

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: P837896

Luminaire Tested: **ORLG-24-2-INS-ASY2R-LD4-2LO-40-120-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: P837896
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-40-120-EDD
Description: 2FT x 2FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2 and
RFI grid
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

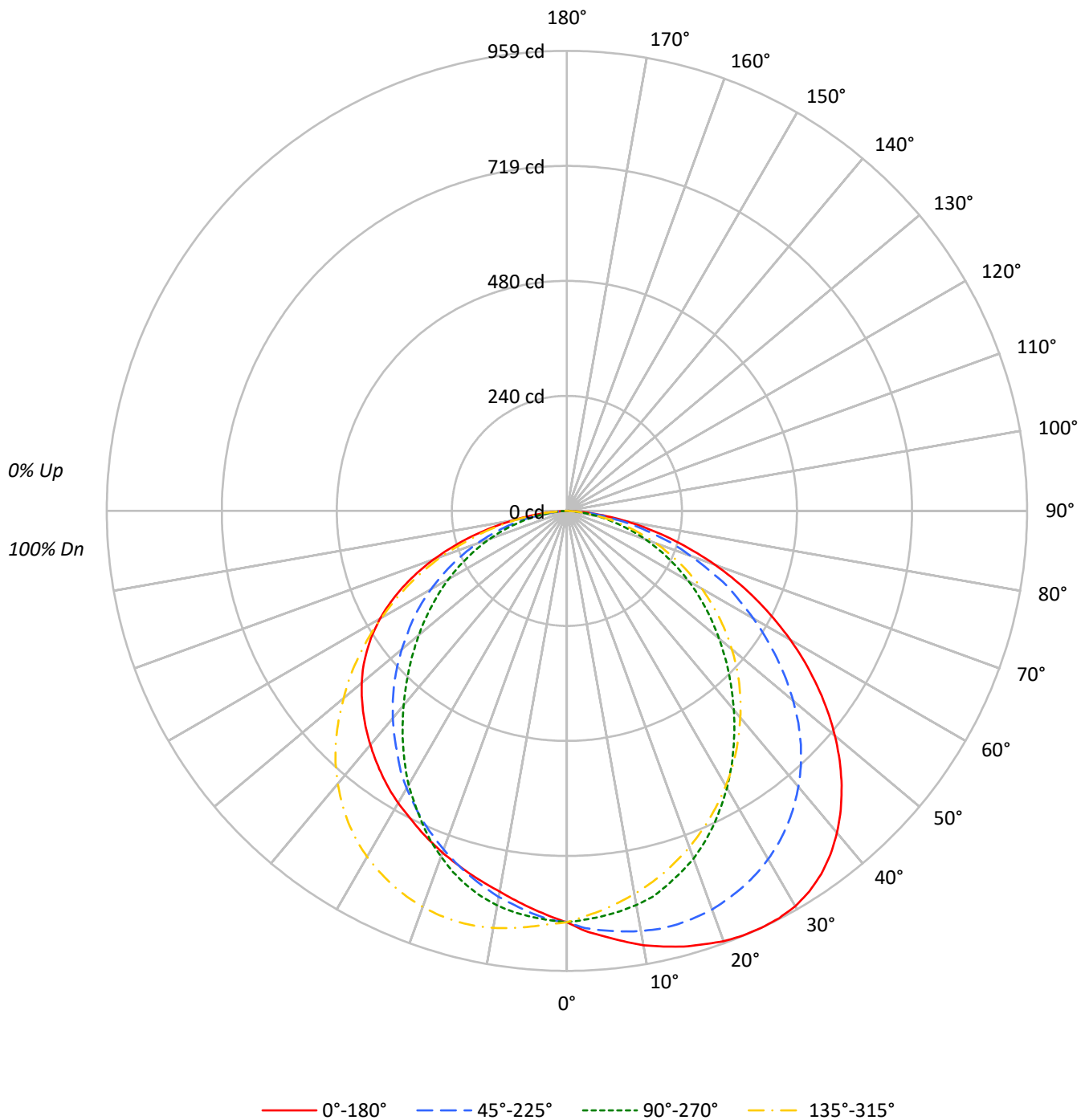
Lumens per Lamp: N/A
Luminaire Lumens: 2515.7 lumens
Efficiency: N/A
Efficacy: 107.5 lumens/watt
Spacing Criteria (0/90/45): 1.43 / 1.16 / 1.4
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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

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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°	2308	2308	2308	2308
5°	2405	2291	2248	2295
10°	2512	2279	2202	2282
15°	2620	2250	2181	2251
20°	2734	2209	2171	2197
25°	2847	2148	2171	2126
30°	2957	2073	2185	2050
35°	3036	1988	2207	1956
40°	3076	1902	2238	1859
45°	3082	1815	2281	1770
50°	3053	1732	2337	1686
55°	2990	1655	2389	1609
60°	2895	1575	2421	1534
65°	2766	1482	2408	1448
70°	2584	1374	2323	1349
75°	2325	1225	2131	1219
80°	1971	1026	1791	1041
85°	1371	679	1136	698

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°	81.4	3.2
10°-20°	235.8	9.4
20°-30°	361.3	14.4
30°-40°	439.3	17.5
40°-50°	456.7	18.2
50°-60°	412.5	16.4
60°-70°	313.6	12.5
70°-80°	174.8	6.9
80°-90°	40.3	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°	678.5	27.0
0°-40°	1117.8	44.4
0°-60°	1987.0	79.0
0°-90°	2515.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2515.7	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	858	858	858	858	858	
5°	890	848	832	850	890	86
15°	940	808	783	808	940	267
25°	959	723	731	716	959	443
35°	924	605	672	596	924	577
45°	810	477	600	465	810	624
55°	637	353	509	343	637	569
65°	434	233	378	227	434	429
75°	224	118	205	117	224	238
85°	44	22	37	23	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°	857.5	857.5	857.5	857.5	857.5	857.5	857.5	857.5	857.5	857.5	857.5
2.5°	876.5	863.7	863.9	875.1	866.5	870.7	858.7	863.3	861.9	862.9	853.1
5°	890.3	876.5	876.3	885.9	876.3	878.1	862.9	865.9	861.5	858.7	848.1
7.5°	904.9	891.1	889.7	898.1	885.5	884.1	867.3	867.3	859.3	852.3	842.3
10°	919.3	905.1	903.3	909.7	894.1	889.5	869.1	865.9	855.3	844.9	834.1
12.5°	930.1	915.7	914.3	918.3	900.7	892.3	869.1	862.9	847.3	832.7	824.3
15°	940.3	925.5	921.7	923.7	903.5	892.3	866.3	856.7	836.7	817.5	807.7
17.5°	947.5	933.3	929.5	929.3	904.9	888.9	860.3	847.1	823.1	799.9	790.1
20°	954.7	940.5	935.7	932.1	904.5	884.3	851.5	833.7	805.7	779.7	771.5
22.5°	958.3	943.7	938.5	933.1	901.9	875.9	840.7	818.1	786.1	755.1	748.3
25°	958.9	943.9	938.3	930.5	896.7	865.9	826.7	799.3	763.5	729.1	723.3
27.5°	957.3	940.9	935.3	925.9	888.9	853.7	810.1	777.9	739.5	701.5	695.3
30°	951.7	935.1	929.7	917.5	877.9	838.7	791.9	754.1	712.9	672.5	667.1
32.5°	940.5	924.3	919.9	907.7	865.9	821.3	770.7	728.5	683.5	644.9	636.9
35°	924.1	907.9	905.1	892.3	849.1	800.5	747.5	700.5	652.3	612.9	605.1
37.5°	902.7	889.1	884.9	872.3	829.3	776.9	720.9	670.1	620.5	578.1	573.2
40°	875.7	862.9	859.7	848.5	806.3	750.7	692.1	638.7	587.7	548.2	541.4
42.5°	844.9	832.9	831.1	819.5	777.9	721.7	660.9	606.1	553.4	515.4	508.6
45°	809.9	798.3	797.9	786.9	746.9	689.5	628.1	573.0	520.0	480.6	477.0
47.5°	771.3	760.9	760.9	750.7	712.3	654.1	594.3	538.6	486.4	451.6	445.2
50°	729.3	719.5	716.5	711.5	674.1	615.5	558.6	505.0	453.2	420.0	413.8
52.5°	684.5	676.1	678.1	668.9	632.7	575.3	522.6	467.2	419.8	389.6	383.4
55°	637.3	625.3	627.1	623.7	589.5	533.8	482.2	436.0	387.0	358.6	352.8
57.5°	588.3	572.6	579.1	577.1	543.4	491.4	445.2	400.6	354.4	328.2	322.6
60°	538.0	523.0	529.6	527.8	496.2	449.0	407.0	365.6	322.0	298.2	292.6
62.5°	486.4	472.6	478.6	477.2	448.2	405.6	369.0	331.0	289.4	268.0	262.8
65°	434.4	421.2	426.6	425.6	398.8	366.4	330.0	295.2	256.6	238.0	232.8
67.5°	381.2	369.0	374.0	374.0	349.4	318.4	290.8	259.0	224.4	208.4	203.6
70°	328.4	317.0	321.4	321.0	300.2	275.0	251.2	222.8	191.8	178.6	174.6
72.5°	275.2	265.2	269.2	268.8	251.4	235.2	211.6	187.0	160.0	149.4	145.8
75°	223.6	214.2	218.0	217.6	203.4	188.2	172.4	152.0	128.8	121.4	117.8
77.5°	174.4	164.8	168.0	168.0	157.6	146.6	134.0	118.2	101.8	93.8	91.2
80°	127.2	122.6	121.0	121.2	114.2	107.0	100.6	85.4	73.4	68.0	66.2
82.5°	83.6	79.8	78.2	78.6	74.6	70.2	66.2	55.6	47.6	44.4	43.4
85°	44.4	41.6	40.2	41.2	40.4	38.0	36.0	28.8	23.8	22.6	22.0
87.5°	14.0	12.2	11.2	14.8	12.6	11.2	10.8	8.6	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°	857.5	857.5	857.5	857.5	857.5	857.5	857.5	857.5	857.5	857.5	857.5
2.5°	856.3	856.3	848.5	846.7	845.9	846.9	839.1	837.7	848.9	845.1	836.5
5°	849.5	849.1	838.1	836.1	836.1	834.9	826.1	824.1	835.3	832.1	822.7
7.5°	841.1	839.9	826.9	825.5	823.5	822.7	812.9	811.5	821.1	819.1	810.3
10°	830.9	829.7	814.3	813.3	811.1	809.5	800.3	799.3	809.1	805.9	798.9
12.5°	817.5	815.3	799.5	798.5	796.7	796.1	787.1	786.7	797.5	794.3	786.9
15°	799.9	798.1	780.5	780.9	781.1	781.1	773.9	773.5	784.1	782.7	774.7
17.5°	780.5	778.1	761.3	762.5	763.9	765.5	759.9	760.9	772.1	770.3	763.1
20°	758.5	756.1	739.7	743.1	746.1	749.3	745.7	748.5	758.9	758.1	752.7
22.5°	733.9	731.5	716.3	721.5	726.5	732.5	730.9	734.1	745.1	744.9	740.1
25°	703.9	704.5	691.1	697.5	705.9	714.3	714.9	720.1	732.3	731.1	726.7
27.5°	675.9	676.7	662.5	673.3	684.5	695.3	697.9	705.1	717.5	716.5	712.7
30°	646.5	647.5	633.7	648.5	662.1	675.3	680.9	690.7	703.3	703.3	699.3
32.5°	615.9	617.7	603.3	623.1	638.9	654.3	664.1	674.3	688.7	688.3	684.9
35°	584.5	586.5	573.2	598.5	614.3	633.1	645.3	658.9	671.7	671.9	669.3
37.5°	552.4	554.8	542.8	570.4	588.5	610.7	626.3	639.9	654.1	654.9	652.5
40°	520.6	523.2	512.8	539.4	562.2	587.1	605.1	621.1	636.7	637.1	635.5
42.5°	488.8	491.6	483.8	509.8	535.6	562.2	583.5	601.7	617.7	618.7	616.9
45°	457.8	460.2	454.6	483.0	507.8	536.8	561.2	581.9	598.1	599.5	598.9
47.5°	427.0	429.2	424.2	450.2	478.8	509.6	537.8	560.6	577.9	579.5	579.1
50°	396.8	398.6	393.2	420.4	448.8	481.6	511.0	537.4	556.6	558.2	558.0
52.5°	366.8	368.6	364.0	392.6	418.4	453.0	485.0	513.6	532.6	535.0	535.4
55°	337.8	338.6	335.0	362.4	387.4	423.6	460.4	488.2	507.2	509.2	510.4
57.5°	308.8	309.0	306.0	332.2	356.2	393.2	431.8	461.0	479.0	481.0	482.8
60°	280.0	279.8	276.4	301.8	324.8	361.4	401.6	430.6	448.0	449.8	452.2
62.5°	251.4	250.8	247.8	271.2	292.8	329.0	369.4	397.4	414.0	415.2	418.4
65°	223.0	222.4	219.6	241.2	260.8	295.4	335.0	361.6	376.6	378.2	377.6
67.5°	195.0	193.8	191.6	211.0	228.8	260.8	298.8	324.2	336.6	338.0	341.8
70°	167.0	165.6	160.6	181.2	196.8	225.4	260.8	283.4	293.8	295.2	294.6
72.5°	139.4	138.0	132.6	151.6	164.8	189.8	221.4	240.2	249.2	250.4	250.4
75°	112.6	111.8	108.4	122.8	133.8	154.2	181.0	196.6	203.6	205.0	204.6
77.5°	86.8	86.2	82.8	95.2	103.8	119.0	140.6	152.8	158.0	159.6	163.0
80°	62.2	62.0	56.6	68.8	72.6	85.4	101.2	110.6	113.4	115.6	118.0
82.5°	39.8	40.0	34.6	45.0	46.6	54.8	64.6	70.4	72.4	74.2	76.0
85°	19.4	20.2	17.2	23.8	24.0	28.2	32.4	34.6	35.4	36.8	38.4
87.5°	5.0	5.8	3.2	6.8	6.0	7.8	9.0	9.6	9.4	10.4	11.0
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°	857.5	857.5	857.5	857.5	857.5	857.5	857.5	857.5	857.5	857.5	857.5
2.5°	839.3	845.7	842.5	852.9	856.9	850.5	861.7	861.9	853.9	863.3	868.5
5°	826.3	832.9	830.9	841.7	846.7	841.1	854.7	857.3	849.5	860.1	868.5
7.5°	813.1	820.9	818.3	829.3	835.3	830.9	845.5	849.7	843.7	855.3	866.5
10°	801.7	808.3	805.5	817.1	822.3	818.7	833.1	840.9	835.3	849.5	862.9
12.5°	790.5	795.9	792.7	802.3	807.3	802.7	820.3	827.5	823.5	838.3	855.5
15°	776.1	782.1	777.7	786.3	790.1	786.1	800.5	812.9	807.9	824.1	843.1
17.5°	765.1	768.5	762.5	769.3	771.5	766.1	780.7	792.9	789.3	806.9	828.9
20°	752.9	755.7	747.3	751.1	750.9	744.1	757.5	769.5	767.1	786.5	811.5
22.5°	739.3	740.7	730.9	731.7	731.3	720.1	732.1	744.3	743.3	762.9	790.9
25°	724.9	725.1	712.5	712.1	707.7	694.5	705.1	718.9	715.9	737.1	766.5
27.5°	710.7	708.7	693.5	689.9	682.9	667.1	676.5	688.9	687.1	707.9	740.5
30°	695.5	692.9	674.3	667.7	657.5	639.3	647.1	658.7	659.7	677.9	712.1
32.5°	681.1	674.5	653.9	644.3	631.5	610.3	614.5	626.3	627.9	646.3	681.5
35°	662.5	658.1	632.7	616.3	603.7	580.5	584.9	593.1	595.5	613.5	649.3
37.5°	644.9	637.9	610.9	590.9	574.7	550.2	551.4	559.8	562.2	580.5	615.9
40°	626.7	616.7	587.7	564.2	545.6	520.0	518.6	527.4	529.2	547.0	579.1
42.5°	607.3	595.3	562.6	537.0	515.6	489.6	486.8	494.4	496.4	513.8	545.2
45°	587.7	573.2	537.0	509.0	485.6	459.0	456.2	462.0	465.0	481.4	511.6
47.5°	566.8	550.0	510.6	479.4	455.2	428.6	425.2	431.0	433.4	449.6	478.2
50°	545.0	524.6	483.4	449.0	425.0	398.8	393.8	400.6	402.8	418.0	446.0
52.5°	521.0	498.4	454.4	418.4	394.4	369.4	363.4	370.0	372.6	387.4	413.2
55°	495.6	471.2	425.2	390.2	364.2	339.8	334.8	337.4	343.0	357.0	381.0
57.5°	467.0	442.8	394.4	358.8	333.8	310.4	306.2	308.6	313.8	327.4	349.0
60°	436.6	411.0	363.0	327.4	303.2	281.0	277.2	279.4	285.0	297.4	317.4
62.5°	406.6	377.8	330.6	295.2	273.2	252.6	251.6	250.8	256.0	268.0	285.6
65°	370.2	342.6	296.8	263.2	243.2	224.6	220.6	222.4	227.4	238.4	256.8
67.5°	331.2	306.2	262.2	231.2	213.4	196.8	193.4	194.2	199.4	209.0	225.0
70°	289.8	267.8	226.8	199.0	184.0	168.4	166.2	166.4	171.4	179.8	193.8
72.5°	246.4	226.6	191.0	167.2	154.8	143.6	141.6	139.2	143.8	151.0	163.0
75°	202.2	184.8	155.4	136.0	126.2	116.8	115.0	112.6	117.2	123.4	132.8
77.5°	157.6	143.6	120.8	105.8	98.2	91.2	89.6	87.0	91.6	96.2	103.6
80°	114.0	103.8	90.2	74.4	71.8	67.2	65.6	62.8	67.2	70.2	75.8
82.5°	73.6	66.8	59.0	48.0	47.6	44.2	43.4	40.2	44.2	46.0	50.2
85°	37.2	34.0	32.0	24.4	25.2	23.0	22.8	19.4	22.6	23.4	25.8
87.5°	10.6	11.2	10.0	6.0	7.6	7.2	7.2	5.2	7.2	7.2	8.2
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: P837896

CATALOG NUMBER: ORLG-24-2-INS-ASY2R-LD4-2LO-40-120-EDD

CANDELA DISTRIBUTION (continued):

	295°	305°	315°	325°	335°	345°	355°	360°
0°	857.5	857.5	857.5	857.5	857.5	857.5	857.5	857.5
2.5°	858.3	861.7	862.5	862.3	864.5	876.5	872.5	876.5
5°	860.3	867.9	869.9	872.7	876.3	889.9	885.5	890.3
7.5°	861.5	872.9	877.3	882.7	888.5	903.7	900.1	904.9
10°	861.5	876.3	882.7	891.7	899.5	917.1	913.7	919.3
12.5°	857.9	876.9	885.9	898.5	908.5	927.5	926.1	930.1
15°	850.5	873.9	886.3	902.5	914.9	936.1	935.5	940.3
17.5°	840.5	868.7	883.7	904.1	919.7	943.5	944.9	947.5
20°	827.9	858.9	878.5	903.5	923.1	949.3	951.1	954.7
22.5°	811.3	847.1	870.7	900.9	923.5	951.7	954.9	958.3
25°	791.7	832.9	860.5	895.9	921.5	951.5	955.9	958.9
27.5°	769.3	814.5	847.5	887.9	915.9	948.3	953.7	957.3
30°	743.3	794.9	832.7	877.5	908.3	942.3	948.1	951.7
32.5°	716.5	773.3	815.1	864.1	897.3	932.7	937.7	940.5
35°	687.3	747.1	793.9	846.9	883.1	917.3	921.1	924.1
37.5°	655.5	718.7	769.7	827.5	863.1	895.9	899.3	902.7
40°	622.7	688.9	742.5	803.7	839.3	869.7	873.3	875.7
42.5°	589.7	655.9	713.5	775.7	811.1	840.3	842.5	844.9
45°	556.2	621.7	680.9	744.7	779.7	807.1	807.9	809.9
47.5°	522.2	586.3	645.1	709.3	743.9	768.9	769.7	771.3
50°	488.0	550.8	606.9	671.1	704.9	731.3	727.7	729.3
52.5°	454.4	513.6	570.8	629.9	663.3	686.7	687.7	684.5
55°	421.4	477.2	529.8	586.7	618.5	636.7	636.1	637.3
57.5°	388.0	440.4	488.6	540.6	571.6	588.9	592.5	588.3
60°	354.0	403.2	446.4	493.4	523.4	537.8	542.0	538.0
62.5°	320.2	365.4	404.6	445.6	473.4	491.2	490.8	486.4
65°	286.4	327.4	362.4	397.2	421.4	439.2	438.4	434.4
67.5°	255.2	289.0	320.4	348.6	369.6	381.8	386.0	381.2
70°	220.8	250.0	277.6	300.2	317.6	328.6	332.6	328.4
72.5°	186.4	211.2	230.6	252.4	265.8	275.0	279.2	275.2
75°	152.4	172.8	188.6	205.6	215.0	222.8	227.6	223.6
77.5°	119.4	135.2	147.8	160.2	171.0	172.8	177.0	174.4
80°	88.0	99.4	108.6	116.8	124.6	125.4	128.8	127.2
82.5°	58.6	66.2	68.6	77.2	82.2	81.4	84.8	83.6
85°	31.0	35.6	39.8	42.4	45.2	42.6	45.6	44.4
87.5°	10.4	11.0	9.6	13.6	15.0	12.8	14.6	14.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)