

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



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: P837968

Luminaire Tested: **ORLG-24-2-INS-ASY2R-LD4-2LO-30-120-EDD-90**

Issue Date: 5/21/2024

Test Information

Test Method: LM-79-08
Report Number: P837968
Test Lab: INNOVATION CENTER(G2)
Issue Date: 5/21/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: ORLG-24-2-INS-ASY2R-LD4-2LO-30-120-EDD-90
Description: 2FT x 2FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2 and RFI grid
Light Source: 3000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

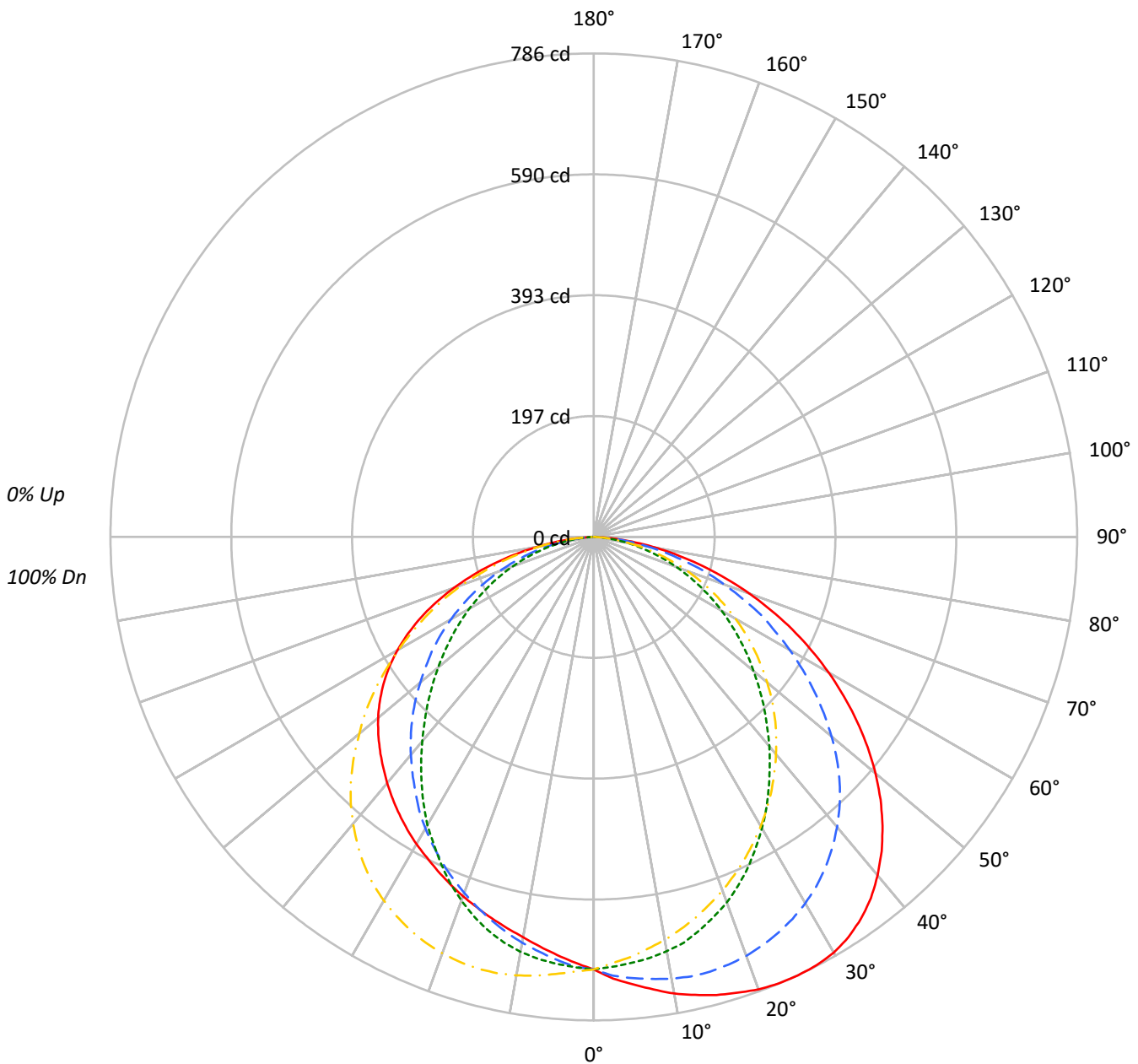
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2062.9 lumens
Efficiency: N/A
Efficacy: 88.2 lumens/watt
Spacing Criteria (0/90/45): 1.43 / 1.16 / 1.4
Luminous Opening: Rectangular (W 2' x L: 2' 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

TEST NUMBER: P837968
CATALOG NUMBER: ORLG-24-2-INS-ASY2R-LD4-2LO-30-120-EDD-90

Luminous Intensity Polar Plot



— 0°-180° - - 45°-225° - · - 90°-270° - · · - 135°-315°

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



TEST NUMBER: P837968

CATALOG NUMBER: ORLG-24-2-INS-ASY2R-LD4-2LO-30-120-EDD-90

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20	
RC	80				70				50				30				10	0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
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°	1892	1892	1892	1892
5°	1972	1878	1843	1882
10°	2060	1869	1806	1871
15°	2148	1845	1788	1846
20°	2242	1812	1780	1801
25°	2335	1761	1780	1743
30°	2425	1700	1792	1681
35°	2489	1630	1810	1604
40°	2523	1560	1835	1525
45°	2527	1489	1871	1451
50°	2503	1420	1917	1383
55°	2451	1357	1959	1320
60°	2375	1292	1985	1258
65°	2268	1216	1975	1188
70°	2119	1127	1905	1106
75°	1907	1004	1748	999
80°	1616	841	1469	854
85°	1124	556	932	571



TEST NUMBER: P837968
 CATALOG NUMBER: ORLG-24-2-INS-ASY2R-LD4-2LO-30-120-EDD-90

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	66.8	3.2
10°-20°	193.3	9.4
20°-30°	296.3	14.4
30°-40°	360.2	17.5
40°-50°	374.5	18.2
50°-60°	338.3	16.4
60°-70°	257.2	12.5
70°-80°	143.4	7.0
80°-90°	33.0	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°	556.3	27.0
0°-40°	916.6	44.4
0°-60°	1629.3	79.0
0°-90°	2062.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2062.9	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	703	703	703	703	703	
5°	730	695	682	697	730	70
15°	771	662	642	662	771	219
25°	786	593	600	587	786	363
35°	758	496	551	488	758	473
45°	664	391	492	381	664	511
55°	522	289	418	281	522	466
65°	356	191	310	186	356	352
75°	183	97	168	96	183	195
85°	36	18	30	18	36	46
90°	0	0	0	0	0	

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



TEST NUMBER: P837968

CATALOG NUMBER: ORLG-24-2-INS-ASY2R-LD4-2LO-30-120-EDD-90

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	703.1	703.1	703.1	703.1	703.1	703.1	703.1	703.1	703.1	703.1	703.1
2.5°	718.7	708.2	708.4	717.6	710.5	714.0	704.1	707.9	706.7	707.6	699.5
5°	730.0	718.7	718.5	726.4	718.5	720.0	707.6	710.0	706.4	704.1	695.4
7.5°	742.0	730.7	729.5	736.4	726.1	724.9	711.2	711.2	704.6	698.9	690.7
10°	753.8	742.2	740.7	745.9	733.1	729.4	712.6	710.0	701.3	692.8	683.9
12.5°	762.7	750.9	749.7	753.0	738.6	731.7	712.6	707.6	694.8	682.8	675.9
15°	771.0	758.9	755.8	757.4	740.9	731.7	710.3	702.5	686.1	670.3	662.3
17.5°	776.9	765.3	762.2	762.0	742.0	728.9	705.4	694.6	674.9	655.9	647.9
20°	782.8	771.2	767.3	764.3	741.7	725.1	698.2	683.6	660.6	639.3	632.6
22.5°	785.8	773.8	769.6	765.1	739.5	718.2	689.4	670.8	644.6	619.2	613.6
25°	786.3	774.0	769.4	763.0	735.3	710.0	677.9	655.4	626.0	597.8	593.1
27.5°	785.0	771.5	766.9	759.2	728.9	700.0	664.3	637.9	606.4	575.2	570.1
30°	780.4	766.8	762.3	752.3	719.9	687.7	649.3	618.3	584.5	551.4	547.0
32.5°	771.2	757.9	754.3	744.3	710.0	673.4	631.9	597.3	560.4	528.8	522.2
35°	757.7	744.5	742.2	731.7	696.2	656.4	612.9	574.4	534.9	502.5	496.1
37.5°	740.2	729.0	725.6	715.3	680.0	637.0	591.1	549.4	508.8	474.0	470.1
40°	718.1	707.6	704.9	695.7	661.1	615.5	567.5	523.7	481.9	449.6	444.0
42.5°	692.8	683.0	681.5	672.0	637.9	591.8	541.9	497.0	453.8	422.7	417.1
45°	664.1	654.6	654.3	645.2	612.4	565.4	515.0	469.9	426.4	394.1	391.2
47.5°	632.4	623.9	623.9	615.5	584.1	536.3	487.3	441.7	398.9	370.3	365.1
50°	598.0	590.0	587.5	583.4	552.7	504.7	458.1	414.1	371.7	344.4	339.3
52.5°	561.3	554.4	556.0	548.5	518.8	471.7	428.6	383.1	344.3	319.5	314.4
55°	522.5	512.7	514.2	511.4	483.4	437.8	395.4	357.6	317.4	294.1	289.3
57.5°	482.4	469.6	474.8	473.2	445.6	403.0	365.1	328.5	290.6	269.1	264.6
60°	441.2	428.9	434.3	432.8	406.9	368.2	333.8	299.8	264.1	244.5	240.0
62.5°	398.9	387.6	392.5	391.3	367.6	332.6	302.6	271.4	237.3	219.8	215.5
65°	356.2	345.4	349.8	349.0	327.0	300.5	270.6	242.1	210.4	195.2	190.9
67.5°	312.6	302.6	306.7	306.7	286.5	261.1	238.5	212.4	184.0	170.9	167.0
70°	269.3	260.0	263.6	263.2	246.2	225.5	206.0	182.7	157.3	146.5	143.2
72.5°	225.7	217.5	220.8	220.4	206.2	192.9	173.5	153.4	131.2	122.5	119.6
75°	183.4	175.7	178.8	178.4	166.8	154.3	141.4	124.7	105.6	99.6	96.6
77.5°	143.0	135.1	137.8	137.8	129.2	120.2	109.9	96.9	83.5	76.9	74.8
80°	104.3	100.5	99.2	99.4	93.7	87.7	82.5	70.0	60.2	55.8	54.3
82.5°	68.6	65.4	64.1	64.5	61.2	57.6	54.3	45.6	39.0	36.4	35.6
85°	36.4	34.1	33.0	33.8	33.1	31.2	29.5	23.6	19.5	18.5	18.0
87.5°	11.5	10.0	9.2	12.1	10.3	9.2	8.9	7.1	5.4	5.4	5.2
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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



TEST NUMBER: P837968

CATALOG NUMBER: ORLG-24-2-INS-ASY2R-LD4-2LO-30-120-EDD-90

CANDELA DISTRIBUTION (continued):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°	185°
0°	703.1	703.1	703.1	703.1	703.1	703.1	703.1	703.1	703.1	703.1	703.1
2.5°	702.1	702.1	695.7	694.3	693.6	694.4	688.0	686.9	696.1	693.0	685.9
5°	696.6	696.2	687.2	685.6	685.6	684.6	677.4	675.7	684.9	682.3	674.6
7.5°	689.7	688.7	678.0	676.9	675.2	674.6	666.6	665.4	673.3	671.6	664.4
10°	681.3	680.3	667.7	666.9	665.1	663.8	656.2	655.4	663.4	660.8	655.1
12.5°	670.3	668.5	655.6	654.7	653.3	652.8	645.4	645.1	653.9	651.3	645.2
15°	655.9	654.4	640.0	640.3	640.5	640.5	634.6	634.2	642.9	641.8	635.2
17.5°	640.0	638.0	624.2	625.2	626.4	627.7	623.1	623.9	633.1	631.6	625.7
20°	621.9	620.0	606.5	609.3	611.8	614.4	611.4	613.7	622.3	621.6	617.2
22.5°	601.8	599.8	587.3	591.6	595.7	600.6	599.3	601.9	611.0	610.8	606.9
25°	577.2	577.7	566.7	571.9	578.8	585.7	586.2	590.5	600.5	599.5	595.9
27.5°	554.2	554.9	543.2	552.1	561.3	570.1	572.2	578.2	588.3	587.5	584.4
30°	530.1	530.9	519.6	531.7	542.9	553.7	558.3	566.3	576.7	576.7	573.4
32.5°	505.0	506.5	494.7	510.9	523.9	536.5	544.5	552.9	564.7	564.4	561.6
35°	479.2	480.9	470.1	490.7	503.7	519.1	529.1	540.3	550.8	550.9	548.8
37.5°	453.0	455.0	445.1	467.8	482.5	500.7	513.5	524.7	536.3	537.0	535.0
40°	426.9	429.1	420.5	442.3	461.0	481.4	496.1	509.3	522.1	522.4	521.1
42.5°	400.9	403.1	396.8	418.1	439.2	461.0	478.4	493.4	506.5	507.3	505.8
45°	375.4	377.4	372.8	396.1	416.4	440.2	460.2	477.1	490.4	491.6	491.1
47.5°	350.2	352.0	347.9	369.2	392.7	417.9	441.0	459.7	473.8	475.1	474.8
50°	325.4	326.9	322.5	344.8	368.0	394.9	419.1	440.7	456.5	457.8	457.6
52.5°	300.8	302.3	298.5	322.0	343.1	371.5	397.7	421.2	436.8	438.7	439.1
55°	277.0	277.7	274.7	297.2	317.7	347.4	377.6	400.4	415.9	417.6	418.6
57.5°	253.2	253.4	250.9	272.4	292.1	322.5	354.1	378.1	392.8	394.5	395.9
60°	229.6	229.5	226.7	247.5	266.4	296.4	329.3	353.1	367.4	368.9	370.8
62.5°	206.2	205.7	203.2	222.4	240.1	269.8	302.9	325.9	339.5	340.5	343.1
65°	182.9	182.4	180.1	197.8	213.9	242.2	274.7	296.5	308.8	310.2	309.7
67.5°	159.9	158.9	157.1	173.0	187.6	213.9	245.0	265.9	276.0	277.2	280.3
70°	137.0	135.8	131.7	148.6	161.4	184.8	213.9	232.4	240.9	242.1	241.6
72.5°	114.3	113.2	108.7	124.3	135.1	155.6	181.6	197.0	204.4	205.3	205.3
75°	92.3	91.7	88.9	100.7	109.7	126.5	148.4	161.2	167.0	168.1	167.8
77.5°	71.2	70.7	67.9	78.1	85.1	97.6	115.3	125.3	129.6	130.9	133.7
80°	51.0	50.8	46.4	56.4	59.5	70.0	83.0	90.7	93.0	94.8	96.8
82.5°	32.6	32.8	28.4	36.9	38.2	44.9	53.0	57.7	59.4	60.8	62.3
85°	15.9	16.6	14.1	19.5	19.7	23.1	26.6	28.4	29.0	30.2	31.5
87.5°	4.1	4.8	2.6	5.6	4.9	6.4	7.4	7.9	7.7	8.5	9.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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



TEST NUMBER: P837968

CATALOG NUMBER: ORLG-24-2-INS-ASY2R-LD4-2LO-30-120-EDD-90

CANDELA DISTRIBUTION (continued):

	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°	285°
0°	703.1	703.1	703.1	703.1	703.1	703.1	703.1	703.1	703.1	703.1	703.1
2.5°	688.2	693.5	690.8	699.4	702.6	697.4	706.6	706.7	700.2	707.9	712.2
5°	677.5	683.0	681.3	690.2	694.3	689.7	700.8	703.0	696.6	705.3	712.2
7.5°	666.7	673.1	671.0	680.0	684.9	681.3	693.3	696.7	691.8	701.3	710.5
10°	657.4	662.8	660.5	670.0	674.3	671.3	683.1	689.5	684.9	696.6	707.6
12.5°	648.2	652.6	650.0	657.9	662.0	658.2	672.6	678.5	675.2	687.4	701.5
15°	636.4	641.3	637.7	644.7	647.9	644.6	656.4	666.6	662.5	675.7	691.3
17.5°	627.4	630.1	625.2	630.8	632.6	628.2	640.1	650.2	647.2	661.6	679.7
20°	617.3	619.6	612.8	615.9	615.7	610.1	621.1	631.0	629.0	644.9	665.4
22.5°	606.2	607.3	599.3	600.0	599.6	590.5	600.3	610.3	609.5	625.6	648.5
25°	594.4	594.6	584.2	583.9	580.3	569.5	578.2	589.5	587.0	604.4	628.5
27.5°	582.7	581.1	568.6	565.7	559.9	547.0	554.7	564.9	563.4	580.4	607.2
30°	570.3	568.1	552.9	547.5	539.1	524.2	530.6	540.1	540.9	555.8	583.9
32.5°	558.5	553.1	536.2	528.3	517.8	500.4	503.9	513.5	514.8	529.9	558.8
35°	543.2	539.6	518.8	505.3	495.0	476.0	479.6	486.3	488.3	503.0	532.4
37.5°	528.8	523.0	500.9	484.5	471.2	451.2	452.2	459.1	461.0	476.0	505.0
40°	513.9	505.7	481.9	462.7	447.4	426.4	425.3	432.5	434.0	448.6	474.8
42.5°	497.9	488.1	461.4	440.4	422.8	401.5	399.2	405.4	407.1	421.4	447.1
45°	481.9	470.1	440.4	417.4	398.2	376.4	374.1	378.9	381.3	394.8	419.5
47.5°	464.8	451.0	418.7	393.1	373.3	351.5	348.7	353.5	355.4	368.7	392.2
50°	446.9	430.2	396.4	368.2	348.5	327.0	322.9	328.5	330.3	342.8	365.8
52.5°	427.3	408.7	372.6	343.1	323.4	302.9	298.0	303.4	305.6	317.7	338.9
55°	406.4	386.4	348.7	320.0	298.7	278.7	274.6	276.7	281.3	292.8	312.4
57.5°	383.0	363.1	323.4	294.2	273.7	254.6	251.1	253.1	257.3	268.5	286.2
60°	358.0	337.0	297.7	268.5	248.6	230.4	227.3	229.1	233.7	243.9	260.3
62.5°	333.4	309.8	271.1	242.1	224.0	207.2	206.3	205.7	209.9	219.8	234.2
65°	303.6	281.0	243.4	215.8	199.4	184.2	180.9	182.4	186.5	195.5	210.6
67.5°	271.6	251.1	215.0	189.6	175.0	161.4	158.6	159.3	163.5	171.4	184.5
70°	237.7	219.6	186.0	163.2	150.9	138.1	136.3	136.5	140.6	147.4	158.9
72.5°	202.1	185.8	156.6	137.1	126.9	117.8	116.1	114.2	117.9	123.8	133.7
75°	165.8	151.5	127.4	111.5	103.5	95.8	94.3	92.3	96.1	101.2	108.9
77.5°	129.2	117.8	99.1	86.8	80.5	74.8	73.5	71.3	75.1	78.9	85.0
80°	93.5	85.1	74.0	61.0	58.9	55.1	53.8	51.5	55.1	57.6	62.2
82.5°	60.4	54.8	48.4	39.4	39.0	36.2	35.6	33.0	36.2	37.7	41.2
85°	30.5	27.9	26.2	20.0	20.7	18.9	18.7	15.9	18.5	19.2	21.2
87.5°	8.7	9.2	8.2	4.9	6.2	5.9	5.9	4.3	5.9	5.9	6.7
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P837968

CATALOG NUMBER: ORLG-24-2-INS-ASY2R-LD4-2LO-30-120-EDD-90

CANDELA DISTRIBUTION (continued):

	295°	305°	315°	325°	335°	345°	355°	360°
0°	703.1	703.1	703.1	703.1	703.1	703.1	703.1	703.1
2.5°	703.8	706.6	707.2	707.1	708.9	718.7	715.4	718.7
5°	705.4	711.7	713.3	715.6	718.5	729.7	726.1	730.0
7.5°	706.4	715.8	719.4	723.8	728.6	741.0	738.1	742.0
10°	706.4	718.5	723.8	731.2	737.6	752.0	749.2	753.8
12.5°	703.5	719.0	726.4	736.8	745.0	760.5	759.4	762.7
15°	697.4	716.6	726.7	740.0	750.2	767.6	767.1	771.0
17.5°	689.2	712.3	724.6	741.3	754.1	773.7	774.8	776.9
20°	678.9	704.3	720.4	740.9	756.9	778.4	779.9	782.8
22.5°	665.2	694.6	714.0	738.7	757.3	780.4	783.0	785.8
25°	649.2	683.0	705.6	734.6	755.6	780.2	783.8	786.3
27.5°	630.8	667.9	694.9	728.1	751.0	777.6	782.0	785.0
30°	609.5	651.8	682.8	719.5	744.8	772.7	777.4	780.4
32.5°	587.5	634.1	668.4	708.5	735.8	764.8	768.9	771.2
35°	563.6	612.6	651.0	694.4	724.1	752.2	755.3	757.7
37.5°	537.5	589.3	631.1	678.5	707.7	734.6	737.4	740.2
40°	510.6	564.9	608.8	659.0	688.2	713.1	716.1	718.1
42.5°	483.5	537.8	585.0	636.0	665.1	689.0	690.8	692.8
45°	456.1	509.8	558.3	610.6	639.3	661.8	662.5	664.1
47.5°	428.2	480.7	528.9	581.6	610.0	630.5	631.1	632.4
50°	400.2	451.7	497.6	550.3	578.0	599.6	596.7	598.0
52.5°	372.6	421.2	468.1	516.5	543.9	563.1	563.9	561.3
55°	345.6	391.3	434.5	481.1	507.1	522.1	521.6	522.5
57.5°	318.2	361.2	400.7	443.3	468.8	482.9	485.8	482.4
60°	290.3	330.7	366.1	404.6	429.2	441.0	444.5	441.2
62.5°	262.6	299.7	331.8	365.4	388.2	402.8	402.5	398.9
65°	234.9	268.5	297.2	325.7	345.6	360.2	359.5	356.2
67.5°	209.3	237.0	262.8	285.9	303.1	313.1	316.5	312.6
70°	181.1	205.0	227.7	246.2	260.5	269.5	272.8	269.3
72.5°	152.9	173.2	189.1	207.0	218.0	225.5	229.0	225.7
75°	125.0	141.7	154.7	168.6	176.3	182.7	186.6	183.4
77.5°	97.9	110.9	121.2	131.4	140.2	141.7	145.2	143.0
80°	72.2	81.5	89.1	95.8	102.2	102.8	105.6	104.3
82.5°	48.1	54.3	56.3	63.3	67.4	66.8	69.5	68.6
85°	25.4	29.2	32.6	34.8	37.1	34.9	37.4	36.4
87.5°	8.5	9.0	7.9	11.2	12.3	10.5	12.0	11.5
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)