

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: P837812

Luminaire Tested: **ORLG-12-4-INS-ASY2R-LD4-1LO-50-120-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: P837812
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-50-120-EDD-90
Description: 1FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2 and
RFI grid
Light Source: 5000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

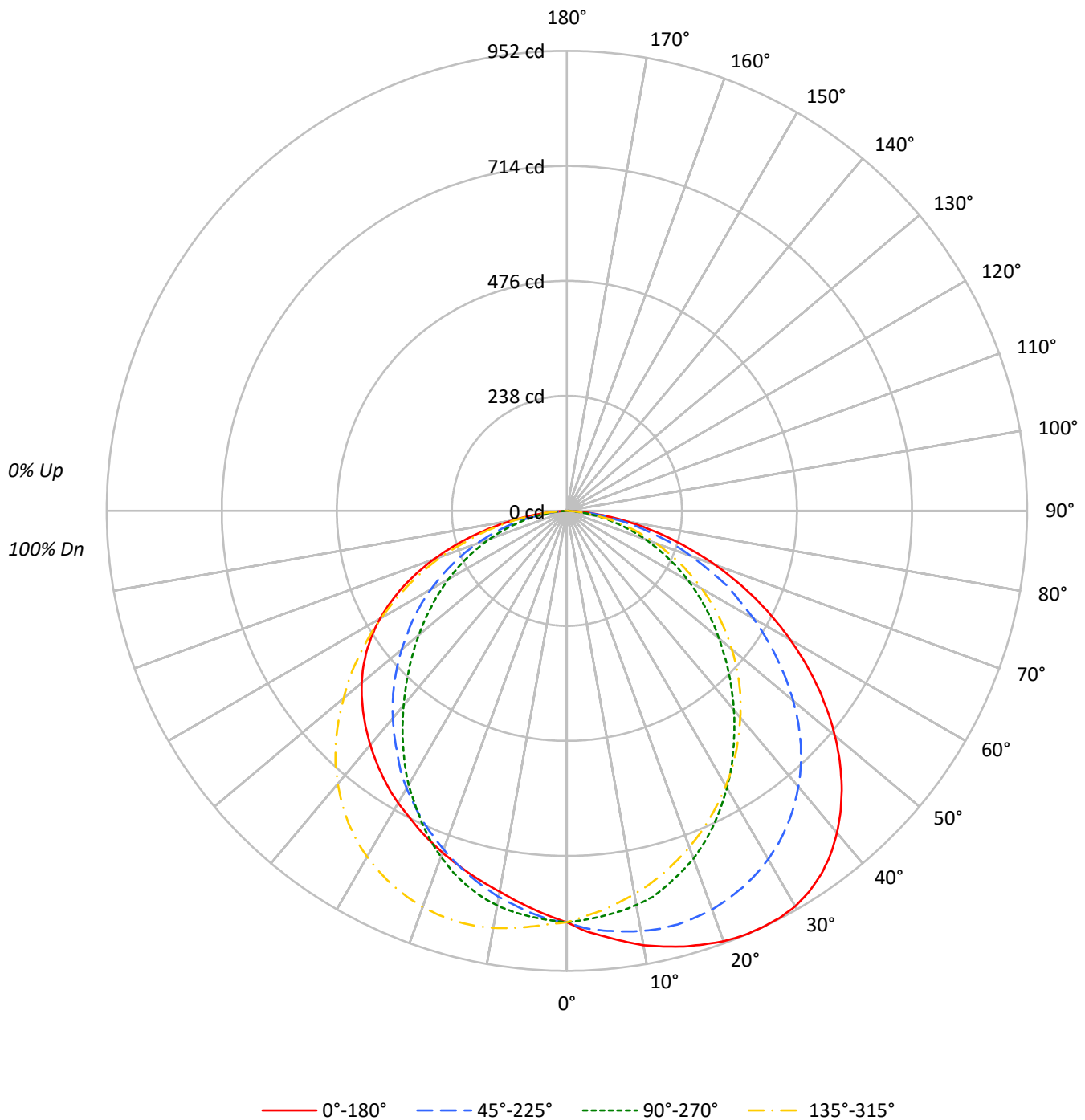
Lumens per Lamp: N/A
Luminaire Lumens: 2497.7 lumens
Efficiency: N/A
Efficacy: 106.7 lumens/watt
Spacing Criteria (0/90/45): 1.43 / 1.16 / 1.4
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

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°	2291	2291	2291	2291
5°	2388	2274	2232	2278
10°	2494	2263	2186	2266
15°	2601	2234	2165	2235
20°	2714	2193	2155	2181
25°	2827	2132	2155	2110
30°	2936	2058	2169	2035
35°	3014	1973	2191	1942
40°	3054	1888	2222	1846
45°	3060	1802	2265	1757
50°	3031	1720	2320	1674
55°	2968	1643	2372	1598
60°	2875	1563	2404	1523
65°	2746	1472	2391	1438
70°	2566	1364	2306	1339
75°	2308	1216	2116	1210
80°	1957	1018	1779	1034
85°	1362	673	1127	692

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	80.8	3.2
10°-20°	234.1	9.4
20°-30°	358.7	14.4
30°-40°	436.2	17.5
40°-50°	453.4	18.2
50°-60°	409.6	16.4
60°-70°	311.4	12.5
70°-80°	173.6	7.0
80°-90°	40.0	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°	673.6	27.0
0°-40°	1109.7	44.4
0°-60°	1972.7	79.0
0°-90°	2497.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2497.7	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	851	851	851	851	851	
5°	884	842	826	843	884	85
15°	934	802	777	802	934	265
25°	952	718	726	711	952	440
35°	918	601	667	591	918	573
45°	804	474	595	462	804	619
55°	633	350	506	341	633	565
65°	431	231	376	226	431	426
75°	222	117	204	116	222	236
85°	44	22	36	22	44	56
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°	851.3	851.3	851.3	851.3	851.3	851.3	851.3	851.3	851.3	851.3	851.3
2.5°	870.2	857.5	857.7	868.8	860.3	864.4	852.5	857.1	855.7	856.7	847.0
5°	883.9	870.2	870.0	879.5	870.0	871.8	856.7	859.7	855.3	852.5	842.0
7.5°	898.4	884.7	883.3	891.6	879.1	877.7	861.1	861.1	853.1	846.2	836.2
10°	912.7	898.6	896.8	903.2	887.7	883.1	862.8	859.7	849.1	838.8	828.1
12.5°	923.4	909.1	907.7	911.7	894.2	885.9	862.8	856.7	841.2	826.7	818.4
15°	933.5	918.8	915.1	917.1	897.0	885.9	860.1	850.5	830.7	811.6	801.9
17.5°	940.7	926.6	922.8	922.6	898.4	882.5	854.1	841.0	817.2	794.1	784.4
20°	947.8	933.7	929.0	925.4	898.0	877.9	845.4	827.7	799.9	774.1	765.9
22.5°	951.4	936.9	931.8	926.4	895.4	869.6	834.6	812.2	780.4	749.6	742.9
25°	952.0	937.1	931.6	923.8	890.2	859.7	820.7	793.5	758.0	723.8	718.1
27.5°	950.4	934.1	928.6	919.2	882.5	847.6	804.3	772.3	734.2	696.4	690.3
30°	944.9	928.4	923.0	910.9	871.6	832.7	786.2	748.7	707.7	667.6	662.3
32.5°	933.7	917.7	913.3	901.2	859.7	815.4	765.1	723.2	678.6	640.2	632.3
35°	917.5	901.4	898.6	885.9	843.0	794.7	742.1	695.4	647.6	608.5	600.7
37.5°	896.2	882.7	878.5	866.0	823.3	771.3	715.7	665.3	616.0	573.9	569.1
40°	869.4	856.7	853.5	842.4	800.5	745.3	687.1	634.1	583.4	544.3	537.6
42.5°	838.8	826.9	825.1	813.6	772.3	716.5	656.1	601.7	549.5	511.7	505.0
45°	804.1	792.5	792.1	781.2	741.5	684.5	623.5	568.9	516.3	477.2	473.6
47.5°	765.7	755.4	755.4	745.3	707.2	649.4	590.0	534.8	483.0	448.4	442.0
50°	724.0	714.3	711.3	706.4	669.2	611.0	554.6	501.4	450.0	417.0	410.9
52.5°	679.6	671.2	673.2	664.1	628.1	571.1	518.9	463.9	416.8	386.8	380.7
55°	632.7	620.8	622.6	619.2	585.2	530.0	478.8	432.9	384.3	356.1	350.3
57.5°	584.0	568.5	574.9	572.9	539.5	487.9	442.0	397.8	351.9	325.9	320.3
60°	534.2	519.3	525.8	524.1	492.7	445.8	404.1	363.0	319.7	296.1	290.5
62.5°	483.0	469.3	475.2	473.8	445.0	402.7	366.4	328.7	287.3	266.1	260.9
65°	431.3	418.2	423.6	422.6	396.0	363.8	327.7	293.1	254.8	236.3	231.2
67.5°	378.5	366.4	371.3	371.3	346.9	316.1	288.7	257.2	222.8	206.9	202.2
70°	326.1	314.8	319.1	318.7	298.1	273.1	249.4	221.2	190.4	177.3	173.4
72.5°	273.2	263.3	267.3	266.9	249.6	233.5	210.1	185.7	158.9	148.3	144.8
75°	222.0	212.7	216.5	216.1	202.0	186.9	171.2	150.9	127.9	120.5	117.0
77.5°	173.2	163.6	166.8	166.8	156.5	145.6	133.1	117.4	101.1	93.1	90.6
80°	126.3	121.7	120.1	120.3	113.4	106.2	99.9	84.8	72.9	67.5	65.7
82.5°	83.0	79.2	77.6	78.0	74.1	69.7	65.7	55.2	47.3	44.1	43.1
85°	44.1	41.3	39.9	40.9	40.1	37.7	35.7	28.6	23.6	22.4	21.8
87.5°	13.9	12.1	11.1	14.7	12.5	11.1	10.7	8.5	6.6	6.6	6.4
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°	851.3	851.3	851.3	851.3	851.3	851.3	851.3	851.3	851.3	851.3	851.3
2.5°	850.1	850.1	842.4	840.6	839.8	840.8	833.1	831.7	842.8	839.0	830.5
5°	843.4	843.0	832.1	830.1	830.1	828.9	820.1	818.2	829.3	826.1	816.8
7.5°	835.0	833.8	820.9	819.6	817.6	816.8	807.0	805.7	815.2	813.2	804.5
10°	824.9	823.7	808.4	807.4	805.3	803.7	794.5	793.5	803.3	800.1	793.1
12.5°	811.6	809.4	793.7	792.7	791.0	790.4	781.4	781.0	791.7	788.6	781.2
15°	794.1	792.3	774.9	775.3	775.5	775.5	768.3	767.9	778.4	777.1	769.1
17.5°	774.9	772.5	755.8	757.0	758.4	760.0	754.4	755.4	766.5	764.7	757.6
20°	753.0	750.6	734.4	737.7	740.7	743.9	740.3	743.1	753.4	752.6	747.3
22.5°	728.6	726.2	711.1	716.3	721.3	727.2	725.6	728.8	739.7	739.5	734.8
25°	698.8	699.4	686.1	692.5	700.8	709.1	709.7	714.9	727.0	725.8	721.5
27.5°	671.0	671.8	657.7	668.4	679.6	690.3	692.9	700.0	712.3	711.3	707.6
30°	641.8	642.8	629.1	643.8	657.3	670.4	676.0	685.7	698.2	698.2	694.2
32.5°	611.4	613.2	598.9	618.6	634.3	649.6	659.3	669.4	683.7	683.3	679.9
35°	580.3	582.2	569.1	594.2	609.8	628.5	640.6	654.1	666.8	667.0	664.5
37.5°	548.5	550.9	539.0	566.4	584.2	606.3	621.8	635.3	649.4	650.2	647.8
40°	516.9	519.5	509.2	535.6	558.2	582.8	600.7	616.6	632.1	632.5	630.9
42.5°	485.3	488.1	480.4	506.2	531.8	558.2	579.3	597.3	613.2	614.2	612.4
45°	454.6	456.9	451.4	479.6	504.2	533.0	557.2	577.7	593.8	595.2	594.6
47.5°	424.0	426.2	421.2	447.0	475.4	506.0	534.0	556.6	573.7	575.3	574.9
50°	394.0	395.8	390.4	417.4	445.6	478.2	507.4	533.6	552.7	554.2	554.0
52.5°	364.2	366.0	361.4	389.8	415.4	449.8	481.6	510.0	528.8	531.2	531.6
55°	335.4	336.2	332.6	359.8	384.7	420.6	457.1	484.7	503.6	505.6	506.8
57.5°	306.6	306.8	303.8	329.8	353.7	390.4	428.7	457.7	475.6	477.6	479.4
60°	278.0	277.8	274.4	299.7	322.5	358.8	398.8	427.5	444.8	446.6	449.0
62.5°	249.6	249.0	246.0	269.3	290.7	326.7	366.8	394.6	411.1	412.3	415.4
65°	221.4	220.8	218.0	239.5	259.0	293.3	332.6	359.0	373.9	375.5	374.9
67.5°	193.6	192.4	190.2	209.5	227.2	259.0	296.7	321.9	334.2	335.6	339.4
70°	165.8	164.4	159.5	179.9	195.4	223.8	259.0	281.4	291.7	293.1	292.5
72.5°	138.4	137.0	131.7	150.5	163.6	188.5	219.8	238.5	247.4	248.6	248.6
75°	111.8	111.0	107.6	121.9	132.9	153.1	179.7	195.2	202.2	203.5	203.2
77.5°	86.2	85.6	82.2	94.5	103.1	118.2	139.6	151.7	156.9	158.5	161.8
80°	61.8	61.6	56.2	68.3	72.1	84.8	100.5	109.8	112.6	114.8	117.2
82.5°	39.5	39.7	34.4	44.7	46.3	54.4	64.1	69.9	71.9	73.7	75.5
85°	19.3	20.1	17.1	23.6	23.8	28.0	32.2	34.4	35.1	36.5	38.1
87.5°	5.0	5.8	3.2	6.8	6.0	7.7	8.9	9.5	9.3	10.3	10.9
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°	851.3	851.3	851.3	851.3	851.3	851.3	851.3	851.3	851.3	851.3	851.3
2.5°	833.3	839.6	836.4	846.8	850.7	844.4	855.5	855.7	847.7	857.1	862.2
5°	820.3	826.9	824.9	835.6	840.6	835.0	848.5	851.1	843.4	853.9	862.2
7.5°	807.2	815.0	812.4	823.3	829.3	824.9	839.4	843.6	837.6	849.1	860.3
10°	795.9	802.5	799.7	811.2	816.4	812.8	827.1	834.8	829.3	843.4	856.7
12.5°	784.8	790.2	787.0	796.5	801.5	796.9	814.4	821.5	817.6	832.3	849.3
15°	770.5	776.5	772.1	780.6	784.4	780.4	794.7	807.0	802.1	818.2	837.0
17.5°	759.6	763.0	757.0	763.7	765.9	760.6	775.1	787.2	783.6	801.1	822.9
20°	747.5	750.2	741.9	745.7	745.5	738.7	752.0	763.9	761.6	780.8	805.7
22.5°	734.0	735.4	725.6	726.4	726.0	714.9	726.8	738.9	737.9	757.4	785.2
25°	719.7	719.9	707.4	707.0	702.6	689.5	700.0	713.7	710.7	731.8	761.0
27.5°	705.6	703.6	688.5	684.9	678.0	662.3	671.6	683.9	682.1	702.8	735.2
30°	690.5	687.9	669.4	662.9	652.7	634.7	642.4	653.9	654.9	673.0	707.0
32.5°	676.2	669.6	649.2	639.6	626.9	605.9	610.0	621.8	623.4	641.6	676.6
35°	657.7	653.3	628.1	611.8	599.3	576.3	580.7	588.8	591.2	609.1	644.6
37.5°	640.2	633.3	606.5	586.6	570.5	546.3	547.5	555.8	558.2	576.3	611.4
40°	622.2	612.2	583.4	560.2	541.7	516.3	514.9	523.7	525.4	543.1	574.9
42.5°	602.9	591.0	558.6	533.2	511.9	486.1	483.4	490.9	492.9	510.2	541.3
45°	583.4	569.1	533.2	505.4	482.2	455.7	453.0	458.7	461.7	478.0	508.0
47.5°	562.8	546.1	507.0	476.0	452.0	425.6	422.2	427.9	430.3	446.4	474.8
50°	541.1	520.9	480.0	445.8	422.0	396.0	391.0	397.8	399.9	415.0	442.8
52.5°	517.3	494.9	451.2	415.4	391.6	366.8	360.8	367.4	370.0	384.7	410.3
55°	492.1	467.9	422.2	387.4	361.6	337.4	332.4	335.0	340.6	354.5	378.3
57.5°	463.7	439.7	391.6	356.3	331.4	308.2	304.0	306.4	311.6	325.1	346.5
60°	433.5	408.1	360.4	325.1	301.1	279.0	275.2	277.4	283.0	295.3	315.2
62.5°	403.7	375.1	328.3	293.1	271.3	250.8	249.8	249.0	254.2	266.1	283.6
65°	367.6	340.2	294.7	261.3	241.5	223.0	219.0	220.8	225.8	236.7	255.0
67.5°	328.9	304.0	260.3	229.6	211.9	195.4	192.0	192.8	198.0	207.5	223.4
70°	287.7	265.9	225.2	197.6	182.7	167.2	165.0	165.2	170.2	178.5	192.4
72.5°	244.7	225.0	189.6	166.0	153.7	142.6	140.6	138.2	142.8	149.9	161.8
75°	200.8	183.5	154.3	135.0	125.3	116.0	114.2	111.8	116.4	122.5	131.9
77.5°	156.5	142.6	119.9	105.1	97.5	90.6	89.0	86.4	91.0	95.5	102.9
80°	113.2	103.1	89.6	73.9	71.3	66.7	65.1	62.4	66.7	69.7	75.3
82.5°	73.1	66.3	58.6	47.7	47.3	43.9	43.1	39.9	43.9	45.7	49.8
85°	36.9	33.8	31.8	24.2	25.0	22.8	22.6	19.3	22.4	23.2	25.6
87.5°	10.5	11.1	9.9	6.0	7.5	7.1	7.1	5.2	7.1	7.1	8.1
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: P837812

CATALOG NUMBER: ORLG-12-4-INS-ASY2R-LD4-1LO-50-120-EDD-90

CANDELA DISTRIBUTION (continued):

	295°	305°	315°	325°	335°	345°	355°	360°
0°	851.3	851.3	851.3	851.3	851.3	851.3	851.3	851.3
2.5°	852.1	855.5	856.3	856.1	858.3	870.2	866.2	870.2
5°	854.1	861.7	863.6	866.4	870.0	883.5	879.1	883.9
7.5°	855.3	866.6	871.0	876.3	882.1	897.2	893.6	898.4
10°	855.3	870.0	876.3	885.3	893.0	910.5	907.1	912.7
12.5°	851.7	870.6	879.5	892.0	902.0	920.8	919.4	923.4
15°	844.4	867.6	879.9	896.0	908.3	929.4	928.8	933.5
17.5°	834.4	862.4	877.3	897.6	913.1	936.7	938.1	940.7
20°	821.9	852.7	872.2	897.0	916.5	942.5	944.3	947.8
22.5°	805.5	841.0	864.4	894.4	916.9	944.9	948.0	951.4
25°	786.0	826.9	854.3	889.5	914.9	944.7	949.0	952.0
27.5°	763.7	808.6	841.4	881.5	909.3	941.5	946.8	950.4
30°	737.9	789.2	826.7	871.2	901.8	935.5	941.3	944.9
32.5°	711.3	767.7	809.2	857.9	890.8	926.0	931.0	933.7
35°	682.3	741.7	788.2	840.8	876.7	910.7	914.5	917.5
37.5°	650.8	713.5	764.1	821.5	856.9	889.5	892.8	896.2
40°	618.2	683.9	737.1	797.9	833.3	863.4	867.0	869.4
42.5°	585.4	651.2	708.3	770.1	805.3	834.2	836.4	838.8
45°	552.3	617.2	676.0	739.3	774.1	801.3	802.1	804.1
47.5°	518.5	582.0	640.4	704.2	738.5	763.4	764.1	765.7
50°	484.5	546.9	602.5	666.2	699.8	726.0	722.4	724.0
52.5°	451.2	510.0	566.8	625.3	658.5	681.7	682.7	679.6
55°	418.4	473.8	526.0	582.4	614.0	632.1	631.5	632.7
57.5°	385.3	437.3	485.1	536.8	567.5	584.6	588.2	584.0
60°	351.5	400.3	443.2	489.9	519.7	534.0	538.2	534.2
62.5°	317.9	362.8	401.7	442.4	470.0	487.7	487.3	483.0
65°	284.4	325.1	359.8	394.4	418.4	436.1	435.3	431.3
67.5°	253.4	287.0	318.1	346.1	367.0	379.1	383.3	378.5
70°	219.2	248.2	275.6	298.1	315.3	326.3	330.2	326.1
72.5°	185.1	209.7	229.0	250.6	263.9	273.1	277.2	273.2
75°	151.3	171.6	187.3	204.1	213.5	221.2	226.0	222.0
77.5°	118.6	134.2	146.8	159.1	169.8	171.6	175.7	173.2
80°	87.4	98.7	107.8	116.0	123.7	124.5	127.9	126.3
82.5°	58.2	65.7	68.1	76.7	81.6	80.8	84.2	83.0
85°	30.8	35.3	39.5	42.1	44.9	42.3	45.3	44.1
87.5°	10.3	10.9	9.5	13.5	14.9	12.7	14.5	13.9
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)