

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: P838084

Luminaire Tested: **ORLG-24-4-INS-ASY2R-LD4-4HI-30-120-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: P838084
Test Lab: INNOVATION CENTER(G2)
Issue Date: 5/21/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: ORLG-24-4-INS-ASY2R-LD4-4HI-30-120-EDD
Description: 2FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2 and
RFI grid
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

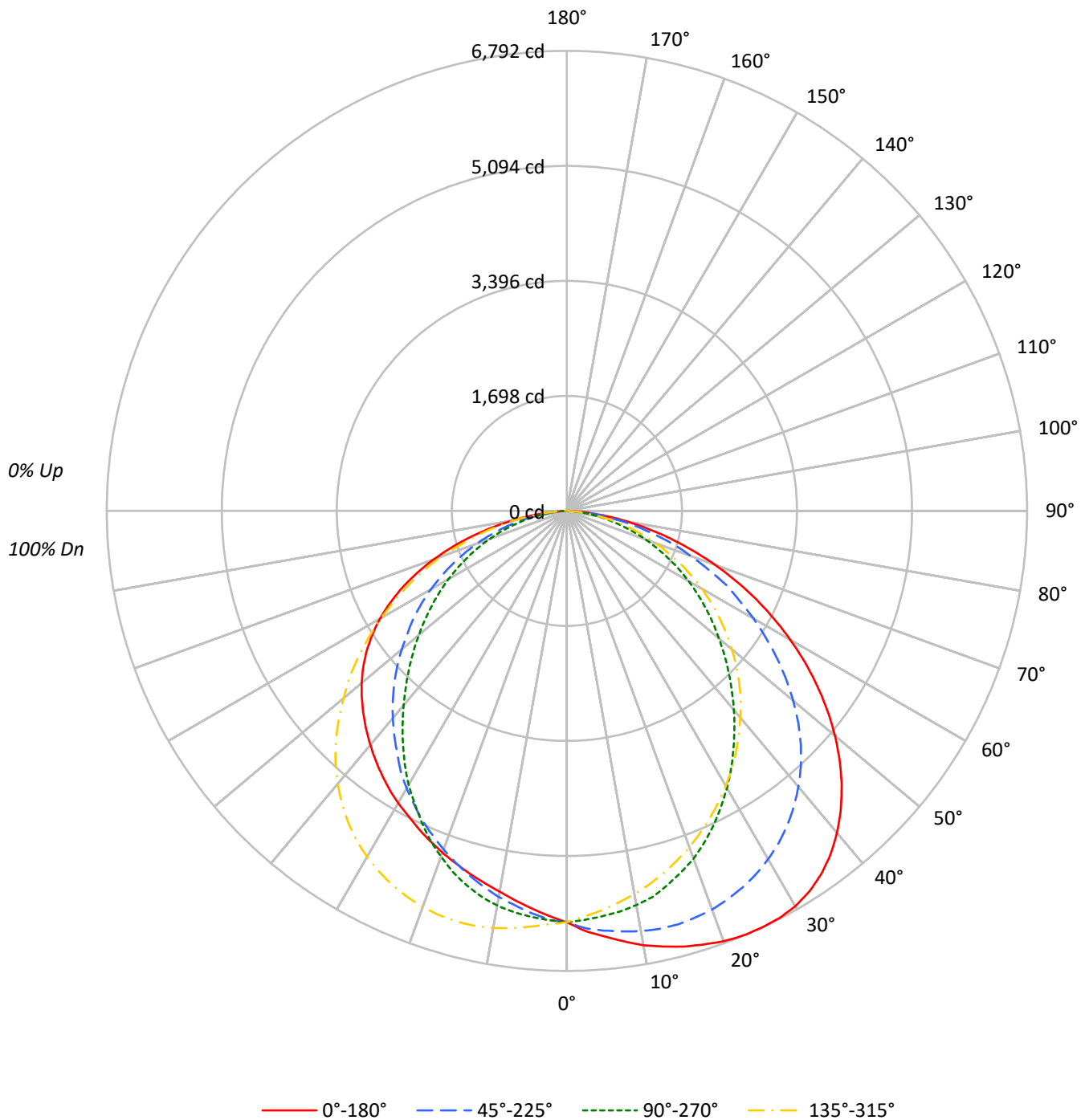
Lumens per Lamp: N/A
Luminaire Lumens: 17819.3 lumens
Efficiency: N/A
Efficacy: 101.2 lumens/watt
Spacing Criteria (0/90/45): 1.43 / 1.16 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 176
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: P838084

CATALOG NUMBER: ORLG-24-4-INS-ASY2R-LD4-4HI-30-120-EDD

Luminous Intensity Polar Plot



Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269



TEST NUMBER: P838084

CATALOG NUMBER: ORLG-24-4-INS-ASY2R-LD4-4HI-30-120-EDD

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°	8172	8172	8172	8172
5°	8517	8113	7960	8127
10°	8896	8072	7799	8083
15°	9277	7969	7722	7971
20°	9682	7824	7688	7780
25°	10083	7606	7688	7528
30°	10473	7341	7739	7259
35°	10751	7039	7817	6928
40°	10894	6736	7926	6584
45°	10915	6430	8079	6268
50°	10812	6136	8277	5973
55°	10588	5863	8461	5700
60°	10256	5578	8574	5433
65°	9797	5250	8529	5129
70°	9152	4866	8226	4777
75°	8234	4338	7549	4316
80°	6982	3633	6345	3688
85°	4855	2405	4025	2472

TEST NUMBER: P838084

CATALOG NUMBER: ORLG-24-4-INS-ASY2R-LD4-4HI-30-120-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	576.7	3.2
10°-20°	1669.9	9.4
20°-30°	2559.1	14.4
30°-40°	3111.7	17.5
40°-50°	3234.8	18.2
50°-60°	2922.0	16.4
60°-70°	2221.5	12.5
70°-80°	1238.5	7.0
80°-90°	285.1	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°	4805.6	27.0
0°-40°	7917.4	44.4
0°-60°	14074.2	79.0
0°-90°	17819.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	17819.3	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	6074	6074	6074	6074	6074	
5°	6306	6007	5894	6017	6306	608
15°	6660	5721	5544	5722	6660	1888
25°	6792	5123	5178	5071	6792	3137
35°	6546	4286	4759	4218	6546	4088
45°	5736	3379	4246	3294	5736	4417
55°	4514	2499	3607	2430	4514	4029
65°	3077	1649	2679	1611	3077	3041
75°	1584	834	1452	830	1584	1683
85°	314	156	261	160	314	396
90°	0	0	0	0	0	

Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269



TEST NUMBER: P838084

CATALOG NUMBER: ORLG-24-4-INS-ASY2R-LD4-4HI-30-120-EDD

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	6073.7	6073.7	6073.7	6073.7	6073.7	6073.7	6073.7	6073.7	6073.7	6073.7	6073.7
2.5°	6208.3	6117.6	6119.0	6198.3	6137.4	6167.2	6082.2	6114.8	6104.8	6111.9	6042.5
5°	6306.0	6208.3	6206.8	6274.9	6206.8	6219.6	6111.9	6133.2	6102.0	6082.2	6007.1
7.5°	6409.4	6311.7	6301.8	6361.3	6272.0	6262.1	6143.1	6143.1	6086.4	6036.8	5966.0
10°	6511.5	6410.9	6398.1	6443.4	6332.9	6300.4	6155.8	6133.2	6058.1	5984.4	5907.9
12.5°	6588.0	6486.0	6476.0	6504.4	6379.7	6320.2	6155.8	6111.9	6001.4	5898.0	5838.5
15°	6660.2	6555.4	6528.5	6542.6	6399.5	6320.2	6136.0	6068.0	5926.3	5790.3	5720.9
17.5°	6711.2	6610.6	6583.7	6582.3	6409.4	6296.1	6093.5	6000.0	5830.0	5665.6	5596.2
20°	6762.2	6661.6	6627.6	6602.1	6406.6	6263.5	6031.2	5905.1	5706.7	5522.6	5464.5
22.5°	6787.7	6684.3	6647.5	6609.2	6388.2	6204.0	5954.7	5794.6	5567.9	5348.3	5300.1
25°	6792.0	6685.7	6646.0	6590.8	6351.4	6133.2	5855.5	5661.4	5407.8	5164.1	5123.0
27.5°	6780.6	6664.5	6624.8	6558.2	6296.1	6046.8	5737.9	5509.8	5237.8	4968.6	4924.7
30°	6741.0	6623.4	6585.1	6498.7	6218.2	5940.5	5609.0	5341.2	5049.4	4763.2	4724.9
32.5°	6661.6	6546.9	6515.7	6429.3	6133.2	5817.2	5458.8	5159.9	4841.1	4567.7	4511.0
35°	6545.5	6430.7	6410.9	6320.2	6014.2	5669.9	5294.5	4961.5	4620.1	4341.0	4285.7
37.5°	6393.9	6297.5	6267.8	6178.5	5873.9	5502.7	5106.0	4746.2	4394.8	4094.5	4060.5
40°	6202.6	6111.9	6089.3	6009.9	5711.0	5317.1	4902.0	4523.7	4162.5	3883.4	3835.2
42.5°	5984.4	5899.4	5886.7	5804.5	5509.8	5111.7	4681.0	4292.8	3920.2	3651.0	3602.8
45°	5736.5	5654.3	5651.5	5573.6	5290.2	4883.6	4448.6	4059.0	3683.6	3404.5	3379.0
47.5°	5463.0	5389.4	5389.4	5317.1	5045.1	4632.8	4209.2	3815.3	3445.6	3199.1	3153.7
50°	5165.5	5096.1	5074.9	5039.4	4774.5	4359.4	3957.0	3577.3	3210.4	2975.2	2931.3
52.5°	4848.2	4788.7	4802.8	4737.7	4481.2	4074.6	3702.0	3309.6	2973.8	2759.9	2715.9
55°	4513.8	4428.8	4441.6	4417.5	4175.2	3781.3	3415.8	3088.5	2741.4	2540.3	2499.2
57.5°	4166.7	4056.2	4101.5	4087.4	3849.4	3481.0	3153.7	2837.8	2510.5	2324.9	2285.2
60°	3811.1	3704.8	3751.6	3738.8	3515.0	3180.6	2883.1	2589.8	2281.0	2112.4	2072.7
62.5°	3445.6	3347.8	3390.3	3380.4	3175.0	2873.2	2613.9	2344.7	2050.1	1898.5	1861.6
65°	3077.2	2983.7	3022.0	3014.9	2825.0	2595.5	2337.7	2091.1	1817.7	1686.0	1649.1
67.5°	2700.4	2613.9	2649.4	2649.4	2475.1	2255.5	2060.0	1834.7	1589.6	1476.3	1442.3
70°	2326.3	2245.6	2276.7	2273.9	2126.6	1948.1	1779.5	1578.3	1358.7	1265.2	1236.8
72.5°	1949.5	1878.6	1907.0	1904.1	1780.9	1666.1	1498.9	1324.7	1133.4	1058.3	1032.8
75°	1583.9	1517.4	1544.3	1541.4	1440.9	1333.2	1221.3	1076.7	912.4	860.0	834.5
77.5°	1235.4	1167.4	1190.1	1190.1	1116.4	1038.5	949.2	837.3	721.1	664.5	646.0
80°	901.1	868.5	857.1	858.6	809.0	758.0	712.6	605.0	520.0	481.7	468.9
82.5°	592.2	565.3	554.0	556.8	528.5	497.3	468.9	393.9	337.2	314.5	307.4
85°	314.5	294.7	284.8	291.9	286.2	269.2	255.0	204.0	168.6	160.1	155.8
87.5°	99.2	86.4	79.3	104.8	89.3	79.3	76.5	60.9	46.8	46.8	45.3
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: P838084

CATALOG NUMBER: ORLG-24-4-INS-ASY2R-LD4-4HI-30-120-EDD

CANDELA DISTRIBUTION (continued):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°	185°
0°	6073.7	6073.7	6073.7	6073.7	6073.7	6073.7	6073.7	6073.7	6073.7	6073.7	6073.7
2.5°	6065.2	6065.2	6009.9	5997.2	5991.5	5998.6	5943.3	5933.4	6012.8	5985.8	5924.9
5°	6017.0	6014.2	5936.2	5922.1	5922.1	5913.6	5851.2	5837.1	5916.4	5893.7	5827.2
7.5°	5957.5	5949.0	5856.9	5847.0	5832.8	5827.2	5757.7	5747.8	5815.8	5801.7	5739.3
10°	5885.2	5876.7	5767.7	5760.6	5745.0	5733.7	5668.5	5661.4	5730.8	5708.1	5658.6
12.5°	5790.3	5774.7	5662.8	5655.7	5643.0	5638.7	5575.0	5572.1	5648.6	5626.0	5573.6
15°	5665.6	5652.9	5528.2	5531.1	5532.5	5532.5	5481.5	5478.6	5553.7	5543.8	5487.1
17.5°	5528.2	5511.2	5392.2	5400.7	5410.6	5422.0	5382.3	5389.4	5468.7	5456.0	5405.0
20°	5372.4	5355.4	5239.2	5263.3	5284.5	5307.2	5281.7	5301.5	5375.2	5369.5	5331.3
22.5°	5198.1	5181.1	5073.4	5110.3	5145.7	5188.2	5176.9	5199.5	5277.5	5276.0	5242.0
25°	4985.6	4989.8	4894.9	4940.3	4999.8	5059.3	5063.5	5100.4	5186.8	5178.3	5147.1
27.5°	4787.3	4792.9	4692.3	4768.8	4848.2	4924.7	4943.1	4994.1	5081.9	5074.9	5047.9
30°	4579.0	4586.1	4488.3	4593.2	4689.5	4783.0	4822.7	4892.1	4981.3	4981.3	4953.0
32.5°	4362.2	4375.0	4273.0	4413.2	4525.1	4634.2	4703.7	4775.9	4877.9	4875.1	4851.0
35°	4139.8	4154.0	4060.5	4239.0	4350.9	4484.1	4570.5	4666.8	4757.5	4758.9	4740.5
37.5°	3913.1	3930.1	3845.1	4040.6	4168.1	4325.4	4435.9	4532.2	4632.8	4638.5	4621.5
40°	3687.8	3706.3	3632.6	3821.0	3982.5	4158.2	4285.7	4399.1	4509.6	4512.4	4501.1
42.5°	3462.6	3482.4	3427.2	3611.3	3794.1	3982.5	4132.7	4261.6	4375.0	4382.1	4369.3
45°	3243.0	3260.0	3220.3	3421.5	3597.2	3802.6	3975.4	4121.4	4236.1	4246.0	4241.8
47.5°	3024.8	3040.4	3005.0	3189.1	3391.7	3609.9	3809.7	3971.2	4093.0	4104.4	4101.5
50°	2810.9	2823.6	2785.4	2978.0	3179.2	3411.6	3619.8	3806.8	3942.9	3954.2	3952.8
52.5°	2598.3	2611.1	2578.5	2781.1	2963.9	3209.0	3435.7	3638.3	3772.8	3789.8	3792.7
55°	2392.9	2398.6	2373.1	2567.2	2744.3	3000.7	3261.4	3458.3	3592.9	3607.1	3615.6
57.5°	2187.5	2188.9	2167.7	2353.2	2523.3	2785.4	3058.8	3265.6	3393.2	3407.3	3420.1
60°	1983.5	1982.1	1958.0	2137.9	2300.8	2560.1	2844.9	3050.3	3173.6	3186.3	3203.3
62.5°	1780.9	1776.6	1755.4	1921.1	2074.1	2330.6	2616.8	2815.1	2932.7	2941.2	2963.9
65°	1579.7	1575.4	1555.6	1708.6	1847.5	2092.6	2373.1	2561.5	2667.8	2679.1	2674.9
67.5°	1381.3	1372.8	1357.3	1494.7	1620.8	1847.5	2116.6	2296.6	2384.4	2394.3	2421.3
70°	1183.0	1173.1	1137.7	1283.6	1394.1	1596.7	1847.5	2007.6	2081.2	2091.1	2086.9
72.5°	987.5	977.6	939.3	1073.9	1167.4	1344.5	1568.4	1701.5	1765.3	1773.8	1773.8
75°	797.6	792.0	767.9	869.9	947.8	1092.3	1282.2	1392.7	1442.3	1452.2	1449.4
77.5°	614.9	610.6	586.5	674.4	735.3	843.0	996.0	1082.4	1119.2	1130.6	1154.7
80°	440.6	439.2	400.9	487.4	514.3	605.0	716.9	783.5	803.3	818.9	835.9
82.5°	281.9	283.4	245.1	318.8	330.1	388.2	457.6	498.7	512.9	525.6	538.4
85°	137.4	143.1	121.8	168.6	170.0	199.8	229.5	245.1	250.8	260.7	272.0
87.5°	35.4	41.1	22.7	48.2	42.5	55.3	63.8	68.0	66.6	73.7	77.9
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: P838084

CATALOG NUMBER: ORLG-24-4-INS-ASY2R-LD4-4HI-30-120-EDD

CANDELA DISTRIBUTION (continued):

	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°	285°
0°	6073.7	6073.7	6073.7	6073.7	6073.7	6073.7	6073.7	6073.7	6073.7	6073.7	6073.7
2.5°	5944.7	5990.1	5967.4	6041.1	6069.4	6024.1	6103.4	6104.8	6048.2	6114.8	6151.6
5°	5852.7	5899.4	5885.2	5961.7	5997.2	5957.5	6053.8	6072.3	6017.0	6092.1	6151.6
7.5°	5759.2	5814.4	5796.0	5873.9	5916.4	5885.2	5988.7	6018.4	5975.9	6058.1	6137.4
10°	5678.4	5725.1	5705.3	5787.5	5824.3	5798.8	5900.8	5956.1	5916.4	6017.0	6111.9
12.5°	5599.1	5637.3	5614.6	5682.6	5718.1	5685.5	5810.2	5861.2	5832.8	5937.7	6059.5
15°	5497.1	5539.6	5508.4	5569.3	5596.2	5567.9	5669.9	5757.7	5722.3	5837.1	5971.7
17.5°	5419.1	5443.2	5400.7	5448.9	5464.5	5426.2	5529.6	5616.1	5590.6	5715.2	5871.1
20°	5332.7	5352.5	5293.0	5320.0	5318.5	5270.4	5365.3	5450.3	5433.3	5570.7	5747.8
22.5°	5236.4	5246.3	5176.9	5182.5	5179.7	5100.4	5185.4	5271.8	5264.7	5403.5	5601.9
25°	5134.4	5135.8	5046.5	5043.7	5012.5	4919.0	4994.1	5091.9	5070.6	5220.8	5429.0
27.5°	5033.8	5019.6	4911.9	4886.4	4836.8	4724.9	4791.5	4879.3	4866.6	5013.9	5244.9
30°	4926.1	4907.7	4775.9	4729.2	4656.9	4528.0	4583.2	4665.4	4672.5	4801.4	5043.7
32.5°	4824.1	4777.3	4631.4	4563.4	4472.7	4322.6	4352.3	4435.9	4447.2	4577.6	4826.9
35°	4692.3	4661.2	4481.2	4365.1	4275.8	4111.5	4142.6	4200.7	4217.7	4345.2	4598.8
37.5°	4567.7	4518.1	4326.8	4185.1	4070.4	3897.5	3906.0	3965.5	3982.5	4111.5	4362.2
40°	4438.7	4367.9	4162.5	3996.7	3864.9	3683.6	3673.7	3736.0	3748.8	3874.9	4101.5
42.5°	4301.3	4216.3	3985.4	3804.0	3652.4	3468.2	3448.4	3502.2	3516.4	3639.7	3862.1
45°	4162.5	4060.5	3804.0	3605.7	3439.9	3251.5	3231.6	3272.7	3294.0	3410.2	3624.1
47.5°	4015.1	3896.1	3617.0	3396.0	3224.6	3036.1	3012.0	3053.1	3070.1	3184.9	3387.5
50°	3860.7	3716.2	3424.3	3180.6	3010.6	2825.0	2789.6	2837.8	2853.4	2961.0	3159.4
52.5°	3690.7	3530.6	3218.9	2963.9	2793.9	2616.8	2574.3	2621.0	2639.4	2744.3	2927.0
55°	3510.7	3337.9	3012.0	2764.1	2579.9	2407.1	2371.7	2390.1	2429.8	2528.9	2698.9
57.5°	3308.1	3136.7	2793.9	2541.7	2364.6	2198.8	2169.1	2186.1	2222.9	2319.2	2472.3
60°	3092.8	2911.5	2571.4	2319.2	2147.8	1990.6	1963.6	1979.2	2018.9	2106.7	2248.4
62.5°	2880.3	2676.3	2341.9	2091.1	1935.3	1789.4	1782.3	1776.6	1813.5	1898.5	2023.1
65°	2622.4	2426.9	2102.5	1864.5	1722.8	1591.0	1562.7	1575.4	1610.9	1688.8	1819.1
67.5°	2346.2	2169.1	1857.4	1637.8	1511.7	1394.1	1370.0	1375.7	1412.5	1480.5	1593.9
70°	2052.9	1897.0	1606.6	1409.7	1303.4	1192.9	1177.3	1178.7	1214.2	1273.7	1372.8
72.5°	1745.5	1605.2	1353.0	1184.4	1096.6	1017.2	1003.1	986.1	1018.7	1069.7	1154.7
75°	1432.3	1309.1	1100.8	963.4	894.0	827.4	814.6	797.6	830.2	874.1	940.7
77.5°	1116.4	1017.2	855.7	749.5	695.6	646.0	634.7	616.3	648.9	681.5	733.9
80°	807.6	735.3	639.0	527.0	508.6	476.0	464.7	444.9	476.0	497.3	537.0
82.5°	521.4	473.2	417.9	340.0	337.2	313.1	307.4	284.8	313.1	325.9	355.6
85°	263.5	240.9	226.7	172.8	178.5	162.9	161.5	137.4	160.1	165.8	182.8
87.5°	75.1	79.3	70.8	42.5	53.8	51.0	51.0	36.8	51.0	51.0	58.1
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: P838084

CATALOG NUMBER: ORLG-24-4-INS-ASY2R-LD4-4HI-30-120-EDD

CANDELA DISTRIBUTION (continued):

	295°	305°	315°	325°	335°	345°	355°	360°
0°	6073.7	6073.7	6073.7	6073.7	6073.7	6073.7	6073.7	6073.7
2.5°	6079.3	6103.4	6109.1	6107.7	6123.3	6208.3	6179.9	6208.3
5°	6093.5	6147.3	6161.5	6181.3	6206.8	6303.2	6272.0	6306.0
7.5°	6102.0	6182.8	6213.9	6252.2	6293.3	6400.9	6375.4	6409.4
10°	6102.0	6206.8	6252.2	6315.9	6371.2	6495.9	6471.8	6511.5
12.5°	6076.5	6211.1	6274.9	6364.1	6434.9	6569.5	6559.6	6588.0
15°	6024.1	6189.8	6277.7	6392.4	6480.3	6630.5	6626.2	6660.2
17.5°	5953.2	6153.0	6259.3	6403.8	6514.3	6682.9	6692.8	6711.2
20°	5864.0	6083.6	6222.4	6399.5	6538.4	6724.0	6736.7	6762.2
22.5°	5746.4	6000.0	6167.2	6381.1	6541.2	6741.0	6763.6	6787.7
25°	5607.6	5899.4	6094.9	6345.7	6527.0	6739.6	6770.7	6792.0
27.5°	5448.9	5769.1	6002.8	6289.0	6487.4	6716.9	6755.1	6780.6
30°	5264.7	5630.2	5898.0	6215.4	6433.5	6674.4	6715.5	6741.0
32.5°	5074.9	5477.2	5773.3	6120.4	6355.6	6606.4	6641.8	6661.6
35°	4868.0	5291.6	5623.1	5998.6	6255.0	6497.3	6524.2	6545.5
37.5°	4642.7	5090.4	5451.7	5861.2	6113.3	6345.7	6369.8	6393.9
40°	4410.4	4879.3	5259.0	5692.6	5944.7	6160.1	6185.6	6202.6
42.5°	4176.6	4645.6	5053.6	5494.2	5745.0	5951.8	5967.4	5984.4
45°	3940.0	4403.3	4822.7	5274.6	5522.6	5716.6	5722.3	5736.5
47.5°	3699.2	4152.5	4569.1	5023.9	5269.0	5446.0	5451.7	5463.0
50°	3456.9	3901.8	4298.5	4753.2	4992.7	5179.7	5154.2	5165.5
52.5°	3218.9	3638.3	4043.4	4461.4	4698.0	4863.8	4870.8	4848.2
55°	2985.1	3380.4	3753.0	4155.4	4380.6	4509.6	4505.3	4513.8
57.5°	2748.5	3119.7	3461.2	3829.5	4049.1	4171.0	4196.5	4166.7
60°	2507.7	2856.2	3162.2	3495.2	3707.7	3809.7	3839.4	3811.1
62.5°	2268.2	2588.4	2866.1	3156.6	3353.5	3479.6	3476.7	3445.6
65°	2028.8	2319.2	2567.2	2813.7	2985.1	3111.2	3105.6	3077.2
67.5°	1807.8	2047.2	2269.7	2469.4	2618.2	2704.6	2734.4	2700.4
70°	1564.1	1771.0	1966.5	2126.6	2249.8	2327.7	2356.1	2326.3
72.5°	1320.4	1496.1	1633.5	1788.0	1882.9	1948.1	1977.8	1949.5
75°	1079.6	1224.1	1336.0	1456.4	1523.0	1578.3	1612.3	1583.9
77.5°	845.8	957.7	1047.0	1134.8	1211.3	1224.1	1253.8	1235.4
80°	623.4	704.1	769.3	827.4	882.6	888.3	912.4	901.1
82.5°	415.1	468.9	486.0	546.9	582.3	576.6	600.7	592.2
85°	219.6	252.2	281.9	300.4	320.2	301.8	323.0	314.5
87.5°	73.7	77.9	68.0	96.3	106.3	90.7	103.4	99.2
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)