

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: P838210

Luminaire Tested: **ORLG-24-4-INS-ASY2R-LD4-4HI-35-120-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: P838210
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-35-120-EDD-90
Description: 2FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2 and RFI grid
Light Source: 3500K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

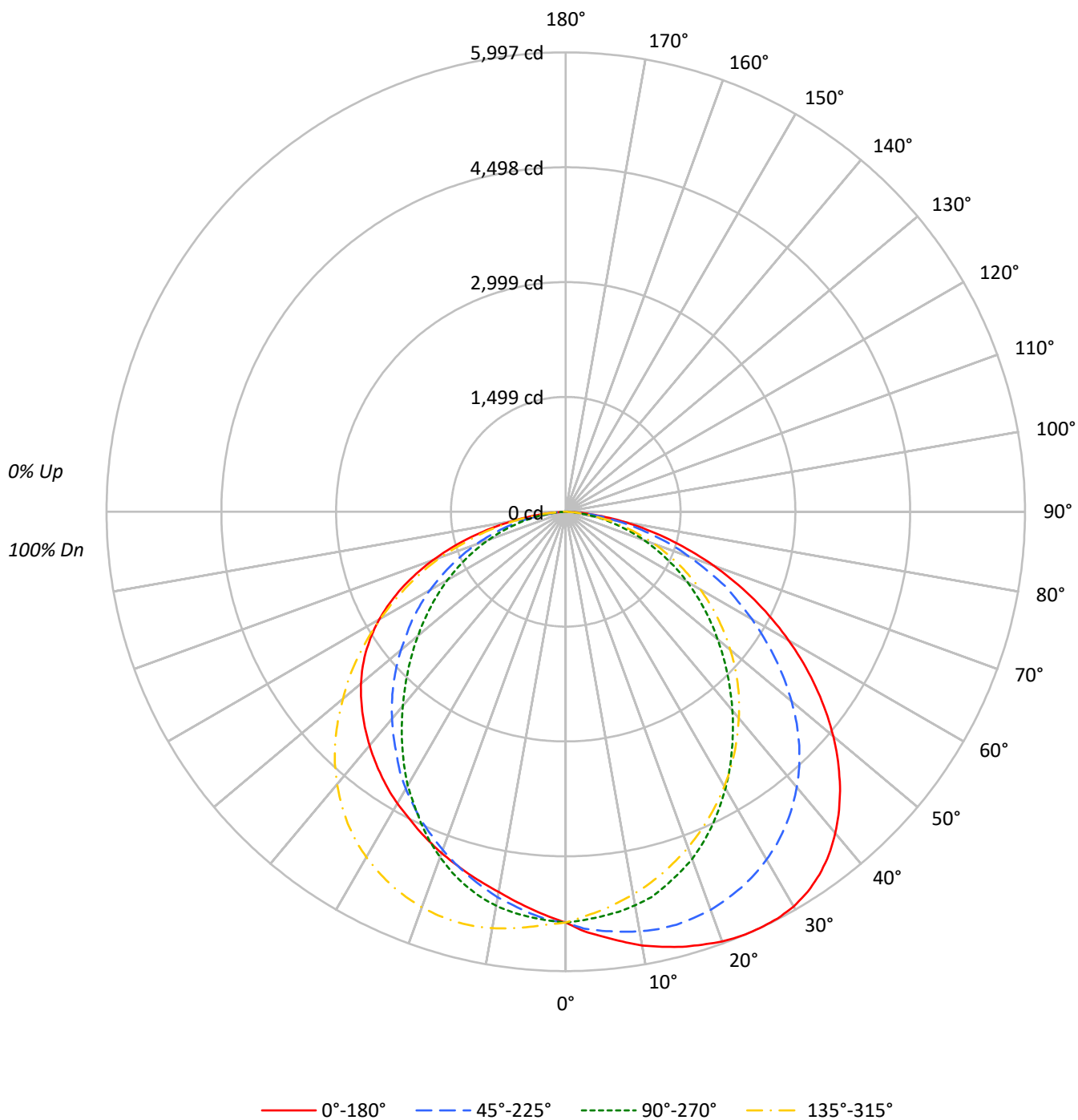
Lumens per Lamp: N/A
Luminaire Lumens: 15734.1 lumens
Efficiency: N/A
Efficacy: 89.4 lumens/watt
Spacing Criteria (0/90/45): 1.43 / 1.16 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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: P838210

CATALOG NUMBER: ORLG-24-4-INS-ASY2R-LD4-4HI-35-120-EDD-90

Luminous Intensity Polar Plot



Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269



TEST NUMBER: P838210

CATALOG NUMBER: ORLG-24-4-INS-ASY2R-LD4-4HI-35-120-EDD-90

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

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	7216	7216	7216	7216
5°	7520	7164	7029	7176
10°	7855	7127	6886	7137
15°	8192	7036	6819	7038
20°	8549	6909	6789	6869
25°	8903	6716	6788	6647
30°	9247	6482	6834	6410
35°	9493	6216	6902	6117
40°	9620	5948	6998	5814
45°	9638	5677	7134	5534
50°	9547	5418	7308	5274
55°	9349	5176	7471	5033
60°	9055	4925	7571	4797
65°	8650	4636	7531	4528
70°	8081	4296	7264	4218
75°	7271	3830	6666	3811
80°	6165	3209	5603	3257
85°	4287	2124	3554	2183

Classified

Scaled Data Report

Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269



TEST NUMBER: P838210

CATALOG NUMBER: ORLG-24-4-INS-ASY2R-LD4-4HI-35-120-EDD-90

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	509.2	3.2
10°-20°	1474.4	9.4
20°-30°	2259.7	14.4
30°-40°	2747.6	17.5
40°-50°	2856.3	18.2
50°-60°	2580.1	16.4
60°-70°	1961.5	12.5
70°-80°	1093.5	7.0
80°-90°	251.8	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°	4243.3	27.0
0°-40°	6990.9	44.4
0°-60°	12427.2	79.0
0°-90°	15734.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	15734.1	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	5363	5363	5363	5363	5363	
5°	5568	5304	5204	5313	5568	537
15°	5881	5051	4895	5053	5881	1667
25°	5997	4524	4572	4477	5997	2770
35°	5780	3784	4202	3724	5780	3610
45°	5065	2984	3749	2908	5065	3900
55°	3986	2207	3185	2145	3986	3558
65°	2717	1456	2366	1422	2717	2685
75°	1399	737	1282	733	1399	1486
85°	278	138	230	141	278	350
90°	0	0	0	0	0	

Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269



TEST NUMBER: P838210

CATALOG NUMBER: ORLG-24-4-INS-ASY2R-LD4-4HI-35-120-EDD-90

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	5362.9	5362.9	5362.9	5362.9	5362.9	5362.9	5362.9	5362.9	5362.9	5362.9	5362.9
2.5°	5481.8	5401.7	5403.0	5473.0	5419.2	5445.5	5370.4	5399.2	5390.4	5396.7	5335.4
5°	5568.1	5481.8	5480.5	5540.6	5480.5	5491.8	5396.7	5415.5	5387.9	5370.4	5304.1
7.5°	5659.4	5573.1	5564.3	5616.9	5538.1	5529.3	5424.2	5424.2	5374.2	5330.4	5267.9
10°	5749.5	5660.7	5649.4	5689.4	5591.9	5563.1	5435.5	5415.5	5349.2	5284.1	5216.6
12.5°	5817.0	5727.0	5718.2	5743.2	5633.1	5580.6	5435.5	5396.7	5299.1	5207.8	5155.3
15°	5880.8	5788.3	5764.5	5777.0	5650.6	5580.6	5418.0	5357.9	5232.8	5112.7	5051.4
17.5°	5925.9	5837.0	5813.3	5812.0	5659.4	5559.3	5380.4	5297.9	5147.8	5002.6	4941.3
20°	5970.9	5882.1	5852.1	5829.5	5656.9	5530.6	5325.4	5214.1	5038.9	4876.3	4825.0
22.5°	5993.4	5902.1	5869.6	5835.8	5640.6	5478.0	5257.8	5116.5	4916.3	4722.4	4679.9
25°	5997.2	5903.3	5868.3	5819.5	5608.1	5415.5	5170.3	4998.9	4775.0	4559.8	4523.5
27.5°	5987.2	5884.6	5849.6	5790.8	5559.3	5339.2	5066.4	4865.0	4624.9	4387.2	4348.4
30°	5952.1	5848.3	5814.5	5738.2	5490.5	5245.3	4952.6	4716.2	4458.5	4205.8	4172.0
32.5°	5882.1	5780.8	5753.2	5676.9	5415.5	5136.5	4820.0	4556.0	4274.6	4033.1	3983.1
35°	5779.5	5678.2	5660.7	5580.6	5310.4	5006.4	4674.9	4380.9	4079.4	3833.0	3784.2
37.5°	5645.6	5560.6	5534.3	5455.5	5186.5	4858.8	4508.5	4190.8	3880.5	3615.3	3585.3
40°	5476.8	5396.7	5376.7	5306.6	5042.7	4694.9	4328.4	3994.4	3675.4	3428.9	3386.4
42.5°	5284.1	5209.1	5197.8	5125.2	4865.0	4513.5	4133.2	3790.5	3461.4	3223.8	3181.2
45°	5065.2	4992.6	4990.1	4921.3	4671.1	4312.1	3928.1	3584.0	3252.5	3006.1	2983.6
47.5°	4823.8	4758.7	4758.7	4694.9	4454.7	4090.7	3716.6	3368.9	3042.4	2824.7	2784.7
50°	4561.1	4499.8	4481.0	4449.7	4215.8	3849.2	3494.0	3158.7	2834.7	2627.0	2588.3
52.5°	4280.8	4228.3	4240.8	4183.3	3956.8	3597.8	3268.8	2922.3	2625.8	2436.9	2398.1
55°	3985.6	3910.5	3921.8	3900.5	3686.6	3338.8	3016.1	2727.1	2420.6	2243.0	2206.7
57.5°	3679.1	3581.5	3621.6	3609.1	3398.9	3073.6	2784.7	2505.7	2216.7	2052.8	2017.8
60°	3365.1	3271.3	3312.6	3301.3	3103.7	2808.4	2545.7	2286.8	2014.1	1865.2	1830.2
62.5°	3042.4	2956.1	2993.6	2984.8	2803.4	2537.0	2308.0	2070.4	1810.2	1676.3	1643.8
65°	2717.1	2634.6	2668.3	2662.1	2494.4	2291.8	2064.1	1846.4	1605.0	1488.7	1456.1
67.5°	2384.4	2308.0	2339.3	2339.3	2185.5	1991.6	1818.9	1620.0	1403.6	1303.5	1273.5
70°	2054.1	1982.8	2010.3	2007.8	1877.7	1720.1	1571.2	1393.6	1199.7	1117.1	1092.1
72.5°	1721.3	1658.8	1683.8	1681.3	1572.5	1471.1	1323.5	1169.7	1000.8	934.5	912.0
75°	1398.6	1339.8	1363.6	1361.1	1272.2	1177.2	1078.3	950.7	805.6	759.3	736.8
77.5°	1090.8	1030.8	1050.8	1050.8	985.8	917.0	838.2	739.3	636.7	586.7	570.4
80°	795.6	766.8	756.8	758.1	714.3	669.3	629.2	534.2	459.1	425.3	414.1
82.5°	522.9	499.1	489.1	491.6	466.6	439.1	414.1	347.8	297.7	277.7	271.5
85°	277.7	260.2	251.4	257.7	252.7	237.7	225.2	180.1	148.9	141.4	137.6
87.5°	87.6	76.3	70.1	92.6	78.8	70.1	67.6	53.8	41.3	41.3	40.0
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: P838210

CATALOG NUMBER: ORLG-24-4-INS-ASY2R-LD4-4HI-35-120-EDD-90

CANDELA DISTRIBUTION (continued):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°	185°
0°	5362.9	5362.9	5362.9	5362.9	5362.9	5362.9	5362.9	5362.9	5362.9	5362.9	5362.9
2.5°	5355.4	5355.4	5306.6	5295.4	5290.4	5296.6	5247.8	5239.1	5309.1	5285.4	5231.6
5°	5312.9	5310.4	5241.6	5229.1	5229.1	5221.6	5166.5	5154.0	5224.1	5204.1	5145.3
7.5°	5260.3	5252.8	5171.5	5162.8	5150.3	5145.3	5084.0	5075.2	5135.2	5122.7	5067.7
10°	5196.5	5189.0	5092.7	5086.5	5072.7	5062.7	5005.1	4998.9	5060.2	5040.2	4996.4
12.5°	5112.7	5099.0	5000.1	4993.9	4982.6	4978.9	4922.6	4920.1	4987.6	4967.6	4921.3
15°	5002.6	4991.4	4881.3	4883.8	4885.1	4885.1	4840.0	4837.5	4903.8	4895.1	4845.0
17.5°	4881.3	4866.3	4761.2	4768.7	4777.5	4787.5	4752.4	4758.7	4828.8	4817.5	4772.5
20°	4743.7	4728.7	4626.1	4647.4	4666.1	4686.1	4663.6	4681.1	4746.2	4741.2	4707.4
22.5°	4589.8	4574.8	4479.7	4512.3	4543.5	4581.1	4571.1	4591.1	4659.9	4658.6	4628.6
25°	4402.2	4405.9	4322.1	4362.1	4414.7	4467.2	4471.0	4503.5	4579.8	4572.3	4544.8
27.5°	4227.0	4232.0	4143.2	4210.8	4280.8	4348.4	4364.6	4409.7	4487.2	4481.0	4457.2
30°	4043.1	4049.4	3963.1	4055.7	4140.7	4223.3	4258.3	4319.6	4398.4	4398.4	4373.4
32.5°	3851.7	3863.0	3772.9	3896.8	3995.6	4091.9	4153.2	4217.0	4307.1	4304.6	4283.3
35°	3655.3	3667.9	3585.3	3742.9	3841.7	3959.3	4035.6	4120.7	4200.8	4202.0	4185.8
37.5°	3455.2	3470.2	3395.1	3567.8	3680.4	3819.2	3916.8	4001.9	4090.7	4095.7	4080.7
40°	3256.3	3272.5	3207.5	3373.9	3516.5	3671.6	3784.2	3884.3	3981.8	3984.4	3974.3
42.5°	3057.4	3074.9	3026.1	3188.7	3350.1	3516.5	3649.1	3762.9	3863.0	3869.3	3858.0
45°	2863.5	2878.5	2843.5	3021.1	3176.2	3357.6	3510.2	3639.1	3740.4	3749.2	3745.4
47.5°	2670.8	2684.6	2653.3	2815.9	2994.8	3187.5	3363.9	3506.5	3614.1	3624.1	3621.6
50°	2481.9	2493.2	2459.4	2629.5	2807.2	3012.3	3196.2	3361.4	3481.5	3491.5	3490.2
52.5°	2294.3	2305.5	2276.8	2455.7	2617.0	2833.5	3033.6	3212.5	3331.3	3346.4	3348.9
55°	2112.9	2117.9	2095.4	2266.8	2423.1	2649.6	2879.7	3053.6	3172.5	3185.0	3192.5
57.5°	1931.5	1932.8	1914.0	2077.9	2228.0	2459.4	2700.9	2883.5	2996.1	3008.6	3019.9
60°	1751.4	1750.1	1728.8	1887.7	2031.6	2260.5	2512.0	2693.3	2802.2	2813.4	2828.5
62.5°	1572.5	1568.7	1550.0	1696.3	1831.4	2057.9	2310.5	2485.7	2589.5	2597.0	2617.0
65°	1394.8	1391.1	1373.6	1508.7	1631.3	1847.7	2095.4	2261.8	2355.6	2365.6	2361.8
67.5°	1219.7	1212.2	1198.4	1319.8	1431.1	1631.3	1869.0	2027.8	2105.4	2114.1	2137.9
70°	1044.6	1035.8	1004.5	1133.4	1231.0	1409.8	1631.3	1772.6	1837.7	1846.4	1842.7
72.5°	871.9	863.2	829.4	948.2	1030.8	1187.2	1384.8	1502.4	1558.7	1566.2	1566.2
75°	704.3	699.3	678.0	768.1	836.9	964.5	1132.1	1229.7	1273.5	1282.2	1279.7
77.5°	542.9	539.2	517.9	595.5	649.3	744.3	879.4	955.7	988.3	998.3	1019.5
80°	389.1	387.8	354.0	430.3	454.1	534.2	633.0	691.8	709.3	723.1	738.1
82.5°	248.9	250.2	216.4	281.5	291.5	342.8	404.1	440.3	452.9	464.1	475.4
85°	121.3	126.3	107.6	148.9	150.1	176.4	202.7	216.4	221.4	230.2	240.2
87.5°	31.3	36.3	20.0	42.5	37.5	48.8	56.3	60.0	58.8	65.1	68.8
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: P838210

CATALOG NUMBER: ORLG-24-4-INS-ASY2R-LD4-4HI-35-120-EDD-90

CANDELA DISTRIBUTION (continued):

	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°	285°
0°	5362.9	5362.9	5362.9	5362.9	5362.9	5362.9	5362.9	5362.9	5362.9	5362.9	5362.9
2.5°	5249.1	5289.1	5269.1	5334.2	5359.2	5319.1	5389.2	5390.4	5340.4	5399.2	5431.7
5°	5167.8	5209.1	5196.5	5264.1	5295.4	5260.3	5345.4	5361.7	5312.9	5379.2	5431.7
7.5°	5085.2	5134.0	5117.7	5186.5	5224.1	5196.5	5287.9	5314.1	5276.6	5349.2	5419.2
10°	5013.9	5055.2	5037.7	5110.2	5142.8	5120.2	5210.3	5259.1	5224.1	5312.9	5396.7
12.5°	4943.8	4977.6	4957.6	5017.7	5048.9	5020.2	5130.2	5175.3	5150.3	5242.8	5350.4
15°	4853.8	4891.3	4863.8	4917.6	4941.3	4916.3	5006.4	5084.0	5052.7	5154.0	5272.9
17.5°	4785.0	4806.2	4768.7	4811.2	4825.0	4791.2	4882.6	4958.9	4936.3	5046.4	5184.0
20°	4708.7	4726.2	4673.6	4697.4	4696.2	4653.6	4737.4	4812.5	4797.5	4918.8	5075.2
22.5°	4623.6	4632.4	4571.1	4576.1	4573.6	4503.5	4578.6	4654.9	4648.6	4771.2	4946.4
25°	4533.5	4534.8	4456.0	4453.5	4425.9	4343.4	4409.7	4496.0	4477.2	4609.8	4793.7
27.5°	4444.7	4432.2	4337.1	4314.6	4270.8	4172.0	4230.8	4308.4	4297.1	4427.2	4631.1
30°	4349.6	4333.4	4217.0	4175.8	4112.0	3998.1	4046.9	4119.5	4125.7	4239.6	4453.5
32.5°	4259.6	4218.3	4089.4	4029.4	3949.3	3816.7	3843.0	3916.8	3926.8	4041.9	4262.1
35°	4143.2	4115.7	3956.8	3854.3	3775.4	3630.3	3657.8	3709.1	3724.1	3836.7	4060.7
37.5°	4033.1	3989.4	3820.5	3695.4	3594.0	3441.4	3448.9	3501.5	3516.5	3630.3	3851.7
40°	3919.3	3856.8	3675.4	3529.0	3412.7	3252.5	3243.8	3298.8	3310.1	3421.4	3621.6
42.5°	3798.0	3722.9	3519.0	3358.9	3225.0	3062.4	3044.9	3092.4	3104.9	3213.8	3410.2
45°	3675.4	3585.3	3358.9	3183.7	3037.4	2871.0	2853.5	2889.7	2908.5	3011.1	3200.0
47.5°	3545.3	3440.2	3193.7	2998.6	2847.2	2680.8	2659.6	2695.8	2710.9	2812.2	2991.1
50°	3408.9	3281.3	3023.6	2808.4	2658.3	2494.4	2463.2	2505.7	2519.5	2614.5	2789.7
52.5°	3258.8	3117.4	2842.2	2617.0	2466.9	2310.5	2273.0	2314.3	2330.6	2423.1	2584.5
55°	3099.9	2947.3	2659.6	2440.7	2278.0	2125.4	2094.1	2110.4	2145.4	2233.0	2383.1
57.5°	2921.0	2769.7	2466.9	2244.2	2087.9	1941.5	1915.2	1930.3	1962.8	2047.8	2182.9
60°	2730.9	2570.8	2270.5	2047.8	1896.5	1757.6	1733.8	1747.6	1782.6	1860.2	1985.3
62.5°	2543.2	2363.1	2067.9	1846.4	1708.8	1580.0	1573.7	1568.7	1601.2	1676.3	1786.4
65°	2315.6	2142.9	1856.4	1646.3	1521.2	1404.8	1379.8	1391.1	1422.4	1491.2	1606.3
67.5°	2071.6	1915.2	1640.0	1446.1	1334.8	1231.0	1209.7	1214.7	1247.2	1307.3	1407.3
70°	1812.7	1675.1	1418.6	1244.7	1150.9	1053.3	1039.6	1040.8	1072.1	1124.6	1212.2
72.5°	1541.2	1417.4	1194.7	1045.8	968.3	898.2	885.7	870.7	899.5	944.5	1019.5
75°	1264.7	1155.9	972.0	850.7	789.4	730.6	719.3	704.3	733.1	771.9	830.6
77.5°	985.8	898.2	755.6	661.8	614.2	570.4	560.4	544.2	572.9	601.7	648.0
80°	713.1	649.3	564.2	465.4	449.1	420.3	410.3	392.8	420.3	439.1	474.1
82.5°	460.4	417.8	369.0	300.2	297.7	276.5	271.5	251.4	276.5	287.7	314.0
85°	232.7	212.7	200.2	152.6	157.6	143.9	142.6	121.3	141.4	146.4	161.4
87.5°	66.3	70.1	62.5	37.5	47.5	45.0	45.0	32.5	45.0	45.0	51.3
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: P838210

CATALOG NUMBER: ORLG-24-4-INS-ASY2R-LD4-4HI-35-120-EDD-90

CANDELA DISTRIBUTION (continued):

	295°	305°	315°	325°	335°	345°	355°	360°
0°	5362.9	5362.9	5362.9	5362.9	5362.9	5362.9	5362.9	5362.9
2.5°	5367.9	5389.2	5394.2	5392.9	5406.7	5481.8	5456.7	5481.8
5°	5380.4	5428.0	5440.5	5458.0	5480.5	5565.6	5538.1	5568.1
7.5°	5387.9	5459.2	5486.8	5520.5	5556.8	5651.9	5629.4	5659.4
10°	5387.9	5480.5	5520.5	5576.8	5625.6	5735.7	5714.4	5749.5
12.5°	5365.4	5484.3	5540.6	5619.4	5681.9	5800.8	5792.0	5817.0
15°	5319.1	5465.5	5543.1	5644.4	5722.0	5854.6	5850.8	5880.8
17.5°	5256.6	5433.0	5526.8	5654.4	5752.0	5900.8	5909.6	5925.9
20°	5177.8	5371.7	5494.3	5650.6	5773.2	5937.1	5948.4	5970.9
22.5°	5073.9	5297.9	5445.5	5634.4	5775.7	5952.1	5972.1	5993.4
25°	4951.4	5209.1	5381.7	5603.1	5763.2	5950.9	5978.4	5997.2
27.5°	4811.2	5094.0	5300.4	5553.1	5728.2	5930.9	5964.6	5987.2
30°	4648.6	4971.4	5207.8	5488.0	5680.7	5893.3	5929.6	5952.1
32.5°	4481.0	4836.3	5097.7	5404.2	5611.9	5833.3	5864.6	5882.1
35°	4298.3	4672.4	4965.1	5296.6	5523.0	5737.0	5760.7	5779.5
37.5°	4099.4	4494.7	4813.7	5175.3	5398.0	5603.1	5624.4	5645.6
40°	3894.3	4308.4	4643.6	5026.4	5249.1	5439.2	5461.8	5476.8
42.5°	3687.9	4101.9	4462.2	4851.3	5072.7	5255.3	5269.1	5284.1
45°	3479.0	3888.0	4258.3	4657.4	4876.3	5047.7	5052.7	5065.2
47.5°	3266.3	3666.6	4034.4	4436.0	4652.4	4808.7	4813.7	4823.8
50°	3052.4	3445.2	3795.5	4197.0	4408.4	4573.6	4551.0	4561.1
52.5°	2842.2	3212.5	3570.3	3939.3	4148.2	4294.6	4300.8	4280.8
55°	2635.8	2984.8	3313.8	3669.1	3868.0	3981.8	3978.1	3985.6
57.5°	2426.9	2754.6	3056.1	3381.4	3575.3	3682.9	3705.4	3679.1
60°	2214.2	2522.0	2792.2	3086.2	3273.8	3363.9	3390.1	3365.1
62.5°	2002.8	2285.5	2530.7	2787.2	2961.1	3072.4	3069.9	3042.4
65°	1791.4	2047.8	2266.8	2484.4	2635.8	2747.1	2742.1	2717.1
67.5°	1596.2	1807.7	2004.1	2180.4	2311.8	2388.1	2414.4	2384.4
70°	1381.1	1563.7	1736.4	1877.7	1986.5	2055.4	2080.4	2054.1
72.5°	1165.9	1321.0	1442.4	1578.7	1662.5	1720.1	1746.4	1721.3
75°	953.2	1080.8	1179.7	1286.0	1344.8	1393.6	1423.6	1398.6
77.5°	746.8	845.7	924.5	1002.0	1069.6	1080.8	1107.1	1090.8
80°	550.4	621.7	679.3	730.6	779.4	784.4	805.6	795.6
82.5°	366.5	414.1	429.1	482.9	514.2	509.1	530.4	522.9
85°	193.9	222.7	248.9	265.2	282.7	266.5	285.2	277.7
87.5°	65.1	68.8	60.0	85.1	93.8	80.1	91.3	87.6
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)