

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: P837714

Luminaire Tested: **ORLG-12-4-INS-ASY2R-LD4-1STD-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: P837714
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-LD4-1STD-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

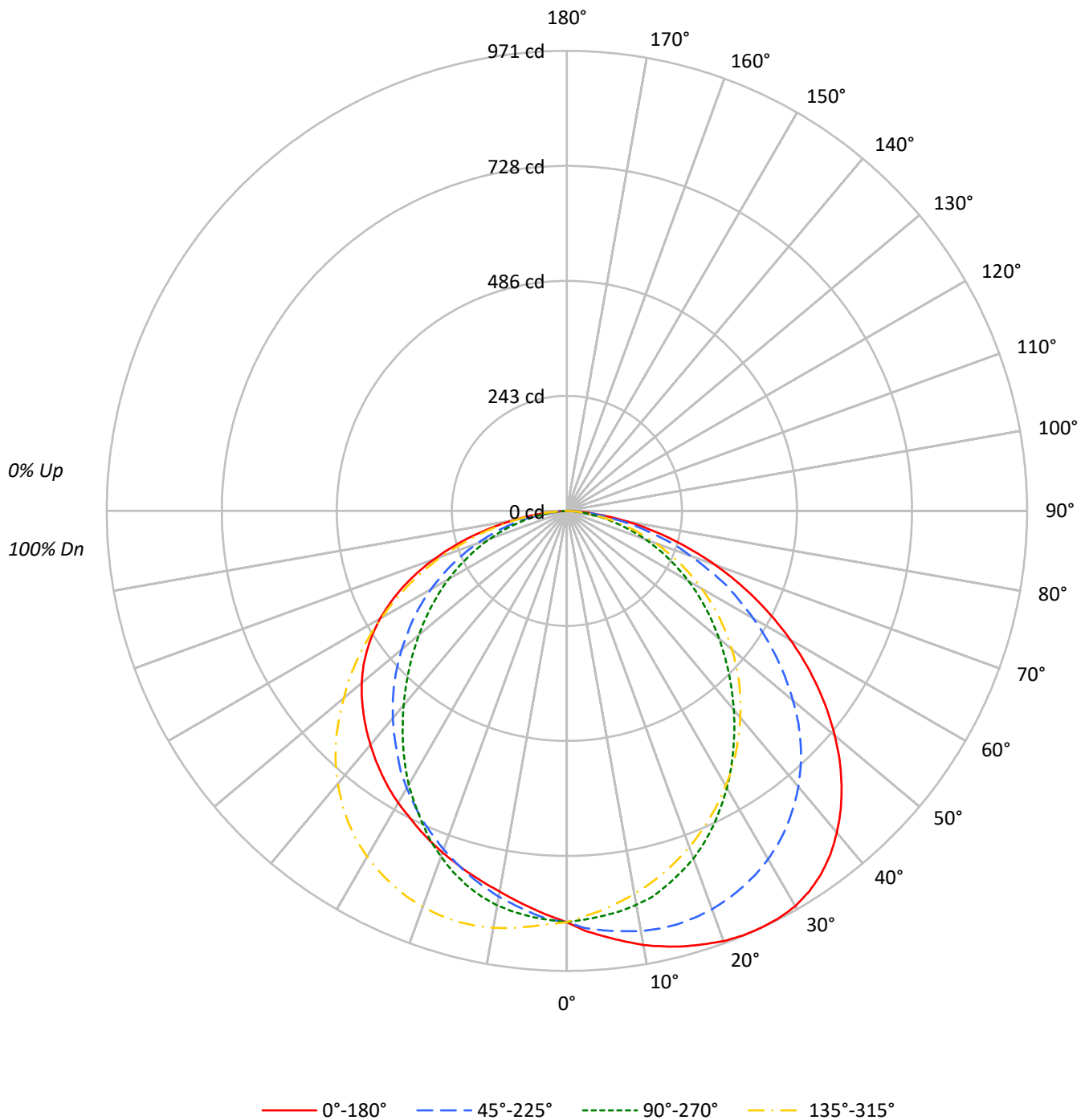
Lumens per Lamp: N/A
Luminaire Lumens: 2546.6 lumens
Efficiency: N/A
Efficacy: 76.5 lumens/watt
Spacing Criteria (0/90/45): 1.43 / 1.16 / 1.4
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 33.3
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
RCR																	
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102
1	109	104	100	96	106	102	98	94	97	94	91	94	91	89	90	88	86
2	99	91	84	78	96	89	82	77	85	80	75	82	77	73	79	75	72
3	90	79	71	65	88	78	70	64	75	68	63	72	66	62	69	65	61
4	82	70	61	55	80	69	61	54	66	59	53	64	58	53	62	56	52
5	76	63	54	47	74	62	53	47	59	52	46	57	51	46	56	50	45
6	70	56	47	41	68	55	47	41	54	46	40	52	45	40	50	44	40
7	65	51	42	36	63	50	42	36	49	41	36	47	40	35	46	40	35
8	60	47	38	32	59	46	38	32	45	37	32	43	37	32	42	36	31
9	56	43	34	29	55	42	34	29	41	34	29	40	33	28	39	33	28
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	2336	2336	2336	2336
5°	2434	2319	2275	2323
10°	2543	2307	2229	2310
15°	2652	2278	2207	2278
20°	2767	2236	2198	2224
25°	2882	2174	2197	2151
30°	2994	2098	2212	2075
35°	3073	2012	2234	1980
40°	3114	1925	2265	1882
45°	3120	1838	2309	1791
50°	3090	1754	2366	1707
55°	3027	1676	2419	1629
60°	2931	1594	2451	1553
65°	2800	1501	2438	1466
70°	2616	1391	2351	1365
75°	2354	1240	2157	1233
80°	1996	1038	1813	1054
85°	1386	689	1152	707

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	82.4	3.2
10°-20°	238.6	9.4
20°-30°	365.7	14.4
30°-40°	444.7	17.5
40°-50°	462.3	18.2
50°-60°	417.6	16.4
60°-70°	317.5	12.5
70°-80°	177.0	7.0
80°-90°	40.7	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°	686.8	27.0
0°-40°	1131.5	44.4
0°-60°	2011.3	79.0
0°-90°	2546.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2546.6	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	868	868	868	868	868	
5°	901	858	842	860	901	87
15°	952	818	792	818	952	270
25°	971	732	740	725	971	448
35°	935	612	680	603	935	584
45°	820	483	607	471	820	631
55°	645	357	516	347	645	576
65°	440	236	383	230	440	435
75°	226	119	208	119	226	240
85°	45	22	37	23	45	57
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°	868.0	868.0	868.0	868.0	868.0	868.0	868.0	868.0	868.0	868.0	868.0
2.5°	887.2	874.3	874.5	885.8	877.1	881.4	869.2	873.9	872.4	873.5	863.5
5°	901.2	887.2	887.0	896.7	887.0	888.8	873.5	876.5	872.0	869.2	858.5
7.5°	916.0	902.0	900.6	909.1	896.3	894.9	877.9	877.9	869.8	862.7	852.6
10°	930.6	916.2	914.4	920.8	905.0	900.4	879.7	876.5	865.8	855.2	844.3
12.5°	941.5	926.9	925.5	929.5	911.7	903.2	879.7	873.5	857.7	842.9	834.4
15°	951.8	936.8	933.0	935.0	914.6	903.2	876.9	867.2	846.9	827.5	817.6
17.5°	959.1	944.7	940.9	940.7	916.0	899.8	870.8	857.5	833.2	809.7	799.8
20°	966.4	952.0	947.2	943.5	915.6	895.1	861.9	843.9	815.5	789.2	780.9
22.5°	970.0	955.3	950.0	944.5	912.9	886.6	851.0	828.1	795.7	764.3	757.4
25°	970.6	955.5	949.8	941.9	907.7	876.5	836.8	809.1	772.8	738.0	732.1
27.5°	969.0	952.4	946.7	937.2	899.8	864.1	820.0	787.4	748.5	710.1	703.8
30°	963.4	946.5	941.1	928.7	888.6	849.0	801.6	763.3	721.6	680.7	675.2
32.5°	952.0	935.6	931.2	918.8	876.5	831.3	780.1	737.4	691.8	652.8	644.7
35°	935.4	919.0	916.2	903.2	859.5	810.3	756.6	709.0	660.3	620.4	612.5
37.5°	913.7	900.0	895.7	883.0	839.4	786.4	729.7	678.3	628.1	585.1	580.3
40°	886.4	873.5	870.2	858.9	816.2	759.9	700.5	646.5	594.9	555.0	548.1
42.5°	855.2	843.1	841.3	829.5	787.4	730.5	669.0	613.5	560.2	521.8	514.9
45°	819.8	808.1	807.7	796.5	756.0	697.9	635.8	580.1	526.4	486.5	482.9
47.5°	780.7	770.2	770.2	759.9	721.0	662.1	601.5	545.3	492.4	457.2	450.7
50°	738.2	728.3	725.2	720.2	682.3	623.0	565.5	511.2	458.8	425.2	418.9
52.5°	692.9	684.3	686.4	677.1	640.4	582.3	529.1	473.0	425.0	394.4	388.1
55°	645.1	632.9	634.7	631.3	596.7	540.4	488.2	441.4	391.8	363.0	357.2
57.5°	595.5	579.7	586.2	584.1	550.1	497.5	450.7	405.5	358.8	332.3	326.6
60°	544.6	529.5	536.1	534.3	502.3	454.5	412.0	370.1	326.0	301.9	296.2
62.5°	492.4	478.4	484.5	483.1	453.7	410.6	373.6	335.1	293.0	271.3	266.0
65°	439.8	426.4	431.9	430.9	403.7	370.9	334.1	298.8	259.8	240.9	235.7
67.5°	385.9	373.6	378.6	378.6	353.7	322.3	294.4	262.2	227.2	211.0	206.1
70°	332.5	320.9	325.4	325.0	303.9	278.4	254.3	225.6	194.2	180.8	176.8
72.5°	278.6	268.5	272.5	272.1	254.5	238.1	214.2	189.3	162.0	151.2	147.6
75°	226.4	216.8	220.7	220.3	205.9	190.5	174.5	153.9	130.4	122.9	119.3
77.5°	176.6	166.8	170.1	170.1	159.5	148.4	135.7	119.7	103.1	95.0	92.3
80°	128.8	124.1	122.5	122.7	115.6	108.3	101.8	86.5	74.3	68.8	67.0
82.5°	84.6	80.8	79.2	79.6	75.5	71.1	67.0	56.3	48.2	44.9	43.9
85°	44.9	42.1	40.7	41.7	40.9	38.5	36.4	29.2	24.1	22.9	22.3
87.5°	14.2	12.4	11.3	15.0	12.8	11.3	10.9	8.7	6.7	6.7	6.5
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):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°	185°
0°	868.0	868.0	868.0	868.0	868.0	868.0	868.0	868.0	868.0	868.0	868.0
2.5°	866.8	866.8	858.9	857.1	856.2	857.3	849.4	847.9	859.3	855.4	846.7
5°	859.9	859.5	848.3	846.3	846.3	845.1	836.2	834.2	845.5	842.3	832.8
7.5°	851.4	850.2	837.0	835.6	833.6	832.8	822.8	821.4	831.1	829.1	820.2
10°	841.1	839.8	824.3	823.2	821.0	819.4	810.1	809.1	819.0	815.8	808.7
12.5°	827.5	825.3	809.3	808.3	806.4	805.8	796.7	796.3	807.2	804.0	796.5
15°	809.7	807.9	790.0	790.4	790.6	790.6	783.4	783.0	793.7	792.3	784.2
17.5°	790.0	787.6	770.6	771.8	773.2	774.9	769.2	770.2	781.5	779.7	772.4
20°	767.8	765.3	748.7	752.2	755.2	758.5	754.8	757.6	768.2	767.4	761.9
22.5°	742.9	740.4	725.0	730.3	735.4	741.4	739.8	743.1	754.2	754.0	749.1
25°	712.5	713.1	699.5	706.0	714.5	723.0	723.6	728.9	741.2	740.0	735.6
27.5°	684.1	685.0	670.6	681.5	692.9	703.8	706.4	713.7	726.3	725.2	721.4
30°	654.4	655.4	641.4	656.4	670.2	683.5	689.2	699.1	711.9	711.9	707.8
32.5°	623.4	625.2	610.6	630.7	646.7	662.3	672.2	682.5	697.1	696.7	693.3
35°	591.6	593.6	580.3	605.8	621.8	640.8	653.2	666.9	679.9	680.1	677.5
37.5°	559.2	561.7	549.5	577.4	595.7	618.1	633.9	647.7	662.1	662.9	660.5
40°	527.0	529.7	519.1	546.1	569.1	594.2	612.5	628.7	644.5	644.9	643.2
42.5°	494.8	497.7	489.8	516.1	542.2	569.1	590.6	609.0	625.2	626.2	624.4
45°	463.5	465.9	460.2	489.0	514.1	543.4	568.1	589.0	605.4	606.8	606.2
47.5°	432.3	434.5	429.4	455.8	484.7	515.9	544.4	567.5	584.9	586.6	586.2
50°	401.7	403.5	398.1	425.6	454.3	487.5	517.3	544.0	563.5	565.1	564.9
52.5°	371.3	373.2	368.5	397.4	423.6	458.6	491.0	519.9	539.2	541.6	542.0
55°	342.0	342.8	339.1	366.9	392.2	428.8	466.1	494.2	513.5	515.5	516.7
57.5°	312.6	312.8	309.8	336.3	360.6	398.1	437.1	466.7	484.9	486.9	488.8
60°	283.5	283.3	279.8	305.5	328.8	365.9	406.6	435.9	453.5	455.4	457.8
62.5°	254.5	253.9	250.9	274.5	296.4	333.1	374.0	402.3	419.1	420.3	423.6
65°	225.8	225.1	222.3	244.2	264.0	299.0	339.1	366.1	381.3	382.9	382.3
67.5°	197.4	196.2	194.0	213.6	231.6	264.0	302.5	328.2	340.8	342.2	346.0
70°	169.1	167.6	162.6	183.4	199.2	228.2	264.0	286.9	297.4	298.8	298.2
72.5°	141.1	139.7	134.2	153.5	166.8	192.1	224.1	243.2	252.3	253.5	253.5
75°	114.0	113.2	109.7	124.3	135.5	156.1	183.2	199.0	206.1	207.5	207.1
77.5°	87.9	87.3	83.8	96.4	105.1	120.5	142.3	154.7	160.0	161.6	165.0
80°	63.0	62.8	57.3	69.6	73.5	86.5	102.4	112.0	114.8	117.0	119.5
82.5°	40.3	40.5	35.0	45.6	47.2	55.5	65.4	71.3	73.3	75.1	76.9
85°	19.6	20.4	17.4	24.1	24.3	28.5	32.8	35.0	35.8	37.3	38.9
87.5°	5.1	5.9	3.2	6.9	6.1	7.9	9.1	9.7	9.5	10.5	11.1
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):

	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°	285°
0°	868.0	868.0	868.0	868.0	868.0	868.0	868.0	868.0	868.0	868.0	868.0
2.5°	849.6	856.0	852.8	863.3	867.4	860.9	872.2	872.4	864.3	873.9	879.1
5°	836.4	843.1	841.1	852.0	857.1	851.4	865.2	867.8	859.9	870.6	879.1
7.5°	823.0	830.9	828.3	839.4	845.5	841.1	855.8	860.1	854.0	865.8	877.1
10°	811.5	818.2	815.3	827.1	832.4	828.7	843.3	851.2	845.5	859.9	873.5
12.5°	800.2	805.6	802.4	812.1	817.2	812.5	830.3	837.6	833.6	848.6	866.0
15°	785.6	791.7	787.2	795.9	799.8	795.7	810.3	822.8	817.8	834.2	853.4
17.5°	774.4	777.9	771.8	778.7	780.9	775.5	790.2	802.6	798.9	816.8	839.0
20°	762.1	764.9	756.4	760.3	760.1	753.2	766.8	778.9	776.5	796.1	821.4
22.5°	748.3	749.7	739.8	740.6	740.2	728.9	741.0	753.4	752.4	772.2	800.6
25°	733.8	734.0	721.2	720.8	716.3	703.0	713.7	727.7	724.6	746.1	775.9
27.5°	719.4	717.4	702.0	698.3	691.2	675.2	684.8	697.3	695.5	716.5	749.5
30°	704.0	701.4	682.5	675.8	665.5	647.1	655.0	666.7	667.7	686.2	720.8
32.5°	689.4	682.7	661.9	652.2	639.2	617.7	622.0	633.9	635.6	654.2	689.8
35°	670.6	666.1	640.4	623.8	611.1	587.6	592.0	600.3	602.8	621.0	657.2
37.5°	652.8	645.7	618.3	598.1	581.7	557.0	558.2	566.7	569.1	587.6	623.4
40°	634.3	624.2	594.9	571.2	552.3	526.4	525.0	533.9	535.7	553.8	586.2
42.5°	614.7	602.6	569.5	543.6	522.0	495.6	492.8	500.5	502.5	520.1	551.9
45°	594.9	580.3	543.6	515.3	491.6	464.7	461.8	467.7	470.7	487.3	517.9
47.5°	573.8	556.8	516.9	485.3	460.8	433.9	430.5	436.3	438.8	455.2	484.1
50°	551.7	531.1	489.4	454.5	430.2	403.7	398.7	405.5	407.8	423.2	451.5
52.5°	527.4	504.6	460.0	423.6	399.3	374.0	367.9	374.6	377.2	392.2	418.3
55°	501.7	477.0	430.5	395.0	368.7	344.0	338.9	341.6	347.2	361.4	385.7
57.5°	472.8	448.3	399.3	363.2	337.9	314.2	310.0	312.4	317.7	331.4	353.3
60°	442.0	416.1	367.5	331.4	306.9	284.5	280.6	282.9	288.5	301.1	321.3
62.5°	411.6	382.5	334.7	298.8	276.6	255.7	254.7	253.9	259.2	271.3	289.1
65°	374.8	346.8	300.5	266.5	246.2	227.4	223.3	225.1	230.2	241.3	260.0
67.5°	335.3	310.0	265.4	234.1	216.0	199.2	195.8	196.6	201.9	211.6	227.8
70°	293.4	271.1	229.6	201.5	186.3	170.5	168.3	168.5	173.5	182.0	196.2
72.5°	249.4	229.4	193.4	169.3	156.7	145.4	143.3	140.9	145.6	152.9	165.0
75°	204.7	187.1	157.3	137.7	127.8	118.2	116.4	114.0	118.6	124.9	134.4
77.5°	159.5	145.4	122.3	107.1	99.4	92.3	90.7	88.1	92.7	97.4	104.9
80°	115.4	105.1	91.3	75.3	72.7	68.0	66.4	63.6	68.0	71.1	76.7
82.5°	74.5	67.6	59.7	48.6	48.2	44.7	43.9	40.7	44.7	46.6	50.8
85°	37.7	34.4	32.4	24.7	25.5	23.3	23.1	19.6	22.9	23.7	26.1
87.5°	10.7	11.3	10.1	6.1	7.7	7.3	7.3	5.3	7.3	7.3	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

TEST NUMBER: P837714

CATALOG NUMBER: ORLG-12-4-INS-ASY2R-LD4-1STD-20-120-EDD

CANDELA DISTRIBUTION (continued):

	295°	305°	315°	325°	335°	345°	355°	360°
0°	868.0	868.0	868.0	868.0	868.0	868.0	868.0	868.0
2.5°	868.8	872.2	873.0	872.8	875.1	887.2	883.2	887.2
5°	870.8	878.5	880.5	883.4	887.0	900.8	896.3	901.2
7.5°	872.0	883.6	888.0	893.5	899.4	914.8	911.1	916.0
10°	872.0	887.0	893.5	902.6	910.5	928.3	924.9	930.6
12.5°	868.4	887.6	896.7	909.5	919.6	938.9	937.4	941.5
15°	860.9	884.6	897.1	913.5	926.1	947.6	947.0	951.8
17.5°	850.8	879.3	894.5	915.2	931.0	955.1	956.5	959.1
20°	838.0	869.4	889.2	914.6	934.4	960.9	962.7	966.4
22.5°	821.2	857.5	881.4	911.9	934.8	963.4	966.6	970.0
25°	801.4	843.1	871.0	906.9	932.8	963.1	967.6	970.6
27.5°	778.7	824.5	857.9	898.8	927.1	959.9	965.4	969.0
30°	752.4	804.6	842.9	888.2	919.4	953.8	959.7	963.4
32.5°	725.2	782.7	825.1	874.7	908.3	944.1	949.2	952.0
35°	695.7	756.2	803.6	857.3	893.9	928.5	932.4	935.4
37.5°	663.5	727.5	779.1	837.6	873.7	906.9	910.3	913.7
40°	630.3	697.3	751.6	813.5	849.6	880.3	884.0	886.4
42.5°	596.9	663.9	722.2	785.2	821.0	850.6	852.8	855.2
45°	563.1	629.3	689.2	753.8	789.2	817.0	817.8	819.8
47.5°	528.6	593.4	653.0	718.0	753.0	778.3	779.1	780.7
50°	494.0	557.6	614.3	679.3	713.5	740.2	736.6	738.2
52.5°	460.0	519.9	577.8	637.6	671.4	695.1	696.1	692.9
55°	426.6	483.1	536.3	593.8	626.0	644.5	643.9	645.1
57.5°	392.8	445.8	494.6	547.3	578.7	596.1	599.7	595.5
60°	358.4	408.2	451.9	499.5	529.9	544.4	548.7	544.6
62.5°	324.2	369.9	409.6	451.1	479.2	497.3	496.9	492.4
65°	289.9	331.4	366.9	402.1	426.6	444.6	443.8	439.8
67.5°	258.4	292.6	324.4	352.9	374.2	386.5	390.8	385.9
70°	223.5	253.1	281.0	303.9	321.5	332.7	336.7	332.5
72.5°	188.7	213.8	233.4	255.5	269.1	278.4	282.6	278.6
75°	154.3	174.9	190.9	208.1	217.7	225.6	230.4	226.4
77.5°	120.9	136.9	149.6	162.2	173.1	174.9	179.2	176.6
80°	89.1	100.6	109.9	118.2	126.1	126.9	130.4	128.8
82.5°	59.3	67.0	69.4	78.2	83.2	82.4	85.8	84.6
85°	31.4	36.0	40.3	42.9	45.8	43.1	46.2	44.9
87.5°	10.5	11.1	9.7	13.8	15.2	13.0	14.8	14.2
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)