
110°	14.1	11.5	8.3	5.1	1.9	0.6	1.3	1.3	1.3	1.3



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CATALOG NUMBER: LDWP-GL-4A-ED-EM-LED

CANDELA DISTRIBUTION (continued):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
112.5°	13.4	10.9	7.7	5.1	1.9	0.6	1.3	1.3	1.3	0.6
115°	12.8	10.2	7.0	4.5	1.3	0.6	1.3	0.6	0.6	0.6
117.5°	11.5	9.0	6.4	3.8	1.3	0.6	0.6	0.6	0.6	0.6
120°	10.9	8.3	5.8	3.2	0.6	0.6	0.6	0.6	0.0	0.6
122.5°	9.6	7.0	5.1	2.6	0.6	0.6	0.6	0.6	0.6	0.6
125°	9.0	6.4	4.5	2.6	0.6	0.6	0.6	0.6	0.0	0.0
127.5°	7.7	5.8	3.8	1.9	0.6	0.6	0.6	0.0	0.0	0.0
130°	7.7	5.1	3.2	1.9	0.6	0.6	0.6	0.6	0.0	0.6
132.5°	6.4	4.5	2.6	1.3	0.6	0.6	0.6	0.6	0.0	0.6
135°	5.8	3.8	1.9	1.3	0.6	0.6	0.6	0.0	0.0	0.0
137.5°	5.1	3.2	1.9	0.6	0.6	0.6	0.6	0.0	0.0	0.6
140°	4.5	2.6	1.3	0.6	0.6	0.6	0.6	0.6	0.0	0.6
142.5°	3.8	2.6	1.3	1.3	0.6	0.6	0.6	0.6	0.6	0.6
145°	3.2	1.9	0.6	0.6	0.6	0.6	0.6	0.6	0.0	0.6
147.5°	2.6	1.3	0.6	0.6	0.6	0.6	0.6	0.6	0.0	0.6
150°	1.9	1.3	0.6	1.3	0.6	0.6	0.6	0.6	0.6	0.6
152.5°	1.3	1.3	0.6	0.6	0.6	0.6	0.6	0.6	0.0	0.6
155°	1.3	1.3	0.6	1.3	0.6	0.6	0.6	0.6	0.6	0.6
157.5°	1.3	1.3	0.6	0.6	0.6	0.6	0.6	0.6	0.0	0.6
160°	1.3	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.0	0.6
162.5°	1.3	1.3	0.6	1.3	0.6	0.6	0.6	0.6	0.6	0.6
165°	1.3	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.0	0.0
167.5°	1.3	0.6	0.6	1.3	0.6	0.6	0.6	0.6	0.0	0.6
170°	1.3	1.3	0.6	1.3	0.6	0.6	0.6	0.6	0.0	0.0
172.5°	1.3	0.6	0.6	0.6	0.6	0.6	0.6	0.0	0.0	0.6
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)