

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: P837934

Luminaire Tested: **ORLG-24-2-INS-ASY2R-LD4-2HI-20-120-EDD-90**

Issue Date: 5/21/2024



Test Information

Test Method: LM-79-08
Report Number: P837934
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-LD4-2HI-20-120-EDD-90
Description: 2FT x 2FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2 and
RFI grid
Light Source: 2000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

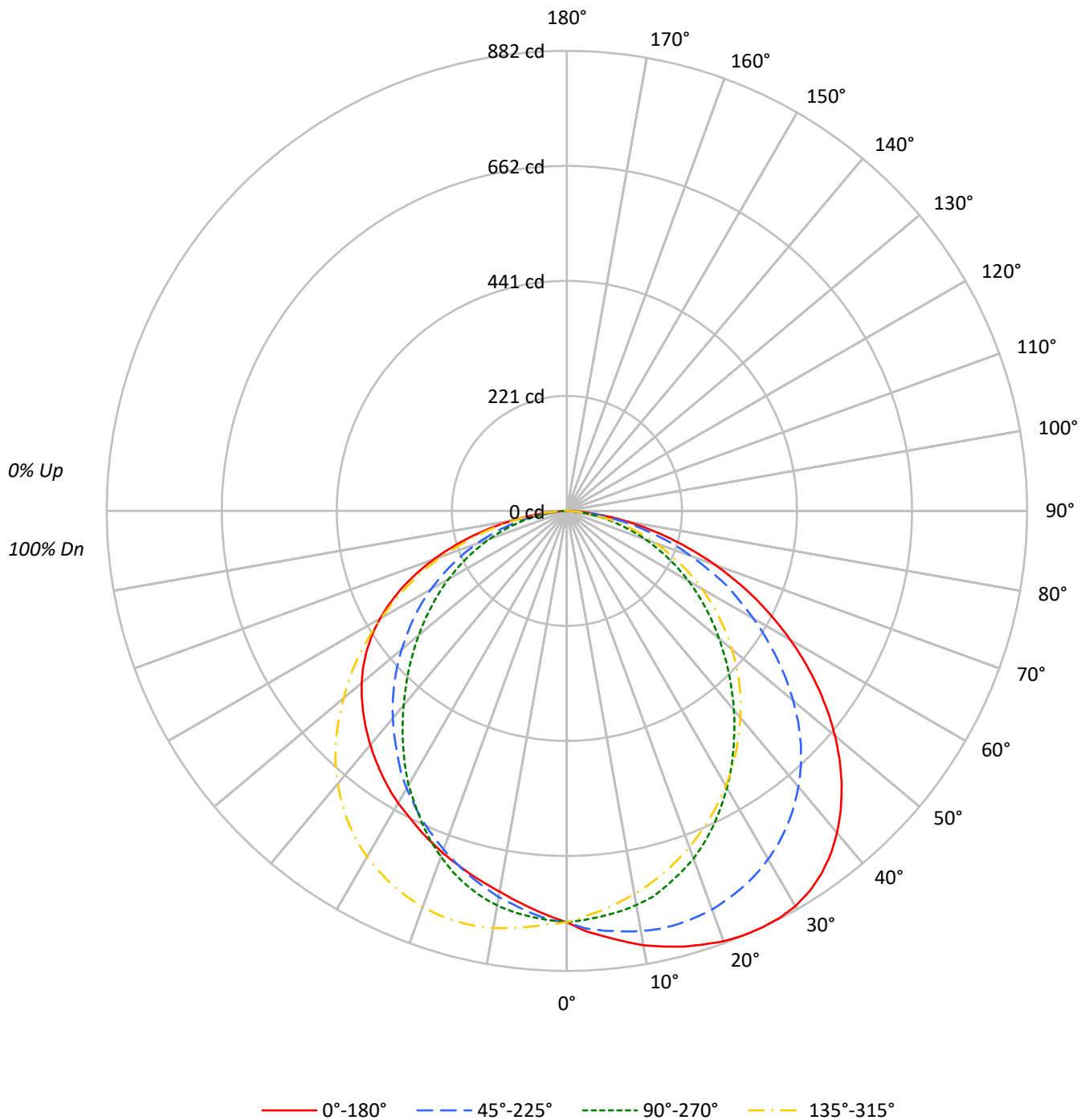
Lumens per Lamp: N/A
Luminaire Lumens: 2314.0 lumens
Efficiency: N/A
Efficacy: 52.6 lumens/watt
Spacing Criteria (0/90/45): 1.43 / 1.16 / 1.4
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 44
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



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°	2122	2122	2122	2122
5°	2212	2107	2068	2111
10°	2311	2096	2026	2099
15°	2410	2070	2006	2070
20°	2515	2032	1997	2021
25°	2619	1975	1996	1955
30°	2720	1907	2010	1885
35°	2792	1828	2030	1799
40°	2830	1749	2059	1710
45°	2835	1670	2098	1628
50°	2808	1594	2150	1551
55°	2750	1522	2198	1480
60°	2664	1449	2227	1411
65°	2544	1364	2215	1332
70°	2377	1264	2137	1241
75°	2139	1127	1961	1121
80°	1813	944	1647	958
85°	1260	624	1047	642

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°	74.9	3.2
10°-20°	216.8	9.4
20°-30°	332.3	14.4
30°-40°	404.1	17.5
40°-50°	420.1	18.2
50°-60°	379.5	16.4
60°-70°	288.5	12.5
70°-80°	160.8	7.0
80°-90°	37.0	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°	624.1	27.0
0°-40°	1028.1	44.4
0°-60°	1827.7	79.0
0°-90°	2314.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2314.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	789	789	789	789	789	
5°	819	780	765	781	819	79
15°	865	743	720	743	865	245
25°	882	665	672	658	882	407
35°	850	556	618	548	850	531
45°	745	439	551	428	745	574
55°	586	324	468	316	586	523
65°	400	214	348	209	400	395
75°	206	108	189	108	206	218
85°	41	20	34	21	41	51
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°	788.7	788.7	788.7	788.7	788.7	788.7	788.7	788.7	788.7	788.7	788.7
2.5°	806.2	794.4	794.6	804.9	797.0	800.9	789.8	794.1	792.8	793.7	784.7
5°	818.9	806.2	806.0	814.8	806.0	807.7	793.7	796.4	792.4	789.8	780.1
7.5°	832.3	819.6	818.3	826.1	814.5	813.2	797.7	797.7	790.4	783.9	774.7
10°	845.6	832.5	830.8	836.7	822.4	818.2	799.4	796.4	786.7	777.1	767.2
12.5°	855.5	842.3	841.0	844.6	828.5	820.7	799.4	793.7	779.3	765.9	758.2
15°	864.9	851.3	847.8	849.6	831.0	820.7	796.8	788.0	769.6	751.9	742.9
17.5°	871.5	858.4	855.0	854.8	832.3	817.6	791.3	779.2	757.1	735.7	726.7
20°	878.1	865.1	860.7	857.3	832.0	813.4	783.2	766.8	741.1	717.2	709.6
22.5°	881.4	868.0	863.2	858.3	829.6	805.6	773.3	752.5	723.0	694.5	688.3
25°	882.0	868.2	863.0	855.9	824.8	796.4	760.4	735.2	702.2	670.6	665.3
27.5°	880.5	865.4	860.3	851.6	817.6	785.2	745.1	715.5	680.2	645.2	639.5
30°	875.4	860.1	855.1	843.9	807.5	771.4	728.4	693.6	655.7	618.5	613.6
32.5°	865.1	850.2	846.1	834.9	796.4	755.4	708.9	670.1	628.7	593.1	585.8
35°	850.0	835.1	832.5	820.7	781.0	736.3	687.5	644.3	600.0	563.7	556.5
37.5°	830.3	817.8	813.9	802.3	762.8	714.6	663.1	616.3	570.7	531.7	527.3
40°	805.5	793.7	790.7	780.4	741.6	690.5	636.6	587.4	540.5	504.3	498.0
42.5°	777.1	766.1	764.4	753.8	715.5	663.8	607.9	557.5	509.1	474.1	467.9
45°	744.9	734.3	733.9	723.8	687.0	634.2	577.7	527.1	478.3	442.1	438.8
47.5°	709.4	699.9	699.9	690.5	655.1	601.6	546.6	495.5	447.4	415.4	409.5
50°	670.8	661.8	659.0	654.4	620.0	566.1	513.9	464.5	416.9	386.4	380.7
52.5°	629.6	621.8	623.7	615.2	581.9	529.1	480.7	429.8	386.2	358.4	352.7
55°	586.2	575.1	576.8	573.6	542.2	491.0	443.6	401.1	356.0	329.9	324.5
57.5°	541.1	526.7	532.6	530.8	499.9	452.0	409.5	368.5	326.0	301.9	296.8
60°	494.9	481.1	487.2	485.5	456.5	413.0	374.4	336.3	296.2	274.3	269.2
62.5°	447.4	434.7	440.3	439.0	412.3	373.1	339.4	304.5	266.2	246.5	241.7
65°	399.6	387.5	392.4	391.5	366.9	337.0	303.6	271.6	236.0	218.9	214.2
67.5°	350.7	339.4	344.0	344.0	321.4	292.9	267.5	238.3	206.4	191.7	187.3
70°	302.1	291.6	295.7	295.3	276.2	253.0	231.1	205.0	176.4	164.3	160.6
72.5°	253.2	244.0	247.6	247.3	231.3	216.4	194.6	172.0	147.2	137.4	134.1
75°	205.7	197.0	200.5	200.2	187.1	173.1	158.6	139.8	118.5	111.7	108.4
77.5°	160.4	151.6	154.5	154.5	145.0	134.9	123.3	108.7	93.6	86.3	83.9
80°	117.0	112.8	111.3	111.5	105.1	98.4	92.5	78.6	67.5	62.6	60.9
82.5°	76.9	73.4	71.9	72.3	68.6	64.6	60.9	51.1	43.8	40.8	39.9
85°	40.8	38.3	37.0	37.9	37.2	35.0	33.1	26.5	21.9	20.8	20.2
87.5°	12.9	11.2	10.3	13.6	11.6	10.3	9.9	7.9	6.1	6.1	5.9
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°	788.7	788.7	788.7	788.7	788.7	788.7	788.7	788.7	788.7	788.7	788.7
2.5°	787.6	787.6	780.4	778.8	778.0	779.0	771.8	770.5	780.8	777.3	769.4
5°	781.4	781.0	770.9	769.0	769.0	767.9	759.8	758.0	768.3	765.4	756.7
7.5°	773.6	772.5	760.6	759.3	757.4	756.7	747.7	746.4	755.2	753.4	745.3
10°	764.2	763.1	749.0	748.1	746.0	744.6	736.1	735.2	744.2	741.3	734.8
12.5°	751.9	749.9	735.4	734.4	732.8	732.2	724.0	723.6	733.5	730.6	723.8
15°	735.7	734.1	717.9	718.3	718.4	718.4	711.8	711.4	721.2	719.9	712.6
17.5°	717.9	715.7	700.2	701.3	702.6	704.1	698.9	699.9	710.2	708.5	701.9
20°	697.6	695.4	680.4	683.5	686.2	689.2	685.9	688.4	698.0	697.3	692.3
22.5°	675.0	672.8	658.8	663.6	668.2	673.7	672.3	675.2	685.3	685.1	680.7
25°	647.4	648.0	635.6	641.5	649.3	657.0	657.5	662.3	673.5	672.4	668.4
27.5°	621.7	622.4	609.3	619.3	629.6	639.5	641.9	648.5	659.9	659.0	655.5
30°	594.6	595.5	582.8	596.5	609.0	621.1	626.3	635.3	646.9	646.9	643.2
32.5°	566.5	568.1	554.9	573.1	587.6	601.8	610.8	620.2	633.4	633.1	629.9
35°	537.6	539.4	527.3	550.5	565.0	582.3	593.5	606.0	617.8	618.0	615.6
37.5°	508.2	510.4	499.3	524.7	541.3	561.7	576.0	588.5	601.6	602.3	600.1
40°	478.9	481.3	471.7	496.2	517.2	540.0	556.5	571.3	585.6	586.0	584.5
42.5°	449.6	452.2	445.0	469.0	492.7	517.2	536.7	553.4	568.1	569.0	567.4
45°	421.1	423.3	418.2	444.3	467.1	493.8	516.2	535.2	550.1	551.4	550.8
47.5°	392.8	394.8	390.2	414.1	440.4	468.8	494.7	515.7	531.5	533.0	532.6
50°	365.0	366.7	361.7	386.7	412.8	443.0	470.1	494.4	512.0	513.5	513.3
52.5°	337.4	339.1	334.8	361.2	384.9	416.7	446.1	472.5	489.9	492.1	492.5
55°	310.7	311.5	308.2	333.4	356.4	389.7	423.5	449.1	466.6	468.4	469.5
57.5°	284.1	284.2	281.5	305.6	327.7	361.7	397.2	424.1	440.6	442.5	444.1
60°	257.6	257.4	254.3	277.6	298.8	332.5	369.4	396.1	412.1	413.8	416.0
62.5°	231.3	230.7	228.0	249.5	269.3	302.6	339.8	365.6	380.8	381.9	384.9
65°	205.1	204.6	202.0	221.9	239.9	271.7	308.2	332.6	346.4	347.9	347.4
67.5°	179.4	178.3	176.3	194.1	210.5	239.9	274.9	298.2	309.6	310.9	314.4
70°	153.6	152.3	147.7	166.7	181.0	207.3	239.9	260.7	270.3	271.6	271.0
72.5°	128.2	126.9	122.0	139.5	151.6	174.6	203.7	221.0	229.2	230.3	230.3
75°	103.6	102.8	99.7	113.0	123.1	141.8	166.5	180.9	187.3	188.6	188.2
77.5°	79.8	79.3	76.2	87.6	95.5	109.5	129.3	140.6	145.3	146.8	149.9
80°	57.2	57.0	52.1	63.3	66.8	78.6	93.1	101.7	104.3	106.3	108.5
82.5°	36.6	36.8	31.8	41.4	42.9	50.4	59.4	64.8	66.6	68.3	69.9
85°	17.8	18.6	15.8	21.9	22.1	25.9	29.8	31.8	32.6	33.9	35.3
87.5°	4.6	5.3	2.9	6.3	5.5	7.2	8.3	8.8	8.6	9.6	10.1
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°	788.7	788.7	788.7	788.7	788.7	788.7	788.7	788.7	788.7	788.7	788.7
2.5°	772.0	777.9	774.9	784.5	788.2	782.3	792.6	792.8	785.4	794.1	798.8
5°	760.0	766.1	764.2	774.2	778.8	773.6	786.1	788.5	781.4	791.1	798.8
7.5°	747.9	755.1	752.7	762.8	768.3	764.2	777.7	781.5	776.0	786.7	797.0
10°	737.4	743.5	740.9	751.6	756.3	753.0	766.3	773.4	768.3	781.4	793.7
12.5°	727.1	732.1	729.1	737.9	742.5	738.3	754.5	761.1	757.4	771.1	786.9
15°	713.8	719.4	715.3	723.2	726.7	723.0	736.3	747.7	743.1	758.0	775.5
17.5°	703.7	706.8	701.3	707.6	709.6	704.6	718.1	729.3	726.0	742.2	762.4
20°	692.5	695.1	687.3	690.8	690.7	684.4	696.7	707.8	705.6	723.4	746.4
22.5°	680.0	681.3	672.3	673.0	672.6	662.3	673.4	684.6	683.7	701.7	727.5
25°	666.7	666.9	655.3	655.0	650.9	638.8	648.5	661.2	658.5	678.0	705.0
27.5°	653.7	651.8	637.9	634.5	628.1	613.6	622.2	633.6	632.0	651.1	681.1
30°	639.7	637.3	620.2	614.1	604.7	588.0	595.2	605.8	606.8	623.5	655.0
32.5°	626.4	620.4	601.4	592.6	580.8	561.3	565.2	576.0	577.5	594.4	626.8
35°	609.3	605.3	581.9	566.8	555.2	533.9	538.0	545.5	547.7	564.3	597.2
37.5°	593.1	586.7	561.9	543.5	528.6	506.1	507.2	515.0	517.2	533.9	566.5
40°	576.4	567.2	540.5	519.0	501.9	478.3	477.1	485.2	486.8	503.2	532.6
42.5°	558.6	547.5	517.5	494.0	474.3	450.4	447.8	454.8	456.6	472.6	501.5
45°	540.5	527.3	494.0	468.2	446.7	422.2	419.7	425.0	427.8	442.8	470.6
47.5°	521.4	505.9	469.7	441.0	418.7	394.3	391.1	396.5	398.7	413.6	439.9
50°	501.3	482.6	444.7	413.0	391.0	366.9	362.3	368.5	370.5	384.5	410.3
52.5°	479.3	458.5	418.0	384.9	362.8	339.8	334.3	340.4	342.8	356.4	380.1
55°	455.9	433.5	391.1	358.9	335.0	312.6	308.0	310.4	315.5	328.4	350.5
57.5°	429.6	407.3	362.8	330.1	307.1	285.5	281.7	283.9	288.7	301.2	321.0
60°	401.6	378.1	333.9	301.2	278.9	258.5	255.0	257.0	262.2	273.6	292.0
62.5°	374.0	347.5	304.1	271.6	251.3	232.4	231.4	230.7	235.5	246.5	262.7
65°	340.5	315.2	273.0	242.1	223.7	206.6	202.9	204.6	209.2	219.3	236.2
67.5°	304.7	281.7	241.2	212.7	196.3	181.0	177.9	178.6	183.4	192.3	207.0
70°	266.6	246.3	208.6	183.1	169.3	154.9	152.9	153.1	157.7	165.4	178.3
72.5°	226.7	208.4	175.7	153.8	142.4	132.1	130.3	128.0	132.3	138.9	149.9
75°	186.0	170.0	143.0	125.1	116.1	107.4	105.8	103.6	107.8	113.5	122.2
77.5°	145.0	132.1	111.1	97.3	90.3	83.9	82.4	80.0	84.3	88.5	95.3
80°	104.9	95.5	83.0	68.4	66.0	61.8	60.3	57.8	61.8	64.6	69.7
82.5°	67.7	61.4	54.3	44.2	43.8	40.7	39.9	37.0	40.7	42.3	46.2
85°	34.2	31.3	29.4	22.4	23.2	21.2	21.0	17.8	20.8	21.5	23.7
87.5°	9.8	10.3	9.2	5.5	7.0	6.6	6.6	4.8	6.6	6.6	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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CATALOG NUMBER: ORLG-24-2-INS-ASY2R-LD4-2HI-20-120-EDD-90

CANDELA DISTRIBUTION (continued):

	295°	305°	315°	325°	335°	345°	355°	360°
0°	788.7	788.7	788.7	788.7	788.7	788.7	788.7	788.7
2.5°	789.5	792.6	793.3	793.1	795.2	806.2	802.5	806.2
5°	791.3	798.3	800.1	802.7	806.0	818.5	814.5	818.9
7.5°	792.4	802.9	806.9	811.9	817.2	831.2	827.9	832.3
10°	792.4	806.0	811.9	820.2	827.4	843.5	840.4	845.6
12.5°	789.1	806.6	814.8	826.4	835.6	853.1	851.8	855.5
15°	782.3	803.8	815.2	830.1	841.5	861.0	860.5	864.9
17.5°	773.1	799.0	812.8	831.6	845.9	867.8	869.1	871.5
20°	761.5	790.0	808.0	831.0	849.1	873.2	874.8	878.1
22.5°	746.2	779.2	800.9	828.6	849.4	875.4	878.3	881.4
25°	728.2	766.1	791.5	824.0	847.6	875.2	879.2	882.0
27.5°	707.6	749.2	779.5	816.7	842.4	872.2	877.2	880.5
30°	683.7	731.1	765.9	807.1	835.4	866.7	872.1	875.4
32.5°	659.0	711.3	749.7	794.8	825.3	857.9	862.5	865.1
35°	632.2	687.2	730.2	779.0	812.3	843.7	847.2	850.0
37.5°	602.9	661.0	708.0	761.1	793.9	824.0	827.2	830.3
40°	572.7	633.6	682.9	739.2	772.0	799.9	803.3	805.5
42.5°	542.4	603.3	656.3	713.5	746.0	772.9	774.9	777.1
45°	511.6	571.8	626.3	685.0	717.2	742.4	743.1	744.9
47.5°	480.4	539.2	593.3	652.4	684.2	707.2	708.0	709.4
50°	448.9	506.7	558.2	617.3	648.3	672.6	669.3	670.8
52.5°	418.0	472.5	525.1	579.4	610.1	631.6	632.5	629.6
55°	387.6	439.0	487.4	539.6	568.9	585.6	585.1	586.2
57.5°	356.9	405.1	449.5	497.3	525.8	541.6	544.9	541.1
60°	325.6	370.9	410.6	453.9	481.5	494.7	498.6	494.9
62.5°	294.6	336.1	372.2	409.9	435.5	451.9	451.5	447.4
65°	263.5	301.2	333.4	365.4	387.6	404.0	403.3	399.6
67.5°	234.8	265.8	294.7	320.7	340.0	351.2	355.1	350.7
70°	203.1	230.0	255.4	276.2	292.2	302.3	306.0	302.1
72.5°	171.5	194.3	212.1	232.2	244.5	253.0	256.8	253.2
75°	140.2	159.0	173.5	189.1	197.8	205.0	209.4	205.7
77.5°	109.8	124.4	136.0	147.4	157.3	159.0	162.8	160.4
80°	81.0	91.4	99.9	107.4	114.6	115.4	118.5	117.0
82.5°	53.9	60.9	63.1	71.0	75.6	74.9	78.0	76.9
85°	28.5	32.7	36.6	39.0	41.6	39.2	41.9	40.8
87.5°	9.6	10.1	8.8	12.5	13.8	11.8	13.4	12.9
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)