

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: P837912

Luminaire Tested: **ORLG-24-2-INS-ASY2R-LD4-1STD-50-120-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: P837912
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-50-120-EDD
Description: 2FT x 2FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2 and
RFI grid
Light Source: 5000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

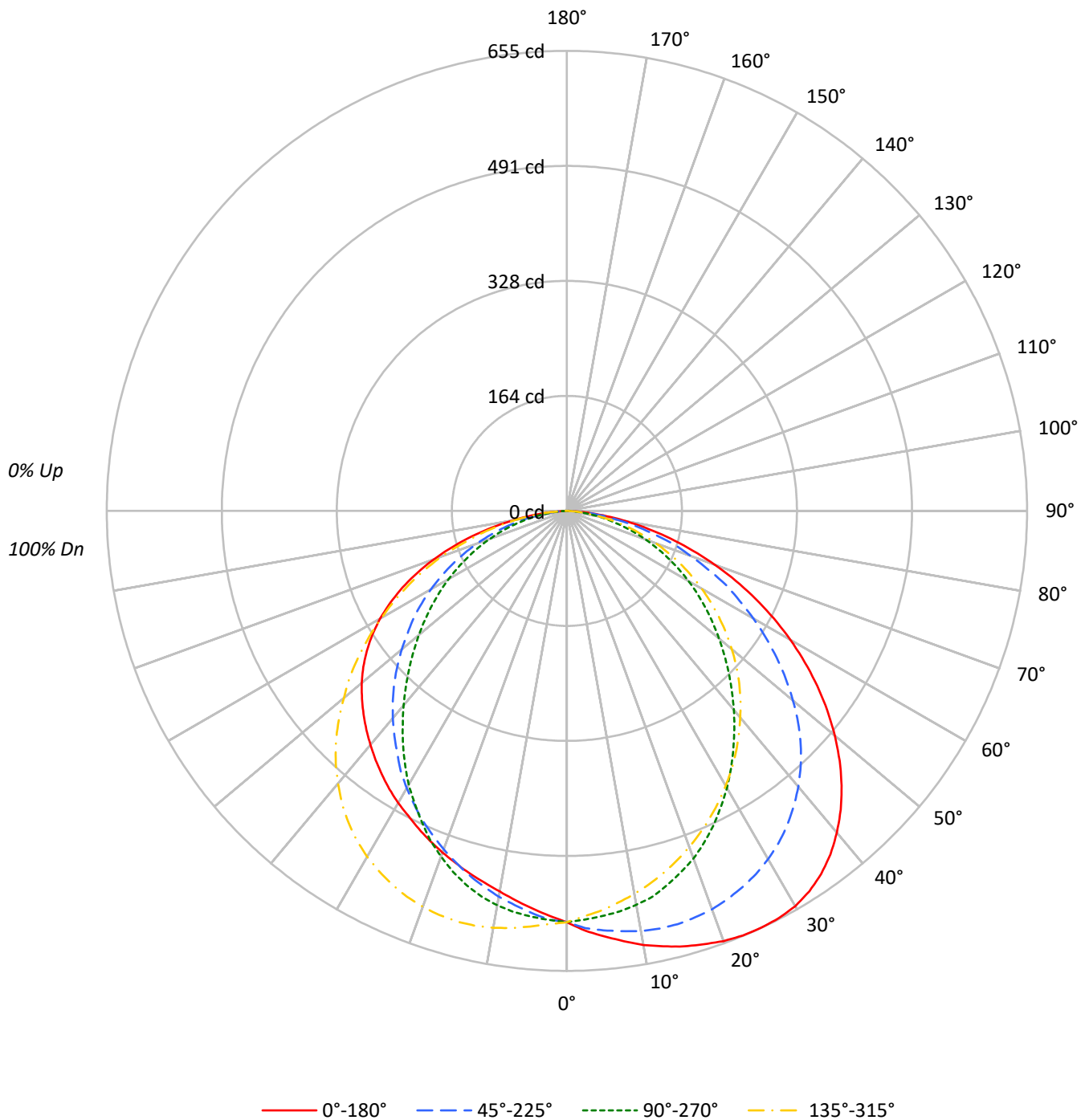
Lumens per Lamp: N/A
Luminaire Lumens: 1717.7 lumens
Efficiency: N/A
Efficacy: 103.5 lumens/watt
Spacing Criteria (0/90/45): 1.43 / 1.16 / 1.4
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 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

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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°	1576	1576	1576	1576
5°	1642	1564	1535	1567
10°	1715	1556	1503	1558
15°	1789	1536	1489	1537
20°	1867	1508	1482	1500
25°	1944	1466	1482	1451
30°	2019	1415	1492	1400
35°	2073	1357	1507	1336
40°	2100	1299	1528	1270
45°	2105	1239	1558	1208
50°	2084	1183	1596	1152
55°	2041	1130	1631	1099
60°	1977	1075	1653	1047
65°	1889	1012	1645	989
70°	1764	938	1586	921
75°	1588	836	1456	832
80°	1347	700	1223	711
85°	936	463	775	475

Classified

Scaled Data Report

Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	55.6	3.2
10°-20°	161.0	9.4
20°-30°	246.7	14.4
30°-40°	300.0	17.5
40°-50°	311.8	18.2
50°-60°	281.7	16.4
60°-70°	214.1	12.5
70°-80°	119.4	7.0
80°-90°	27.5	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°	463.2	27.0
0°-40°	763.2	44.4
0°-60°	1356.7	79.0
0°-90°	1717.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1717.7	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	586	586	586	586	586	
5°	608	579	568	580	608	59
15°	642	552	534	552	642	182
25°	655	494	499	489	655	302
35°	631	413	459	407	631	394
45°	553	326	409	318	553	426
55°	435	241	348	234	435	388
65°	297	159	258	155	297	293
75°	153	80	140	80	153	162
85°	30	15	25	15	30	38
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°	585.5	585.5	585.5	585.5	585.5	585.5	585.5	585.5	585.5	585.5	585.5
2.5°	598.4	589.7	589.8	597.5	591.6	594.5	586.3	589.4	588.5	589.2	582.5
5°	607.9	598.4	598.3	604.9	598.3	599.5	589.2	591.2	588.2	586.3	579.1
7.5°	617.8	608.4	607.5	613.2	604.6	603.6	592.2	592.2	586.7	581.9	575.1
10°	627.7	618.0	616.7	621.1	610.5	607.3	593.4	591.2	584.0	576.9	569.5
12.5°	635.0	625.2	624.3	627.0	615.0	609.2	593.4	589.2	578.5	568.5	562.8
15°	642.0	631.9	629.3	630.7	616.9	609.2	591.5	584.9	571.3	558.2	551.5
17.5°	646.9	637.2	634.6	634.5	617.8	606.9	587.4	578.4	562.0	546.1	539.4
20°	651.8	642.2	638.9	636.4	617.6	603.8	581.4	569.2	550.1	532.3	526.7
22.5°	654.3	644.3	640.8	637.1	615.8	598.0	574.0	558.6	536.7	515.6	510.9
25°	654.7	644.5	640.6	635.3	612.2	591.2	564.4	545.7	521.3	497.8	493.8
27.5°	653.6	642.4	638.6	632.2	606.9	582.9	553.1	531.1	504.9	478.9	474.7
30°	649.8	638.5	634.8	626.4	599.4	572.6	540.7	514.9	486.7	459.1	455.5
32.5°	642.2	631.1	628.1	619.8	591.2	560.8	526.2	497.4	466.7	440.3	434.8
35°	631.0	619.9	618.0	609.2	579.7	546.6	510.4	478.3	445.4	418.4	413.1
37.5°	616.3	607.1	604.2	595.6	566.2	530.4	492.2	457.5	423.6	394.7	391.4
40°	597.9	589.2	587.0	579.3	550.5	512.5	472.5	436.1	401.2	374.3	369.7
42.5°	576.9	568.7	567.4	559.5	531.1	492.7	451.2	413.8	377.9	351.9	347.3
45°	553.0	545.0	544.8	537.3	510.0	470.8	428.8	391.3	355.1	328.2	325.7
47.5°	526.6	519.5	519.5	512.5	486.3	446.6	405.7	367.8	332.1	308.4	304.0
50°	497.9	491.2	489.2	485.8	460.2	420.2	381.4	344.8	309.5	286.8	282.6
52.5°	467.3	461.6	463.0	456.7	432.0	392.8	356.9	319.0	286.7	266.0	261.8
55°	435.1	426.9	428.1	425.8	402.5	364.5	329.3	297.7	264.3	244.9	240.9
57.5°	401.7	391.0	395.4	394.0	371.1	335.6	304.0	273.5	242.0	224.1	220.3
60°	367.4	357.1	361.6	360.4	338.8	306.6	277.9	249.6	219.9	203.6	199.8
62.5°	332.1	322.7	326.8	325.9	306.1	277.0	252.0	226.0	197.6	183.0	179.5
65°	296.6	287.6	291.3	290.6	272.3	250.2	225.3	201.6	175.2	162.5	159.0
67.5°	260.3	252.0	255.4	255.4	238.6	217.4	198.6	176.9	153.2	142.3	139.0
70°	224.2	216.5	219.5	219.2	205.0	187.8	171.5	152.1	131.0	122.0	119.2
72.5°	187.9	181.1	183.8	183.5	171.7	160.6	144.5	127.7	109.3	102.0	99.6
75°	152.7	146.3	148.9	148.6	138.9	128.5	117.7	103.8	88.0	82.9	80.4
77.5°	119.1	112.5	114.7	114.7	107.6	100.1	91.5	80.7	69.5	64.1	62.3
80°	86.9	83.7	82.6	82.8	78.0	73.1	68.7	58.3	50.1	46.4	45.2
82.5°	57.1	54.5	53.4	53.7	50.9	47.9	45.2	38.0	32.5	30.3	29.6
85°	30.3	28.4	27.5	28.1	27.6	25.9	24.6	19.7	16.3	15.4	15.0
87.5°	9.6	8.3	7.6	10.1	8.6	7.6	7.4	5.9	4.5	4.5	4.4
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: P837912

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CANDELA DISTRIBUTION (continued):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°	185°
0°	585.5	585.5	585.5	585.5	585.5	585.5	585.5	585.5	585.5	585.5	585.5
2.5°	584.7	584.7	579.3	578.1	577.6	578.2	572.9	572.0	579.6	577.0	571.1
5°	580.0	579.7	572.2	570.9	570.9	570.0	564.0	562.7	570.3	568.1	561.7
7.5°	574.3	573.5	564.6	563.6	562.3	561.7	555.0	554.1	560.6	559.3	553.2
10°	567.3	566.5	556.0	555.3	553.8	552.7	546.4	545.7	552.4	550.2	545.5
12.5°	558.2	556.7	545.9	545.2	544.0	543.5	537.4	537.1	544.5	542.3	537.3
15°	546.1	544.9	532.9	533.2	533.3	533.3	528.4	528.1	535.4	534.4	528.9
17.5°	532.9	531.3	519.8	520.6	521.6	522.7	518.8	519.5	527.2	525.9	521.0
20°	517.9	516.2	505.0	507.4	509.4	511.6	509.1	511.0	518.1	517.6	513.9
22.5°	501.1	499.4	489.1	492.6	496.0	500.1	499.0	501.2	508.7	508.6	505.3
25°	480.6	481.0	471.8	476.2	482.0	487.7	488.1	491.7	500.0	499.2	496.2
27.5°	461.5	462.0	452.3	459.7	467.3	474.7	476.5	481.4	489.9	489.2	486.6
30°	441.4	442.1	432.7	442.8	452.0	461.1	464.9	471.6	480.2	480.2	477.4
32.5°	420.5	421.7	411.9	425.4	436.2	446.7	453.4	460.4	470.2	469.9	467.6
35°	399.1	400.4	391.4	408.6	419.4	432.2	440.6	449.9	458.6	458.7	457.0
37.5°	377.2	378.8	370.6	389.5	401.8	416.9	427.6	436.9	446.6	447.1	445.5
40°	355.5	357.3	350.2	368.3	383.9	400.8	413.1	424.0	434.7	435.0	433.9
42.5°	333.8	335.7	330.4	348.1	365.7	383.9	398.4	410.8	421.7	422.4	421.2
45°	312.6	314.2	310.4	329.8	346.8	366.6	383.2	397.3	408.3	409.3	408.9
47.5°	291.6	293.1	289.7	307.4	326.9	348.0	367.2	382.8	394.5	395.6	395.4
50°	271.0	272.2	268.5	287.1	306.5	328.9	348.9	367.0	380.1	381.2	381.0
52.5°	250.5	251.7	248.6	268.1	285.7	309.3	331.2	350.7	363.7	365.3	365.6
55°	230.7	231.2	228.8	247.5	264.5	289.3	314.4	333.4	346.3	347.7	348.5
57.5°	210.9	211.0	209.0	226.8	243.2	268.5	294.9	314.8	327.1	328.4	329.7
60°	191.2	191.1	188.7	206.1	221.8	246.8	274.2	294.0	305.9	307.1	308.8
62.5°	171.7	171.3	169.2	185.2	199.9	224.7	252.2	271.4	282.7	283.5	285.7
65°	152.3	151.9	150.0	164.7	178.1	201.7	228.8	246.9	257.2	258.3	257.8
67.5°	133.2	132.3	130.8	144.1	156.2	178.1	204.0	221.4	229.8	230.8	233.4
70°	114.0	113.1	109.7	123.7	134.4	153.9	178.1	193.5	200.6	201.6	201.2
72.5°	95.2	94.2	90.5	103.5	112.5	129.6	151.2	164.0	170.2	171.0	171.0
75°	76.9	76.3	74.0	83.9	91.4	105.3	123.6	134.2	139.0	140.0	139.7
77.5°	59.3	58.9	56.5	65.0	70.9	81.3	96.0	104.3	107.9	109.0	111.3
80°	42.5	42.3	38.6	47.0	49.6	58.3	69.1	75.5	77.4	78.9	80.6
82.5°	27.2	27.3	23.6	30.7	31.8	37.4	44.1	48.1	49.4	50.7	51.9
85°	13.2	13.8	11.7	16.3	16.4	19.3	22.1	23.6	24.2	25.1	26.2
87.5°	3.4	4.0	2.2	4.6	4.1	5.3	6.1	6.6	6.4	7.1	7.5
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):

	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°	285°
0°	585.5	585.5	585.5	585.5	585.5	585.5	585.5	585.5	585.5	585.5	585.5
2.5°	573.0	577.4	575.2	582.3	585.1	580.7	588.3	588.5	583.0	589.4	593.0
5°	564.2	568.7	567.3	574.7	578.1	574.3	583.6	585.3	580.0	587.2	593.0
7.5°	555.2	560.5	558.7	566.2	570.3	567.3	577.3	580.1	576.1	584.0	591.6
10°	547.4	551.9	550.0	557.9	561.4	559.0	568.8	574.1	570.3	580.0	589.2
12.5°	539.7	543.4	541.2	547.8	551.2	548.1	560.1	565.0	562.3	572.4	584.1
15°	529.9	534.0	531.0	536.9	539.4	536.7	546.6	555.0	551.6	562.7	575.6
17.5°	522.4	524.7	520.6	525.2	526.7	523.1	533.0	541.4	538.9	550.9	565.9
20°	514.0	516.0	510.2	512.8	512.7	508.0	517.2	525.4	523.7	537.0	554.1
22.5°	504.8	505.7	499.0	499.6	499.3	491.7	499.8	508.2	507.5	520.9	540.0
25°	494.9	495.1	486.5	486.2	483.2	474.2	481.4	490.8	488.8	503.3	523.3
27.5°	485.2	483.9	473.5	471.0	466.2	455.5	461.9	470.3	469.1	483.3	505.6
30°	474.9	473.1	460.4	455.9	448.9	436.5	441.8	449.7	450.4	462.8	486.2
32.5°	465.0	460.5	446.4	439.9	431.2	416.7	419.5	427.6	428.7	441.3	465.3
35°	452.3	449.3	432.0	420.8	412.2	396.3	399.3	404.9	406.6	418.9	443.3
37.5°	440.3	435.5	417.1	403.4	392.4	375.7	376.5	382.3	383.9	396.3	420.5
40°	427.9	421.0	401.2	385.3	372.6	355.1	354.1	360.1	361.4	373.5	395.4
42.5°	414.6	406.4	384.2	366.7	352.1	334.3	332.4	337.6	339.0	350.8	372.3
45°	401.2	391.4	366.7	347.6	331.6	313.4	311.5	315.5	317.5	328.7	349.3
47.5°	387.0	375.6	348.7	327.4	310.8	292.7	290.3	294.3	295.9	307.0	326.5
50°	372.2	358.2	330.1	306.6	290.2	272.3	268.9	273.5	275.1	285.4	304.6
52.5°	355.8	340.3	310.3	285.7	269.3	252.2	248.1	252.7	254.4	264.5	282.2
55°	338.4	321.8	290.3	266.4	248.7	232.0	228.6	230.4	234.2	243.8	260.2
57.5°	318.9	302.4	269.3	245.0	227.9	212.0	209.1	210.7	214.3	223.6	238.3
60°	298.1	280.7	247.9	223.6	207.0	191.9	189.3	190.8	194.6	203.1	216.7
62.5°	277.6	258.0	225.7	201.6	186.6	172.5	171.8	171.3	174.8	183.0	195.0
65°	252.8	233.9	202.7	179.7	166.1	153.4	150.6	151.9	155.3	162.8	175.4
67.5°	226.2	209.1	179.0	157.9	145.7	134.4	132.1	132.6	136.2	142.7	153.6
70°	197.9	182.9	154.9	135.9	125.6	115.0	113.5	113.6	117.0	122.8	132.3
72.5°	168.3	154.7	130.4	114.2	105.7	98.1	96.7	95.1	98.2	103.1	111.3
75°	138.1	126.2	106.1	92.9	86.2	79.8	78.5	76.9	80.0	84.3	90.7
77.5°	107.6	98.1	82.5	72.2	67.1	62.3	61.2	59.4	62.5	65.7	70.7
80°	77.8	70.9	61.6	50.8	49.0	45.9	44.8	42.9	45.9	47.9	51.8
82.5°	50.3	45.6	40.3	32.8	32.5	30.2	29.6	27.5	30.2	31.4	34.3
85°	25.4	23.2	21.9	16.7	17.2	15.7	15.6	13.2	15.4	16.0	17.6
87.5°	7.2	7.6	6.8	4.1	5.2	4.9	4.9	3.6	4.9	4.9	5.6
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: P837912

CATALOG NUMBER: ORLG-24-2-INS-ASY2R-LD4-1STD-50-120-EDD

CANDELA DISTRIBUTION (continued):

	295°	305°	315°	325°	335°	345°	355°	360°
0°	585.5	585.5	585.5	585.5	585.5	585.5	585.5	585.5
2.5°	586.0	588.3	588.9	588.8	590.3	598.4	595.7	598.4
5°	587.4	592.6	593.9	595.9	598.3	607.6	604.6	607.9
7.5°	588.2	596.0	599.0	602.7	606.6	617.0	614.6	617.8
10°	588.2	598.3	602.7	608.8	614.2	626.2	623.8	627.7
12.5°	585.7	598.7	604.9	613.5	620.3	633.3	632.3	635.0
15°	580.7	596.7	605.1	616.2	624.7	639.1	638.7	642.0
17.5°	573.9	593.1	603.4	617.3	627.9	644.2	645.2	646.9
20°	565.3	586.4	599.8	616.9	630.3	648.2	649.4	651.8
22.5°	553.9	578.4	594.5	615.1	630.5	649.8	652.0	654.3
25°	540.5	568.7	587.5	611.7	629.2	649.7	652.7	654.7
27.5°	525.2	556.1	578.6	606.2	625.4	647.5	651.2	653.6
30°	507.5	542.7	568.5	599.1	620.2	643.4	647.3	649.8
32.5°	489.2	528.0	556.5	590.0	612.7	636.8	640.2	642.2
35°	469.3	510.1	542.0	578.2	603.0	626.3	628.9	631.0
37.5°	447.5	490.7	525.5	565.0	589.3	611.7	614.0	616.3
40°	425.1	470.3	506.9	548.7	573.0	593.8	596.3	597.9
42.5°	402.6	447.8	487.1	529.6	553.8	573.7	575.2	576.9
45°	379.8	424.5	464.9	508.4	532.3	551.1	551.6	553.0
47.5°	356.6	400.3	440.4	484.3	507.9	525.0	525.5	526.6
50°	333.2	376.1	414.4	458.2	481.3	499.3	496.8	497.9
52.5°	310.3	350.7	389.8	430.1	452.9	468.8	469.5	467.3
55°	287.8	325.9	361.8	400.6	422.3	434.7	434.3	435.1
57.5°	264.9	300.7	333.6	369.1	390.3	402.1	404.5	401.7
60°	241.7	275.3	304.8	336.9	357.4	367.2	370.1	367.4
62.5°	218.6	249.5	276.3	304.3	323.3	335.4	335.1	332.1
65°	195.6	223.6	247.5	271.2	287.8	299.9	299.4	296.6
67.5°	174.3	197.3	218.8	238.0	252.4	260.7	263.6	260.3
70°	150.8	170.7	189.6	205.0	216.9	224.4	227.1	224.2
72.5°	127.3	144.2	157.5	172.4	181.5	187.8	190.7	187.9
75°	104.1	118.0	128.8	140.4	146.8	152.1	155.4	152.7
77.5°	81.5	92.3	100.9	109.4	116.8	118.0	120.9	119.1
80°	60.1	67.9	74.2	79.8	85.1	85.6	88.0	86.9
82.5°	40.0	45.2	46.8	52.7	56.1	55.6	57.9	57.1
85°	21.2	24.3	27.2	29.0	30.9	29.1	31.1	30.3
87.5°	7.1	7.5	6.6	9.3	10.2	8.7	10.0	9.6
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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