

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: FAIL-SAFE

Report Number: P838199

Luminaire Tested: **ORLG-24-4-INS-ASY2R-LD4-1LO-35-120-EDD-90**

Issue Date: 5/21/2024

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

**Test Information**

Test Method: LM-79-08
Report Number: P838199
Test Lab: INNOVATION CENTER(G2)
Issue Date: 5/21/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: ORLG-24-4-INS-ASY2R-LD4-1LO-35-120-EDD-90
Description: 2FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2 and
RFI grid
Light Source: 3500K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

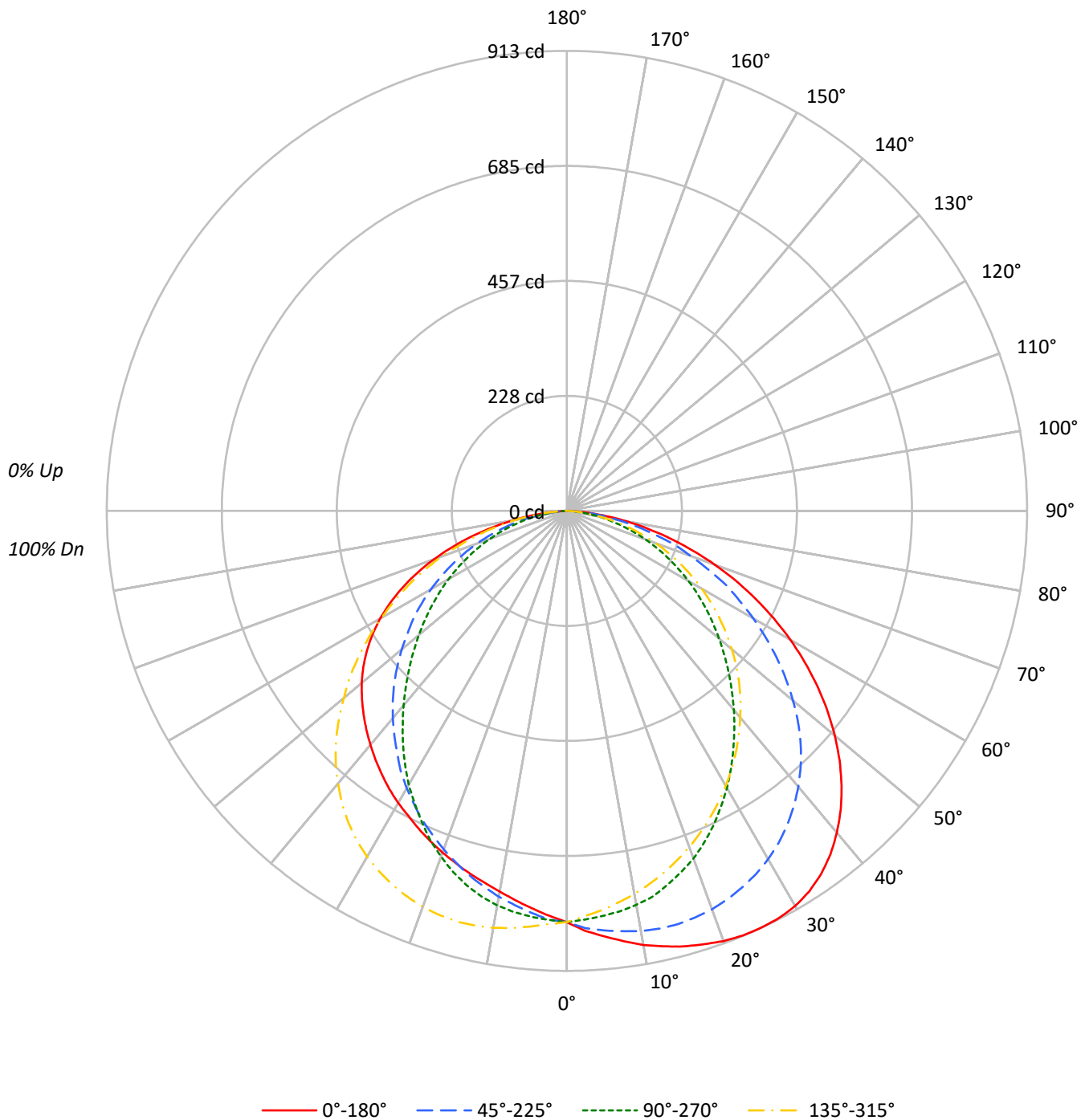
Lumens per Lamp: N/A
Luminaire Lumens: 2394.3 lumens
Efficiency: N/A
Efficacy: 102.3 lumens/watt
Spacing Criteria (0/90/45): 1.43 / 1.16 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 23.4
Input Voltage (V): 120
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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Luminous Intensity Polar Plot



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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20					20					20					20
RC	80				70					50					30					10
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10
RCR																				
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100		
1	109	104	100	96	106	102	98	94	97	94	91	94	91	89	90	88	86	84		
2	99	91	84	78	96	89	82	77	85	80	75	82	77	73	79	75	72	70		
3	90	79	71	65	88	78	70	64	75	68	63	72	66	62	69	65	61	59		
4	82	70	61	55	80	69	61	54	66	59	53	64	58	53	62	56	52	50		
5	76	63	54	47	74	62	53	47	59	52	46	57	51	46	56	50	45	43		
6	70	56	47	41	68	55	47	41	54	46	40	52	45	40	50	44	40	38		
7	65	51	42	36	63	50	42	36	49	41	36	47	40	35	46	40	35	33		
8	60	47	38	32	59	46	38	32	45	37	32	43	37	32	42	36	31	29		
9	56	43	34	29	55	42	34	29	41	34	29	40	33	28	39	33	28	26		
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24		

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	1098	1098	1098	1098
5°	1144	1090	1070	1092
10°	1195	1085	1048	1086
15°	1247	1071	1038	1071
20°	1301	1051	1033	1045
25°	1355	1022	1033	1011
30°	1407	986	1040	975
35°	1445	946	1050	931
40°	1464	905	1065	885
45°	1467	864	1086	842
50°	1453	825	1112	803
55°	1423	788	1137	766
60°	1378	749	1152	730
65°	1316	706	1146	689
70°	1230	654	1105	642
75°	1106	583	1014	580
80°	938	488	852	496
85°	653	323	540	332

Classified

Scaled Data Report

Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	77.5	3.2
10°-20°	224.4	9.4
20°-30°	343.9	14.4
30°-40°	418.1	17.5
40°-50°	434.6	18.2
50°-60°	392.6	16.4
60°-70°	298.5	12.5
70°-80°	166.4	7.0
80°-90°	38.3	1.6
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°-30°	645.7	27.0
0°-40°	1063.8	44.4
0°-60°	1891.1	79.0
0°-90°	2394.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2394.3	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	816	816	816	816	816	
5°	847	807	792	808	847	82
15°	895	769	745	769	895	254
25°	913	688	696	681	913	422
35°	880	576	639	567	880	549
45°	771	454	570	443	771	593
55°	606	336	485	326	606	541
65°	414	222	360	216	414	409
75°	213	112	195	112	213	226
85°	42	21	35	22	42	53
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	816.1	816.1	816.1	816.1	816.1	816.1	816.1	816.1	816.1	816.1	816.1
2.5°	834.2	822.0	822.2	832.8	824.7	828.6	817.2	821.6	820.3	821.2	811.9
5°	847.3	834.2	834.0	843.1	834.0	835.7	821.2	824.1	819.9	817.2	807.1
7.5°	861.2	848.1	846.7	854.7	842.7	841.4	825.4	825.4	817.8	811.1	801.6
10°	874.9	861.4	859.7	865.8	850.9	846.5	827.1	824.1	814.0	804.1	793.8
12.5°	885.2	871.5	870.1	874.0	857.2	849.2	827.1	821.2	806.4	792.5	784.5
15°	894.9	880.8	877.2	879.1	859.9	849.2	824.5	815.3	796.3	778.0	768.7
17.5°	901.7	888.2	884.6	884.4	861.2	846.0	818.8	806.2	783.3	761.3	751.9
20°	908.6	895.1	890.5	887.1	860.8	841.6	810.4	793.4	766.8	742.0	734.2
22.5°	912.0	898.1	893.2	888.0	858.3	833.6	800.1	778.6	748.1	718.6	712.1
25°	912.6	898.3	893.0	885.6	853.4	824.1	786.8	760.7	726.6	693.9	688.4
27.5°	911.1	895.5	890.1	881.2	846.0	812.5	771.0	740.3	703.8	667.6	661.7
30°	905.7	889.9	884.8	873.2	835.5	798.2	753.6	717.7	678.5	640.0	634.9
32.5°	895.1	879.7	875.5	863.9	824.1	781.6	733.5	693.3	650.5	613.7	606.1
35°	879.5	864.1	861.4	849.2	808.1	761.8	711.4	666.7	620.8	583.3	575.8
37.5°	859.1	846.2	842.2	830.2	789.2	739.4	686.1	637.7	590.5	550.1	545.6
40°	833.4	821.2	818.2	807.5	767.4	714.4	658.7	607.8	559.3	521.8	515.3
42.5°	804.1	792.7	791.0	779.9	740.3	686.8	629.0	576.8	526.7	490.6	484.1
45°	770.8	759.7	759.4	748.9	710.8	656.2	597.7	545.4	494.9	457.4	454.0
47.5°	734.0	724.1	724.1	714.4	677.9	622.5	565.6	512.6	463.0	429.8	423.7
50°	694.1	684.7	681.9	677.1	641.5	585.7	531.7	480.7	431.4	399.8	393.9
52.5°	651.4	643.4	645.3	636.6	602.1	547.5	497.4	444.7	399.6	370.8	364.9
55°	606.5	595.1	596.8	593.6	561.0	508.1	459.0	415.0	368.4	341.3	335.8
57.5°	559.9	545.0	551.1	549.2	517.2	467.7	423.7	381.3	337.3	312.4	307.1
60°	512.1	497.8	504.1	502.4	472.3	427.4	387.4	348.0	306.5	283.8	278.5
62.5°	463.0	449.8	455.5	454.2	426.6	386.1	351.2	315.1	275.5	255.1	250.1
65°	413.5	400.9	406.0	405.1	379.6	348.7	314.1	281.0	244.2	226.5	221.6
67.5°	362.8	351.2	356.0	356.0	332.6	303.1	276.8	246.5	213.6	198.4	193.8
70°	312.6	301.7	305.9	305.5	285.7	261.7	239.1	212.1	182.6	170.0	166.2
72.5°	261.9	252.4	256.2	255.8	239.3	223.9	201.4	178.0	152.3	142.2	138.8
75°	212.8	203.9	207.5	207.1	193.6	179.1	164.1	144.7	122.6	115.6	112.1
77.5°	166.0	156.9	159.9	159.9	150.0	139.5	127.5	112.5	96.9	89.3	86.8
80°	121.1	116.7	115.2	115.4	108.7	101.8	95.8	81.3	69.9	64.7	63.0
82.5°	79.6	76.0	74.4	74.8	71.0	66.8	63.0	52.9	45.3	42.3	41.3
85°	42.3	39.6	38.3	39.2	38.5	36.2	34.3	27.4	22.7	21.5	20.9
87.5°	13.3	11.6	10.7	14.1	12.0	10.7	10.3	8.2	6.3	6.3	6.1
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):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°	185°
0°	816.1	816.1	816.1	816.1	816.1	816.1	816.1	816.1	816.1	816.1	816.1
2.5°	814.9	814.9	807.5	805.8	805.0	806.0	798.6	797.2	807.9	804.3	796.1
5°	808.5	808.1	797.6	795.7	795.7	794.6	786.2	784.3	795.0	791.9	783.0
7.5°	800.5	799.3	787.0	785.6	783.7	783.0	773.6	772.3	781.4	779.5	771.2
10°	790.8	789.6	775.0	774.0	771.9	770.4	761.6	760.7	770.0	767.0	760.3
12.5°	778.0	775.9	760.9	759.9	758.2	757.6	749.1	748.7	759.0	755.9	748.9
15°	761.3	759.5	742.8	743.2	743.4	743.4	736.5	736.1	746.2	744.9	737.3
17.5°	742.8	740.5	724.5	725.7	727.0	728.5	723.2	724.1	734.8	733.1	726.2
20°	721.9	719.6	704.0	707.2	710.1	713.1	709.7	712.3	722.2	721.5	716.3
22.5°	698.4	696.2	681.7	686.6	691.4	697.1	695.6	698.6	709.1	708.9	704.3
25°	669.9	670.5	657.7	663.8	671.8	679.8	680.4	685.3	696.9	695.8	691.6
27.5°	643.2	644.0	630.5	640.8	651.4	661.7	664.2	671.0	682.8	681.9	678.3
30°	615.3	616.2	603.1	617.2	630.1	642.7	648.0	657.3	669.3	669.3	665.5
32.5°	586.1	587.8	574.1	593.0	608.0	622.7	632.0	641.7	655.4	655.0	651.8
35°	556.2	558.1	545.6	569.6	584.6	602.5	614.1	627.1	639.2	639.4	637.0
37.5°	525.8	528.1	516.6	542.9	560.0	581.2	596.0	609.0	622.5	623.2	621.0
40°	495.5	498.0	488.1	513.4	535.1	558.7	575.8	591.1	605.9	606.3	604.8
42.5°	465.2	467.9	460.5	485.2	509.8	535.1	555.3	572.6	587.8	588.8	587.1
45°	435.7	438.0	432.7	459.7	483.3	510.9	534.2	553.8	569.2	570.5	569.9
47.5°	406.4	408.5	403.8	428.5	455.7	485.0	511.9	533.6	550.0	551.5	551.1
50°	377.7	379.4	374.3	400.1	427.2	458.4	486.4	511.5	529.8	531.3	531.1
52.5°	349.1	350.8	346.5	373.7	398.2	431.2	461.6	488.9	506.9	509.2	509.6
55°	321.5	322.3	318.9	344.9	368.7	403.2	438.2	464.7	482.8	484.7	485.8
57.5°	293.9	294.1	291.3	316.2	339.0	374.3	411.0	438.8	455.9	457.8	459.5
60°	266.5	266.3	263.1	287.3	309.1	344.0	382.2	409.9	426.4	428.1	430.4
62.5°	239.3	238.7	235.9	258.1	278.7	313.1	351.6	378.3	394.1	395.2	398.2
65°	212.3	211.7	209.0	229.6	248.2	281.2	318.9	344.2	358.5	360.0	359.4
67.5°	185.6	184.5	182.4	200.8	217.8	248.2	284.4	308.6	320.4	321.7	325.3
70°	159.0	157.6	152.9	172.5	187.3	214.5	248.2	269.7	279.6	281.0	280.4
72.5°	132.7	131.4	126.2	144.3	156.9	180.7	210.7	228.6	237.2	238.3	238.3
75°	107.2	106.4	103.2	116.9	127.4	146.8	172.3	187.1	193.8	195.1	194.7
77.5°	82.6	82.0	78.8	90.6	98.8	113.3	133.8	145.4	150.4	151.9	155.1
80°	59.2	59.0	53.9	65.5	69.1	81.3	96.3	105.3	107.9	110.0	112.3
82.5°	37.9	38.1	32.9	42.8	44.4	52.2	61.5	67.0	68.9	70.6	72.3
85°	18.5	19.2	16.4	22.7	22.8	26.8	30.8	32.9	33.7	35.0	36.5
87.5°	4.8	5.5	3.0	6.5	5.7	7.4	8.6	9.1	8.9	9.9	10.5
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):

	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°	285°
0°	816.1	816.1	816.1	816.1	816.1	816.1	816.1	816.1	816.1	816.1	816.1
2.5°	798.8	804.9	801.8	811.7	815.5	809.4	820.1	820.3	812.7	821.6	826.6
5°	786.4	792.7	790.8	801.0	805.8	800.5	813.4	815.9	808.5	818.6	826.6
7.5°	773.8	781.2	778.8	789.2	795.0	790.8	804.7	808.7	803.0	814.0	824.7
10°	763.0	769.3	766.6	777.6	782.6	779.2	792.9	800.3	795.0	808.5	821.2
12.5°	752.3	757.5	754.4	763.5	768.3	763.9	780.7	787.5	783.7	797.8	814.2
15°	738.6	744.3	740.1	748.3	751.9	748.1	761.8	773.6	768.9	784.3	802.4
17.5°	728.1	731.4	725.7	732.1	734.2	729.1	743.0	754.6	751.2	767.9	788.9
20°	716.5	719.2	711.2	714.8	714.6	708.2	720.9	732.3	730.0	748.5	772.3
22.5°	703.6	704.9	695.6	696.3	696.0	685.3	696.7	708.3	707.4	726.0	752.7
25°	689.9	690.1	678.1	677.7	673.5	660.9	671.0	684.2	681.3	701.5	729.5
27.5°	676.4	674.5	660.0	656.6	649.9	634.9	643.8	655.6	653.9	673.7	704.7
30°	661.9	659.4	641.7	635.4	625.7	608.4	615.8	626.9	627.8	645.1	677.7
32.5°	648.2	641.9	622.3	613.2	601.0	580.8	584.8	596.0	597.5	615.1	648.6
35°	630.5	626.3	602.1	586.5	574.5	552.4	556.6	564.4	566.7	583.8	617.9
37.5°	613.7	607.1	581.4	562.3	546.9	523.7	524.8	532.8	535.1	552.4	586.1
40°	596.4	586.9	559.3	537.0	519.3	494.9	493.6	502.0	503.7	520.6	551.1
42.5°	577.9	566.5	535.5	511.1	490.8	466.0	463.3	470.6	472.5	489.0	518.9
45°	559.3	545.6	511.1	484.5	462.2	436.9	434.2	439.7	442.6	458.2	486.9
47.5°	539.5	523.5	486.0	456.3	433.3	407.9	404.7	410.2	412.5	427.9	455.2
50°	518.7	499.3	460.1	427.4	404.5	379.6	374.8	381.3	383.4	397.9	424.5
52.5°	495.9	474.4	432.5	398.2	375.4	351.6	345.9	352.2	354.6	368.7	393.3
55°	471.7	448.5	404.7	371.4	346.7	323.4	318.7	321.1	326.5	339.8	362.6
57.5°	444.5	421.5	375.4	341.5	317.7	295.4	291.4	293.7	298.7	311.6	332.2
60°	415.6	391.2	345.5	311.6	288.6	267.5	263.8	265.9	271.3	283.1	302.1
62.5°	387.0	359.6	314.7	281.0	260.0	240.4	239.5	238.7	243.7	255.1	271.8
65°	352.4	326.1	282.5	250.5	231.5	213.8	210.0	211.7	216.4	226.9	244.4
67.5°	315.2	291.4	249.6	220.1	203.1	187.3	184.1	184.8	189.8	198.9	214.2
70°	275.8	254.9	215.9	189.4	175.1	160.3	158.2	158.4	163.1	171.1	184.5
72.5°	234.5	215.7	181.8	159.1	147.3	136.7	134.8	132.5	136.9	143.7	155.1
75°	192.5	175.9	147.9	129.4	120.1	111.2	109.5	107.2	111.6	117.5	126.4
77.5°	150.0	136.7	115.0	100.7	93.5	86.8	85.3	82.8	87.2	91.6	98.6
80°	108.5	98.8	85.9	70.8	68.3	64.0	62.4	59.8	64.0	66.8	72.1
82.5°	70.1	63.6	56.2	45.7	45.3	42.1	41.3	38.3	42.1	43.8	47.8
85°	35.4	32.4	30.5	23.2	24.0	21.9	21.7	18.5	21.5	22.3	24.6
87.5°	10.1	10.7	9.5	5.7	7.2	6.9	6.9	4.9	6.9	6.9	7.8
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: ORLG-24-4-INS-ASY2R-LD4-1LO-35-120-EDD-90

CANDELA DISTRIBUTION (continued):

	295°	305°	315°	325°	335°	345°	355°	360°
0°	816.1	816.1	816.1	816.1	816.1	816.1	816.1	816.1
2.5°	816.8	820.1	820.8	820.7	822.7	834.2	830.4	834.2
5°	818.8	826.0	827.9	830.6	834.0	846.9	842.7	847.3
7.5°	819.9	830.7	834.9	840.1	845.6	860.1	856.6	861.2
10°	819.9	834.0	840.1	848.6	856.1	872.8	869.6	874.9
12.5°	816.5	834.6	843.1	855.1	864.6	882.7	881.4	885.2
15°	809.4	831.7	843.5	858.9	870.7	890.9	890.3	894.9
17.5°	799.9	826.7	841.0	860.4	875.3	897.9	899.3	901.7
20°	787.9	817.4	836.1	859.9	878.5	903.5	905.2	908.6
22.5°	772.1	806.2	828.6	857.4	878.9	905.7	908.8	912.0
25°	753.5	792.7	818.9	852.6	877.0	905.6	909.7	912.6
27.5°	732.1	775.2	806.6	845.0	871.7	902.5	907.7	911.1
30°	707.4	756.5	792.5	835.1	864.4	896.8	902.3	905.7
32.5°	681.9	735.9	775.7	822.4	854.0	887.7	892.4	895.1
35°	654.1	711.0	755.6	806.0	840.5	873.0	876.6	879.5
37.5°	623.8	684.0	732.5	787.5	821.4	852.6	855.9	859.1
40°	592.6	655.6	706.6	764.9	798.8	827.7	831.1	833.4
42.5°	561.2	624.2	679.0	738.2	771.9	799.7	801.8	804.1
45°	529.4	591.6	648.0	708.7	742.0	768.1	768.9	770.8
47.5°	497.0	558.0	613.9	675.0	708.0	731.8	732.5	734.0
50°	464.5	524.3	577.6	638.7	670.8	696.0	692.5	694.1
52.5°	432.5	488.9	543.3	599.5	631.2	653.5	654.5	651.4
55°	401.1	454.2	504.3	558.3	588.6	605.9	605.4	606.5
57.5°	369.3	419.2	465.1	514.6	544.1	560.4	563.9	559.9
60°	336.9	383.8	424.9	469.6	498.2	511.9	515.9	512.1
62.5°	304.8	347.8	385.1	424.1	450.6	467.5	467.2	463.0
65°	272.6	311.6	344.9	378.1	401.1	418.0	417.3	413.5
67.5°	242.9	275.1	305.0	331.8	351.8	363.4	367.4	362.8
70°	210.2	238.0	264.2	285.7	302.3	312.8	316.6	312.6
72.5°	177.4	201.0	219.5	240.2	253.0	261.7	265.7	261.9
75°	145.1	164.5	179.5	195.7	204.6	212.1	216.6	212.8
77.5°	113.6	128.7	140.7	152.5	162.8	164.5	168.5	166.0
80°	83.8	94.6	103.4	111.2	118.6	119.4	122.6	121.1
82.5°	55.8	63.0	65.3	73.5	78.2	77.5	80.7	79.6
85°	29.5	33.9	37.9	40.4	43.0	40.5	43.4	42.3
87.5°	9.9	10.5	9.1	12.9	14.3	12.2	13.9	13.3
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)