

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: P837840

Luminaire Tested: **ORLG-24-2-INS-ASY2R-LD4-1STD-27-120-EDD**

Issue Date: 5/21/2024



Test Information

Test Method: LM-79-08
Report Number: P837840
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-LD4-1STD-27-120-EDD
Description: 2FT x 2FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2 and
RFI grid
Light Source: 2700K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

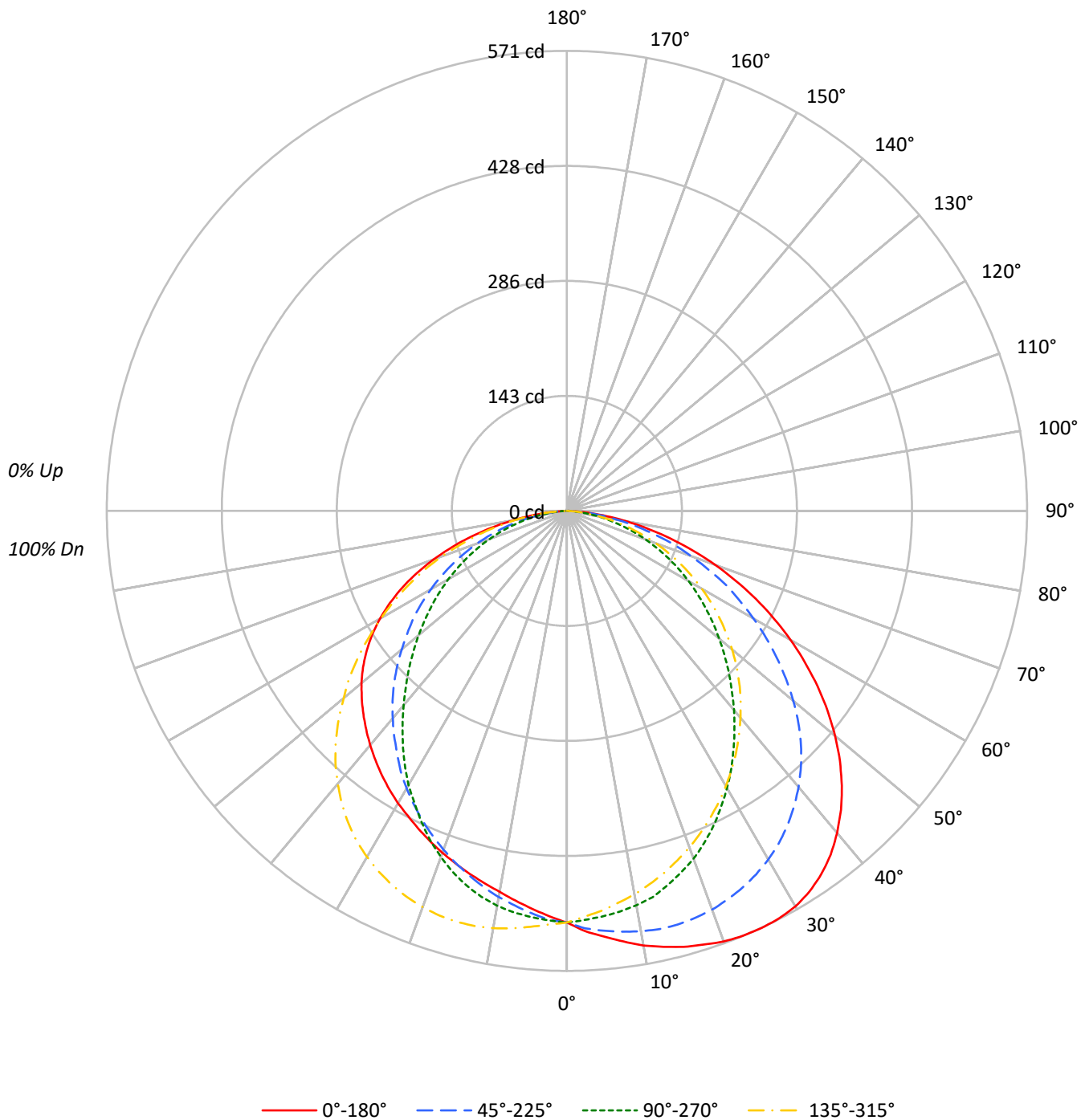
Lumens per Lamp: N/A
Luminaire Lumens: 1498.8 lumens
Efficiency: N/A
Efficacy: 90.3 lumens/watt
Spacing Criteria (0/90/45): 1.43 / 1.16 / 1.4
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 16.6
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: P837840

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Luminous Intensity Polar Plot



Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269



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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°	1375	1375	1375	1375
5°	1433	1365	1339	1367
10°	1497	1358	1312	1360
15°	1561	1341	1299	1341
20°	1629	1316	1293	1309
25°	1696	1279	1293	1266
30°	1762	1235	1302	1221
35°	1808	1184	1315	1166
40°	1833	1133	1333	1108
45°	1836	1082	1359	1055
50°	1819	1032	1392	1005
55°	1781	986	1423	959
60°	1725	938	1442	914
65°	1648	883	1435	863
70°	1540	818	1384	803
75°	1385	730	1269	726
80°	1175	611	1068	620
85°	818	404	676	417

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°	48.5	3.2
10°-20°	140.5	9.4
20°-30°	215.2	14.4
30°-40°	261.7	17.5
40°-50°	272.1	18.2
50°-60°	245.8	16.4
60°-70°	186.9	12.5
70°-80°	104.2	7.0
80°-90°	24.0	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°	404.2	27.0
0°-40°	665.9	44.4
0°-60°	1183.8	79.0
0°-90°	1498.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1498.8	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	511	511	511	511	511	
5°	530	505	496	506	530	51
15°	560	481	466	481	560	159
25°	571	431	436	426	571	264
35°	550	360	400	355	550	344
45°	482	284	357	277	482	371
55°	380	210	303	204	380	339
65°	259	139	225	136	259	256
75°	133	70	122	70	133	142
85°	26	13	22	14	26	33
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°	510.9	510.9	510.9	510.9	510.9	510.9	510.9	510.9	510.9	510.9	510.9
2.5°	522.2	514.5	514.7	521.3	516.2	518.7	511.6	514.3	513.5	514.1	508.2
5°	530.4	522.2	522.1	527.8	522.1	523.1	514.1	515.9	513.2	511.6	505.3
7.5°	539.1	530.9	530.0	535.0	527.5	526.7	516.7	516.7	511.9	507.8	501.8
10°	547.7	539.2	538.1	542.0	532.7	529.9	517.8	515.9	509.5	503.3	496.9
12.5°	554.1	545.5	544.7	547.1	536.6	531.6	517.8	514.1	504.8	496.1	491.1
15°	560.2	551.4	549.1	550.3	538.3	531.6	516.1	510.4	498.5	487.0	481.2
17.5°	564.5	556.0	553.8	553.6	539.1	529.6	512.5	504.7	490.4	476.5	470.7
20°	568.8	560.3	557.4	555.3	538.9	526.8	507.3	496.7	480.0	464.5	459.6
22.5°	570.9	562.2	559.1	555.9	537.3	521.8	500.8	487.4	468.3	449.8	445.8
25°	571.3	562.3	559.0	554.3	534.2	515.9	492.5	476.2	454.8	434.4	430.9
27.5°	570.3	560.5	557.2	551.6	529.6	508.6	482.6	463.4	440.5	417.9	414.2
30°	567.0	557.1	553.9	546.6	523.0	499.7	471.8	449.2	424.7	400.6	397.4
32.5°	560.3	550.7	548.0	540.8	515.9	489.3	459.1	434.0	407.2	384.2	379.4
35°	550.5	540.9	539.2	531.6	505.8	476.9	445.3	417.3	388.6	365.1	360.5
37.5°	537.8	529.7	527.2	519.7	494.1	462.8	429.5	399.2	369.6	344.4	341.5
40°	521.7	514.1	512.2	505.5	480.3	447.2	412.3	380.5	350.1	326.6	322.6
42.5°	503.3	496.2	495.1	488.2	463.4	429.9	393.7	361.1	329.7	307.1	303.0
45°	482.5	475.6	475.3	468.8	445.0	410.8	374.2	341.4	309.8	286.4	284.2
47.5°	459.5	453.3	453.3	447.2	424.3	389.7	354.0	320.9	289.8	269.1	265.3
50°	434.5	428.6	426.8	423.9	401.6	366.7	332.8	300.9	270.0	250.2	246.5
52.5°	407.8	402.8	404.0	398.5	376.9	342.7	311.4	278.4	250.1	232.1	228.4
55°	379.7	372.5	373.6	371.6	351.2	318.0	287.3	259.8	230.6	213.7	210.2
57.5°	350.5	341.2	345.0	343.8	323.8	292.8	265.3	238.7	211.2	195.5	192.2
60°	320.6	311.6	315.5	314.5	295.6	267.5	242.5	217.8	191.9	177.7	174.3
62.5°	289.8	281.6	285.2	284.3	267.0	241.7	219.9	197.2	172.4	159.7	156.6
65°	258.8	251.0	254.2	253.6	237.6	218.3	196.6	175.9	152.9	141.8	138.7
67.5°	227.1	219.9	222.8	222.8	208.2	189.7	173.3	154.3	133.7	124.2	121.3
70°	195.7	188.9	191.5	191.3	178.9	163.9	149.7	132.7	114.3	106.4	104.0
72.5°	164.0	158.0	160.4	160.2	149.8	140.1	126.1	111.4	95.3	89.0	86.9
75°	133.2	127.6	129.9	129.7	121.2	112.1	102.7	90.6	76.7	72.3	70.2
77.5°	103.9	98.2	100.1	100.1	93.9	87.3	79.8	70.4	60.7	55.9	54.3
80°	75.8	73.0	72.1	72.2	68.0	63.8	59.9	50.9	43.7	40.5	39.4
82.5°	49.8	47.5	46.6	46.8	44.4	41.8	39.4	33.1	28.4	26.5	25.9
85°	26.5	24.8	24.0	24.5	24.1	22.6	21.4	17.2	14.2	13.5	13.1
87.5°	8.3	7.3	6.7	8.8	7.5	6.7	6.4	5.1	3.9	3.9	3.8
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: P837840

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CANDELA DISTRIBUTION (continued):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°	185°
0°	510.9	510.9	510.9	510.9	510.9	510.9	510.9	510.9	510.9	510.9	510.9
2.5°	510.1	510.1	505.5	504.4	503.9	504.5	499.9	499.1	505.7	503.5	498.3
5°	506.1	505.8	499.3	498.1	498.1	497.4	492.1	491.0	497.6	495.7	490.1
7.5°	501.1	500.4	492.6	491.8	490.6	490.1	484.3	483.4	489.2	488.0	482.7
10°	495.0	494.3	485.1	484.5	483.2	482.3	476.8	476.2	482.0	480.1	475.9
12.5°	487.0	485.7	476.3	475.7	474.6	474.3	468.9	468.7	475.1	473.2	468.8
15°	476.5	475.5	465.0	465.2	465.3	465.3	461.0	460.8	467.1	466.3	461.5
17.5°	465.0	463.5	453.5	454.3	455.1	456.0	452.7	453.3	460.0	458.9	454.6
20°	451.9	450.4	440.7	442.7	444.5	446.4	444.2	445.9	452.1	451.6	448.4
22.5°	437.2	435.8	426.7	429.8	432.8	436.4	435.4	437.3	443.9	443.8	440.9
25°	419.3	419.7	411.7	415.5	420.5	425.5	425.9	429.0	436.3	435.5	432.9
27.5°	402.7	403.1	394.7	401.1	407.8	414.2	415.8	420.1	427.4	426.8	424.6
30°	385.1	385.7	377.5	386.3	394.4	402.3	405.6	411.5	419.0	419.0	416.6
32.5°	366.9	368.0	359.4	371.2	380.6	389.8	395.6	401.7	410.3	410.0	408.0
35°	348.2	349.4	341.5	356.5	366.0	377.2	384.4	392.5	400.2	400.3	398.7
37.5°	329.1	330.6	323.4	339.9	350.6	363.8	373.1	381.2	389.7	390.1	388.7
40°	310.2	311.7	305.5	321.4	335.0	349.7	360.5	370.0	379.3	379.5	378.6
42.5°	291.2	292.9	288.3	303.7	319.1	335.0	347.6	358.4	368.0	368.6	367.5
45°	272.8	274.2	270.9	287.8	302.6	319.8	334.4	346.6	356.3	357.1	356.8
47.5°	254.4	255.7	252.7	268.2	285.3	303.6	320.4	334.0	344.3	345.2	345.0
50°	236.4	237.5	234.3	250.5	267.4	286.9	304.5	320.2	331.6	332.6	332.5
52.5°	218.5	219.6	216.9	233.9	249.3	269.9	289.0	306.0	317.3	318.8	319.0
55°	201.3	201.7	199.6	215.9	230.8	252.4	274.3	290.9	302.2	303.4	304.1
57.5°	184.0	184.1	182.3	197.9	212.2	234.3	257.3	274.7	285.4	286.6	287.7
60°	166.8	166.7	164.7	179.8	193.5	215.3	239.3	256.6	266.9	268.0	269.4
62.5°	149.8	149.4	147.6	161.6	174.5	196.0	220.1	236.8	246.7	247.4	249.3
65°	132.9	132.5	130.8	143.7	155.4	176.0	199.6	215.4	224.4	225.3	225.0
67.5°	116.2	115.5	114.2	125.7	136.3	155.4	178.0	193.2	200.6	201.4	203.7
70°	99.5	98.7	95.7	108.0	117.3	134.3	155.4	168.9	175.1	175.9	175.5
72.5°	83.1	82.2	79.0	90.3	98.2	113.1	131.9	143.1	148.5	149.2	149.2
75°	67.1	66.6	64.6	73.2	79.7	91.9	107.8	117.1	121.3	122.1	121.9
77.5°	51.7	51.4	49.3	56.7	61.8	70.9	83.8	91.0	94.1	95.1	97.1
80°	37.1	36.9	33.7	41.0	43.3	50.9	60.3	65.9	67.6	68.9	70.3
82.5°	23.7	23.8	20.6	26.8	27.8	32.7	38.5	41.9	43.1	44.2	45.3
85°	11.6	12.0	10.2	14.2	14.3	16.8	19.3	20.6	21.1	21.9	22.9
87.5°	3.0	3.5	1.9	4.1	3.6	4.6	5.4	5.7	5.6	6.2	6.6
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°	510.9	510.9	510.9	510.9	510.9	510.9	510.9	510.9	510.9	510.9	510.9
2.5°	500.0	503.8	501.9	508.1	510.5	506.7	513.4	513.5	508.7	514.3	517.4
5°	492.3	496.2	495.0	501.4	504.4	501.1	509.2	510.7	506.1	512.4	517.4
7.5°	484.4	489.0	487.5	494.1	497.6	495.0	503.7	506.2	502.6	509.5	516.2
10°	477.6	481.5	479.9	486.8	489.9	487.7	496.3	501.0	497.6	506.1	514.1
12.5°	470.9	474.2	472.2	478.0	480.9	478.2	488.7	493.0	490.6	499.4	509.7
15°	462.4	465.9	463.3	468.4	470.7	468.3	476.9	484.3	481.3	491.0	502.3
17.5°	455.8	457.8	454.3	458.3	459.6	456.4	465.1	472.4	470.2	480.7	493.8
20°	448.5	450.2	445.2	447.5	447.3	443.3	451.3	458.4	457.0	468.6	483.4
22.5°	440.4	441.3	435.4	435.9	435.7	429.0	436.1	443.4	442.8	454.5	471.2
25°	431.8	432.0	424.5	424.2	421.6	413.7	420.1	428.3	426.5	439.1	456.6
27.5°	423.4	422.2	413.1	411.0	406.8	397.4	403.0	410.4	409.3	421.7	441.1
30°	414.3	412.8	401.7	397.8	391.7	380.8	385.5	392.4	393.0	403.8	424.2
32.5°	405.8	401.8	389.5	383.8	376.2	363.6	366.1	373.1	374.1	385.0	406.0
35°	394.7	392.0	376.9	367.1	359.6	345.8	348.4	353.3	354.8	365.5	386.8
37.5°	384.2	380.0	363.9	352.0	342.4	327.8	328.5	333.5	335.0	345.8	366.9
40°	373.3	367.4	350.1	336.2	325.1	309.8	309.0	314.2	315.3	325.9	345.0
42.5°	361.8	354.6	335.2	320.0	307.2	291.7	290.0	294.6	295.8	306.1	324.8
45°	350.1	341.5	320.0	303.3	289.3	273.5	271.8	275.3	277.1	286.8	304.8
47.5°	337.7	327.7	304.2	285.6	271.2	255.4	253.3	256.8	258.2	267.9	284.9
50°	324.7	312.6	288.0	267.5	253.2	237.6	234.6	238.7	240.0	249.1	265.7
52.5°	310.4	297.0	270.7	249.3	235.0	220.1	216.5	220.5	222.0	230.8	246.2
55°	295.3	280.7	253.3	232.5	217.0	202.5	199.5	201.0	204.4	212.7	227.0
57.5°	278.2	263.8	235.0	213.8	198.9	184.9	182.4	183.9	187.0	195.1	207.9
60°	260.1	244.9	216.3	195.1	180.7	167.4	165.2	166.5	169.8	177.2	189.1
62.5°	242.3	225.1	197.0	175.9	162.8	150.5	149.9	149.4	152.5	159.7	170.2
65°	220.6	204.1	176.8	156.8	144.9	133.8	131.4	132.5	135.5	142.0	153.0
67.5°	197.3	182.4	156.2	137.8	127.1	117.3	115.2	115.7	118.8	124.5	134.1
70°	172.7	159.6	135.1	118.6	109.6	100.3	99.0	99.1	102.1	107.1	115.5
72.5°	146.8	135.0	113.8	99.6	92.2	85.6	84.4	82.9	85.7	90.0	97.1
75°	120.5	110.1	92.6	81.0	75.2	69.6	68.5	67.1	69.8	73.5	79.1
77.5°	93.9	85.6	72.0	63.0	58.5	54.3	53.4	51.8	54.6	57.3	61.7
80°	67.9	61.8	53.7	44.3	42.8	40.0	39.1	37.4	40.0	41.8	45.2
82.5°	43.9	39.8	35.2	28.6	28.4	26.3	25.9	24.0	26.3	27.4	29.9
85°	22.2	20.3	19.1	14.5	15.0	13.7	13.6	11.6	13.5	13.9	15.4
87.5°	6.3	6.7	6.0	3.6	4.5	4.3	4.3	3.1	4.3	4.3	4.9
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: P837840

CATALOG NUMBER: ORLG-24-2-INS-ASY2R-LD4-1STD-27-120-EDD

CANDELA DISTRIBUTION (continued):

	295°	305°	315°	325°	335°	345°	355°	360°
0°	510.9	510.9	510.9	510.9	510.9	510.9	510.9	510.9
2.5°	511.3	513.4	513.8	513.7	515.0	522.2	519.8	522.2
5°	512.5	517.1	518.2	519.9	522.1	530.2	527.5	530.4
7.5°	513.2	520.0	522.7	525.9	529.3	538.4	536.2	539.1
10°	513.2	522.1	525.9	531.2	535.9	546.4	544.3	547.7
12.5°	511.1	522.4	527.8	535.3	541.2	552.6	551.7	554.1
15°	506.7	520.6	528.0	537.7	545.1	557.7	557.3	560.2
17.5°	500.7	517.5	526.5	538.6	547.9	562.1	562.9	564.5
20°	493.2	511.7	523.4	538.3	549.9	565.6	566.6	568.8
22.5°	483.3	504.7	518.7	536.7	550.2	567.0	568.9	570.9
25°	471.6	496.2	512.6	533.7	549.0	566.9	569.5	571.3
27.5°	458.3	485.2	504.9	529.0	545.7	565.0	568.2	570.3
30°	442.8	473.6	496.1	522.8	541.1	561.4	564.8	567.0
32.5°	426.8	460.7	485.6	514.8	534.6	555.7	558.6	560.3
35°	409.4	445.1	473.0	504.5	526.1	546.5	548.7	550.5
37.5°	390.5	428.2	458.5	493.0	514.2	533.7	535.8	537.8
40°	371.0	410.4	442.3	478.8	500.0	518.1	520.3	521.7
42.5°	351.3	390.7	425.1	462.1	483.2	500.6	501.9	503.3
45°	331.4	370.4	405.6	443.6	464.5	480.8	481.3	482.5
47.5°	311.1	349.3	384.3	422.6	443.2	458.1	458.5	459.5
50°	290.8	328.2	361.5	399.8	419.9	435.7	433.5	434.5
52.5°	270.7	306.0	340.1	375.2	395.1	409.1	409.7	407.8
55°	251.1	284.3	315.7	349.5	368.5	379.3	378.9	379.7
57.5°	231.2	262.4	291.1	322.1	340.6	350.8	353.0	350.5
60°	210.9	240.2	266.0	294.0	311.9	320.4	322.9	320.6
62.5°	190.8	217.7	241.1	265.5	282.1	292.7	292.4	289.8
65°	170.6	195.1	215.9	236.7	251.1	261.7	261.2	258.8
67.5°	152.1	172.2	190.9	207.7	220.2	227.5	230.0	227.1
70°	131.6	149.0	165.4	178.9	189.2	195.8	198.2	195.7
72.5°	111.1	125.8	137.4	150.4	158.4	163.9	166.4	164.0
75°	90.8	103.0	112.4	122.5	128.1	132.7	135.6	133.2
77.5°	71.1	80.6	88.1	95.5	101.9	103.0	105.5	103.9
80°	52.4	59.2	64.7	69.6	74.2	74.7	76.7	75.8
82.5°	34.9	39.4	40.9	46.0	49.0	48.5	50.5	49.8
85°	18.5	21.2	23.7	25.3	26.9	25.4	27.2	26.5
87.5°	6.2	6.6	5.7	8.1	8.9	7.6	8.7	8.3
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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