

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: P837713

Luminaire Tested: **ORLG-12-4-INS-ASY2R-LD4-1LO-20-120-EDD**

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: P837713
Test Lab: INNOVATION CENTER(G2)
Issue Date: 5/21/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: ORLG-12-4-INS-ASY2R-LD4-1LO-20-120-EDD
Description: 1FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2 and
RFI grid
Light Source: 2000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

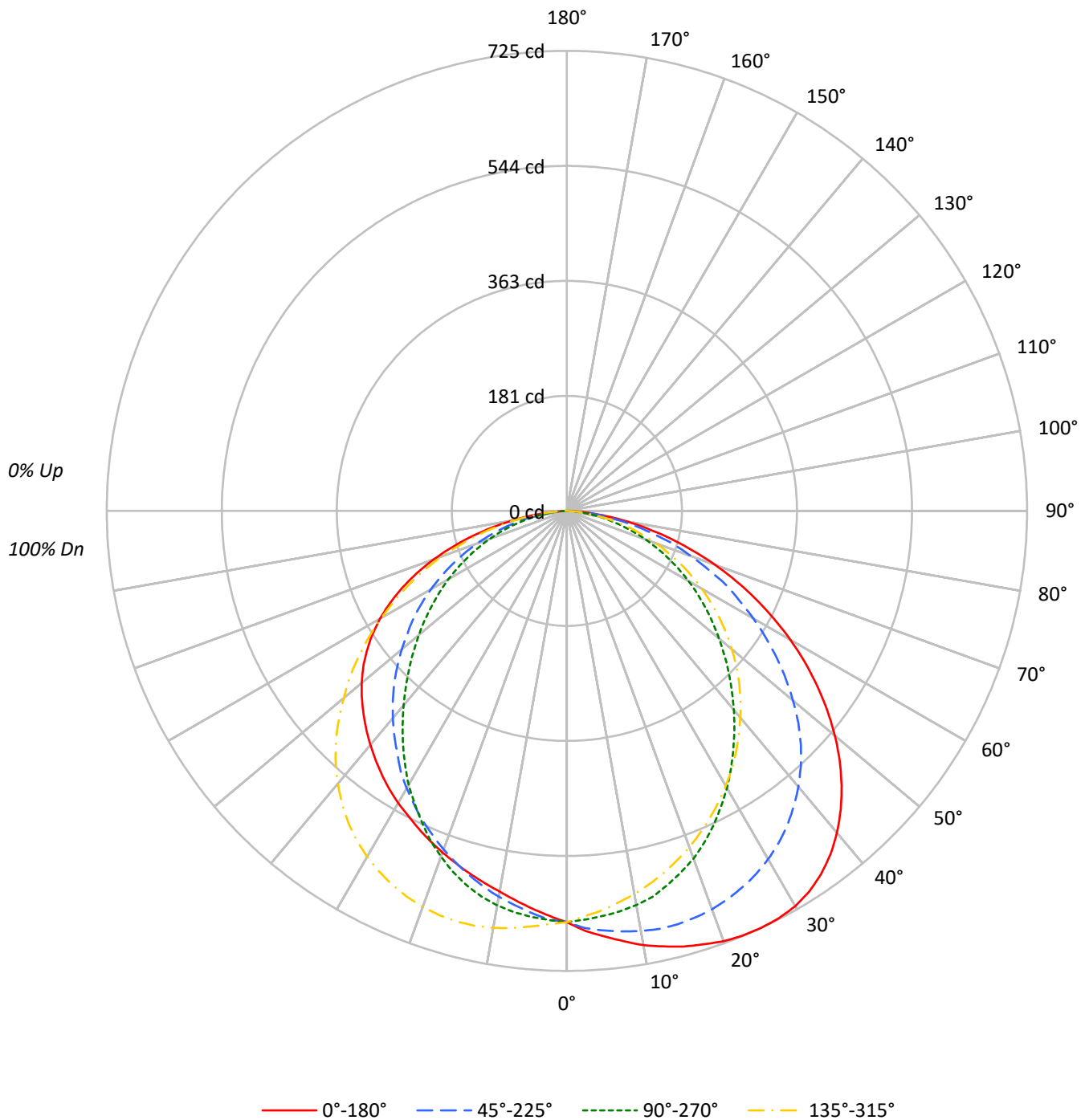
Lumens per Lamp: N/A
Luminaire Lumens: 1901.6 lumens
Efficiency: N/A
Efficacy: 81.3 lumens/watt
Spacing Criteria (0/90/45): 1.43 / 1.16 / 1.4
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

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°	1744	1744	1744	1744
5°	1818	1732	1699	1734
10°	1899	1723	1665	1725
15°	1980	1701	1648	1701
20°	2066	1670	1641	1660
25°	2152	1623	1641	1607
30°	2235	1567	1652	1549
35°	2295	1503	1668	1479
40°	2325	1438	1692	1405
45°	2330	1372	1724	1338
50°	2308	1310	1767	1275
55°	2260	1251	1806	1217
60°	2189	1190	1830	1160
65°	2091	1121	1820	1095
70°	1954	1039	1756	1020
75°	1757	926	1612	921
80°	1491	775	1354	787
85°	1037	513	858	528

Classified

Scaled Data Report

Cooper Lighting Solutions Photometric Lab

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Peachtree City, GA 30269



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	61.5	3.2
10°-20°	178.2	9.4
20°-30°	273.1	14.4
30°-40°	332.1	17.5
40°-50°	345.2	18.2
50°-60°	311.8	16.4
60°-70°	237.1	12.5
70°-80°	132.2	7.0
80°-90°	30.4	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°	512.8	27.0
0°-40°	844.9	44.4
0°-60°	1502.0	79.0
0°-90°	1901.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1901.6	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	648	648	648	648	648	
5°	673	641	629	642	673	65
15°	711	610	592	611	711	202
25°	725	547	553	541	725	335
35°	698	457	508	450	698	436
45°	612	361	453	352	612	471
55°	482	267	385	259	482	430
65°	328	176	286	172	328	325
75°	169	89	155	89	169	180
85°	34	17	28	17	34	42
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°	648.2	648.2	648.2	648.2	648.2	648.2	648.2	648.2	648.2	648.2	648.2
2.5°	662.5	652.9	653.0	661.5	655.0	658.1	649.1	652.6	651.5	652.2	644.8
5°	673.0	662.5	662.4	669.6	662.4	663.7	652.2	654.5	651.2	649.1	641.1
7.5°	684.0	673.6	672.5	678.9	669.3	668.3	655.6	655.6	649.5	644.2	636.7
10°	694.9	684.2	682.8	687.6	675.8	672.4	656.9	654.5	646.5	638.6	630.5
12.5°	703.1	692.2	691.1	694.1	680.8	674.5	656.9	652.2	640.5	629.4	623.1
15°	710.8	699.6	696.7	698.2	682.9	674.5	654.8	647.6	632.4	617.9	610.5
17.5°	716.2	705.5	702.6	702.4	684.0	671.9	650.3	640.3	622.2	604.6	597.2
20°	721.6	710.9	707.3	704.6	683.7	668.4	643.6	630.2	609.0	589.4	583.2
22.5°	724.4	713.3	709.4	705.3	681.7	662.1	635.5	618.4	594.2	570.8	565.6
25°	724.8	713.5	709.2	703.4	677.8	654.5	624.9	604.2	577.1	551.1	546.7
27.5°	723.6	711.2	707.0	699.9	671.9	645.3	612.3	588.0	559.0	530.2	525.5
30°	719.4	706.8	702.7	693.5	663.6	634.0	598.6	570.0	538.9	508.3	504.2
32.5°	710.9	698.7	695.3	686.1	654.5	620.8	582.5	550.6	516.6	487.4	481.4
35°	698.5	686.3	684.2	674.5	641.8	605.1	565.0	529.5	493.0	463.3	457.4
37.5°	682.3	672.1	668.9	659.4	626.8	587.2	544.9	506.5	469.0	436.9	433.3
40°	661.9	652.2	649.8	641.4	609.5	567.4	523.1	482.8	444.2	414.4	409.3
42.5°	638.6	629.6	628.2	619.4	588.0	545.5	499.5	458.1	418.4	389.6	384.5
45°	612.2	603.4	603.1	594.8	564.6	521.2	474.7	433.2	393.1	363.3	360.6
47.5°	583.0	575.1	575.1	567.4	538.4	494.4	449.2	407.2	367.7	341.4	336.6
50°	551.3	543.8	541.6	537.8	509.5	465.2	422.3	381.8	342.6	317.5	312.8
52.5°	517.4	511.0	512.5	505.6	478.2	434.8	395.1	353.2	317.4	294.5	289.8
55°	481.7	472.6	474.0	471.4	445.6	403.5	364.5	329.6	292.6	271.1	266.7
57.5°	444.7	432.9	437.7	436.2	410.8	371.5	336.6	302.8	267.9	248.1	243.9
60°	406.7	395.4	400.4	399.0	375.1	339.4	307.7	276.4	243.4	225.4	221.2
62.5°	367.7	357.3	361.8	360.7	338.8	306.6	279.0	250.2	218.8	202.6	198.7
65°	328.4	318.4	322.5	321.7	301.5	277.0	249.5	223.2	194.0	179.9	176.0
67.5°	288.2	279.0	282.7	282.7	264.1	240.7	219.8	195.8	169.6	157.5	153.9
70°	248.3	239.6	243.0	242.7	226.9	207.9	189.9	168.4	145.0	135.0	132.0
72.5°	208.0	200.5	203.5	203.2	190.1	177.8	160.0	141.4	121.0	112.9	110.2
75°	169.0	161.9	164.8	164.5	153.8	142.3	130.3	114.9	97.4	91.8	89.1
77.5°	131.8	124.6	127.0	127.0	119.1	110.8	101.3	89.4	77.0	70.9	68.9
80°	96.2	92.7	91.5	91.6	86.3	80.9	76.1	64.6	55.5	51.4	50.0
82.5°	63.2	60.3	59.1	59.4	56.4	53.1	50.0	42.0	36.0	33.6	32.8
85°	33.6	31.4	30.4	31.1	30.5	28.7	27.2	21.8	18.0	17.1	16.6
87.5°	10.6	9.2	8.5	11.2	9.5	8.5	8.2	6.5	5.0	5.0	4.8
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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CANDELA DISTRIBUTION (continued):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°	185°
0°	648.2	648.2	648.2	648.2	648.2	648.2	648.2	648.2	648.2	648.2	648.2
2.5°	647.3	647.3	641.4	640.0	639.4	640.2	634.3	633.2	641.7	638.8	632.3
5°	642.1	641.8	633.5	632.0	632.0	631.1	624.4	622.9	631.4	629.0	621.9
7.5°	635.8	634.9	625.0	624.0	622.5	621.9	614.5	613.4	620.7	619.1	612.5
10°	628.1	627.2	615.5	614.8	613.1	611.9	604.9	604.2	611.6	609.2	603.9
12.5°	617.9	616.3	604.3	603.6	602.2	601.8	594.9	594.6	602.8	600.4	594.8
15°	604.6	603.3	590.0	590.3	590.4	590.4	585.0	584.7	592.7	591.6	585.6
17.5°	590.0	588.1	575.4	576.4	577.4	578.6	574.4	575.1	583.6	582.2	576.8
20°	573.3	571.5	559.1	561.7	564.0	566.4	563.7	565.8	573.6	573.0	568.9
22.5°	554.7	552.9	541.4	545.4	549.1	553.7	552.5	554.9	563.2	563.0	559.4
25°	532.1	532.5	522.4	527.2	533.6	539.9	540.4	544.3	553.5	552.6	549.3
27.5°	510.9	511.5	500.8	508.9	517.4	525.5	527.5	533.0	542.3	541.6	538.7
30°	488.7	489.4	479.0	490.2	500.5	510.4	514.7	522.1	531.6	531.6	528.6
32.5°	465.5	466.9	456.0	471.0	482.9	494.6	502.0	509.7	520.6	520.3	517.7
35°	441.8	443.3	433.3	452.4	464.3	478.5	487.8	498.0	507.7	507.9	505.9
37.5°	417.6	419.4	410.3	431.2	444.8	461.6	473.4	483.7	494.4	495.0	493.2
40°	393.6	395.5	387.7	407.8	425.0	443.8	457.4	469.5	481.2	481.6	480.3
42.5°	369.5	371.6	365.7	385.4	404.9	425.0	441.0	454.8	466.9	467.6	466.3
45°	346.1	347.9	343.7	365.1	383.9	405.8	424.2	439.8	452.1	453.1	452.7
47.5°	322.8	324.5	320.7	340.3	362.0	385.2	406.6	423.8	436.8	438.0	437.7
50°	300.0	301.3	297.2	317.8	339.3	364.1	386.3	406.3	420.8	422.0	421.8
52.5°	277.3	278.6	275.2	296.8	316.3	342.5	366.6	388.3	402.6	404.4	404.7
55°	255.4	256.0	253.2	274.0	292.9	320.2	348.0	369.1	383.4	384.9	385.8
57.5°	233.4	233.6	231.3	251.1	269.3	297.2	326.4	348.5	362.1	363.6	365.0
60°	211.7	211.5	208.9	228.2	245.5	273.2	303.6	325.5	338.7	340.0	341.8
62.5°	190.1	189.6	187.3	205.0	221.3	248.7	279.3	300.4	313.0	313.9	316.3
65°	168.6	168.1	166.0	182.3	197.2	223.3	253.2	273.4	284.7	285.9	285.5
67.5°	147.4	146.5	144.8	159.5	173.0	197.2	225.9	245.1	254.5	255.5	258.4
70°	126.2	125.2	121.4	137.0	148.8	170.4	197.2	214.2	222.1	223.2	222.7
72.5°	105.4	104.3	100.2	114.6	124.6	143.5	167.4	181.6	188.4	189.3	189.3
75°	85.1	84.5	81.9	92.8	101.1	116.6	136.8	148.6	153.9	155.0	154.7
77.5°	65.6	65.2	62.6	72.0	78.5	90.0	106.3	115.5	119.4	120.7	123.2
80°	47.0	46.9	42.8	52.0	54.9	64.6	76.5	83.6	85.7	87.4	89.2
82.5°	30.1	30.2	26.2	34.0	35.2	41.4	48.8	53.2	54.7	56.1	57.5
85°	14.7	15.3	13.0	18.0	18.1	21.3	24.5	26.2	26.8	27.8	29.0
87.5°	3.8	4.4	2.4	5.1	4.5	5.9	6.8	7.3	7.1	7.9	8.3
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°	648.2	648.2	648.2	648.2	648.2	648.2	648.2	648.2	648.2	648.2	648.2
2.5°	634.4	639.2	636.8	644.7	647.7	642.9	651.3	651.5	645.4	652.6	656.5
5°	624.6	629.6	628.1	636.2	640.0	635.8	646.1	648.0	642.1	650.1	656.5
7.5°	614.6	620.5	618.5	626.8	631.4	628.1	639.1	642.3	637.7	646.5	655.0
10°	606.0	611.0	608.9	617.6	621.6	618.8	629.7	635.6	631.4	642.1	652.2
12.5°	597.5	601.6	599.2	606.4	610.2	606.7	620.0	625.5	622.5	633.7	646.7
15°	586.6	591.2	587.8	594.3	597.2	594.2	605.1	614.5	610.7	622.9	637.3
17.5°	578.3	580.9	576.4	581.5	583.2	579.1	590.1	599.3	596.6	609.9	626.5
20°	569.1	571.2	564.9	567.7	567.6	562.4	572.6	581.6	579.8	594.5	613.4
22.5°	558.8	559.9	552.5	553.1	552.8	544.3	553.4	562.6	561.8	576.7	597.8
25°	547.9	548.1	538.6	538.2	534.9	524.9	533.0	543.4	541.1	557.1	579.4
27.5°	537.2	535.7	524.2	521.5	516.2	504.2	511.3	520.7	519.4	535.1	559.7
30°	525.7	523.7	509.7	504.7	497.0	483.2	489.1	497.9	498.6	512.4	538.2
32.5°	514.8	509.8	494.3	487.0	477.3	461.3	464.5	473.4	474.6	488.5	515.1
35°	500.8	497.4	478.2	465.8	456.3	438.8	442.1	448.3	450.1	463.7	490.8
37.5°	487.4	482.2	461.7	446.6	434.4	415.9	416.8	423.2	425.0	438.8	465.5
40°	473.7	466.1	444.2	426.5	412.5	393.1	392.0	398.7	400.1	413.5	437.7
42.5°	459.0	450.0	425.3	406.0	389.8	370.1	368.0	373.8	375.3	388.4	412.2
45°	444.2	433.3	406.0	384.8	367.1	347.0	344.9	349.3	351.5	363.9	386.8
47.5°	428.5	415.8	386.0	362.4	344.1	324.0	321.4	325.8	327.6	339.9	361.5
50°	412.0	396.6	365.4	339.4	321.3	301.5	297.7	302.8	304.5	316.0	337.2
52.5°	393.9	376.8	343.5	316.3	298.2	279.3	274.7	279.7	281.7	292.9	312.4
55°	374.7	356.2	321.4	295.0	275.3	256.9	253.1	255.1	259.3	269.9	288.0
57.5°	353.0	334.7	298.2	271.2	252.3	234.7	231.5	233.3	237.2	247.5	263.8
60°	330.1	310.7	274.4	247.5	229.2	212.4	209.6	211.2	215.5	224.8	239.9
62.5°	307.4	285.6	249.9	223.2	206.5	191.0	190.2	189.6	193.5	202.6	215.9
65°	279.9	259.0	224.4	199.0	183.9	169.8	166.8	168.1	171.9	180.2	194.1
67.5°	250.4	231.5	198.2	174.8	161.3	148.8	146.2	146.8	150.7	158.0	170.1
70°	219.1	202.4	171.5	150.4	139.1	127.3	125.6	125.8	129.6	135.9	146.5
72.5°	186.3	171.3	144.4	126.4	117.0	108.6	107.0	105.2	108.7	114.2	123.2
75°	152.9	139.7	117.5	102.8	95.4	88.3	86.9	85.1	88.6	93.3	100.4
77.5°	119.1	108.6	91.3	80.0	74.2	68.9	67.7	65.8	69.2	72.7	78.3
80°	86.2	78.5	68.2	56.2	54.3	50.8	49.6	47.5	50.8	53.1	57.3
82.5°	55.6	50.5	44.6	36.3	36.0	33.4	32.8	30.4	33.4	34.8	37.9
85°	28.1	25.7	24.2	18.4	19.1	17.4	17.2	14.7	17.1	17.7	19.5
87.5°	8.0	8.5	7.6	4.5	5.7	5.4	5.4	3.9	5.4	5.4	6.2
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-12-4-INS-ASY2R-LD4-1LO-20-120-EDD

CANDELA DISTRIBUTION (continued):

	295°	305°	315°	325°	335°	345°	355°	360°
0°	648.2	648.2	648.2	648.2	648.2	648.2	648.2	648.2
2.5°	648.8	651.3	651.9	651.8	653.5	662.5	659.5	662.5
5°	650.3	656.0	657.5	659.7	662.4	672.7	669.3	673.0
7.5°	651.2	659.8	663.1	667.2	671.6	683.1	680.4	684.0
10°	651.2	662.4	667.2	674.0	679.9	693.2	690.7	694.9
12.5°	648.5	662.8	669.6	679.2	686.7	701.1	700.0	703.1
15°	642.9	660.6	669.9	682.2	691.6	707.6	707.1	710.8
17.5°	635.3	656.6	668.0	683.4	695.2	713.2	714.2	716.2
20°	625.8	649.2	664.0	682.9	697.8	717.6	718.9	721.6
22.5°	613.2	640.3	658.1	681.0	698.1	719.4	721.8	724.4
25°	598.4	629.6	650.4	677.2	696.5	719.2	722.6	724.8
27.5°	581.5	615.7	640.6	671.1	692.3	716.8	720.9	723.6
30°	561.8	600.8	629.4	663.3	686.6	712.3	716.7	719.4
32.5°	541.6	584.5	616.1	653.2	678.3	705.0	708.8	710.9
35°	519.5	564.7	600.1	640.2	667.5	693.4	696.2	698.5
37.5°	495.5	543.2	581.8	625.5	652.4	677.2	679.8	682.3
40°	470.7	520.7	561.2	607.5	634.4	657.4	660.1	661.9
42.5°	445.7	495.8	539.3	586.3	613.1	635.2	636.8	638.6
45°	420.5	469.9	514.7	562.9	589.4	610.1	610.7	612.2
47.5°	394.8	443.1	487.6	536.1	562.3	581.2	581.8	583.0
50°	368.9	416.4	458.7	507.3	532.8	552.8	550.0	551.3
52.5°	343.5	388.3	431.5	476.1	501.4	519.0	519.8	517.4
55°	318.6	360.7	400.5	443.5	467.5	481.2	480.8	481.7
57.5°	293.3	332.9	369.4	408.7	432.1	445.1	447.8	444.7
60°	267.6	304.8	337.5	373.0	395.7	406.6	409.7	406.7
62.5°	242.1	276.2	305.9	336.9	357.9	371.3	371.0	367.7
65°	216.5	247.5	274.0	300.3	318.6	332.0	331.4	328.4
67.5°	192.9	218.5	242.2	263.5	279.4	288.6	291.8	288.2
70°	166.9	189.0	209.9	226.9	240.1	248.4	251.4	248.3
72.5°	140.9	159.7	174.3	190.8	200.9	207.9	211.1	208.0
75°	115.2	130.6	142.6	155.4	162.5	168.4	172.1	169.0
77.5°	90.3	102.2	111.7	121.1	129.3	130.6	133.8	131.8
80°	66.5	75.1	82.1	88.3	94.2	94.8	97.4	96.2
82.5°	44.3	50.0	51.9	58.4	62.1	61.5	64.1	63.2
85°	23.4	26.9	30.1	32.1	34.2	32.2	34.5	33.6
87.5°	7.9	8.3	7.3	10.3	11.3	9.7	11.0	10.6
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)