

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: P837877

Luminaire Tested: **ORLG-24-2-INS-ASY2R-LD4-1HI-35-120-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: P837877
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-LD4-1HI-35-120-EDD
Description: 2FT x 2FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2 and RFI grid
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

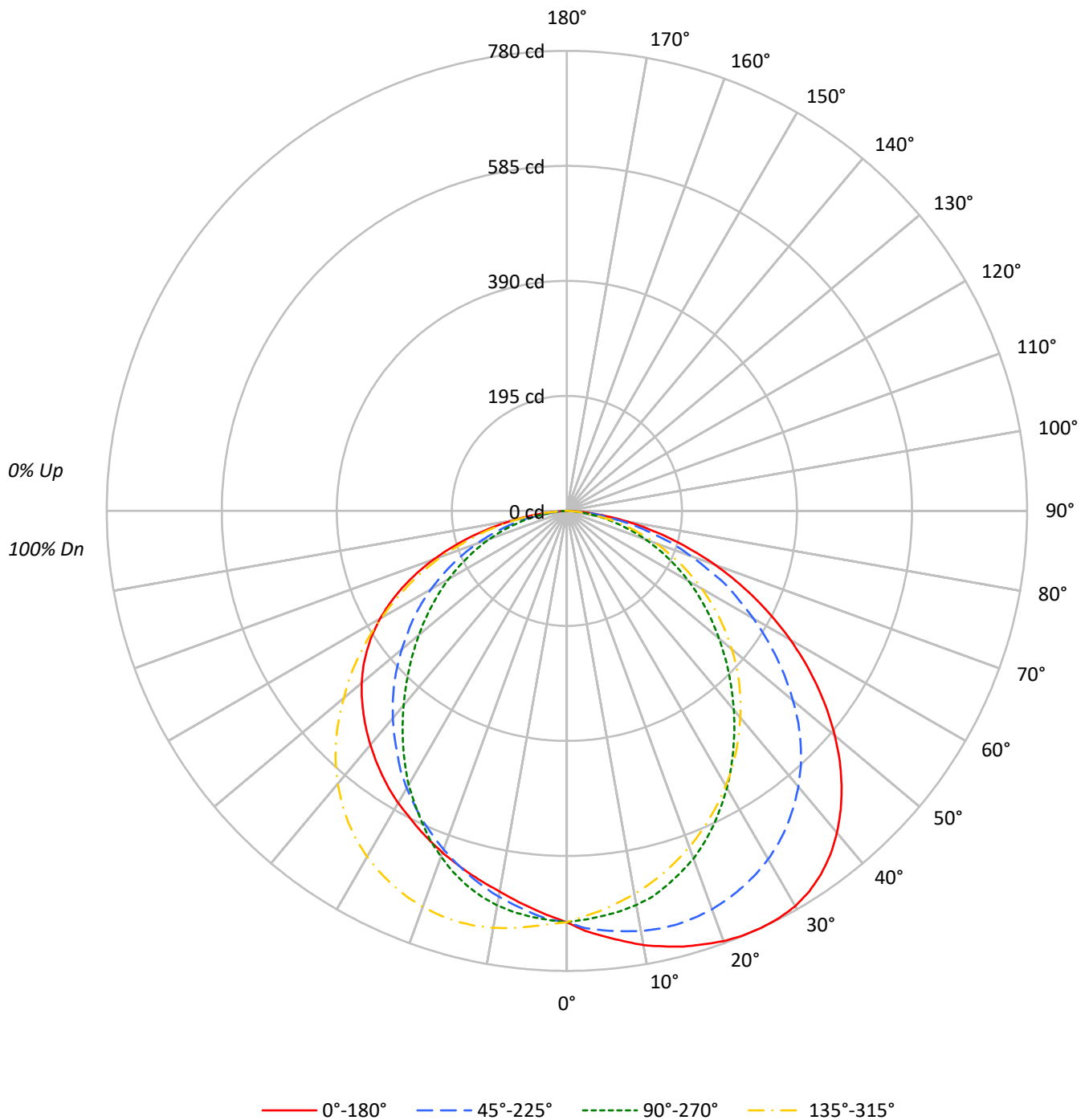
Lumens per Lamp: N/A
Luminaire Lumens: 2045.8 lumens
Efficiency: N/A
Efficacy: 93.0 lumens/watt
Spacing Criteria (0/90/45): 1.43 / 1.16 / 1.4
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 22
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°	1876	1876	1876	1876
5°	1956	1863	1828	1866
10°	2043	1853	1791	1856
15°	2130	1830	1773	1830
20°	2223	1797	1765	1786
25°	2315	1746	1765	1728
30°	2405	1685	1777	1667
35°	2469	1616	1795	1591
40°	2501	1547	1820	1512
45°	2506	1476	1855	1439
50°	2483	1409	1901	1371
55°	2431	1346	1943	1309
60°	2355	1281	1969	1248
65°	2250	1205	1959	1177
70°	2102	1117	1889	1097
75°	1890	996	1733	991
80°	1602	834	1457	848
85°	1115	553	923	568

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°	66.2	3.2
10°-20°	191.7	9.4
20°-30°	293.8	14.4
30°-40°	357.2	17.5
40°-50°	371.4	18.2
50°-60°	335.5	16.4
60°-70°	255.0	12.5
70°-80°	142.2	7.0
80°-90°	32.7	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°	551.7	27.0
0°-40°	909.0	44.4
0°-60°	1615.8	79.0
0°-90°	2045.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2045.8	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	697	697	697	697	697	
5°	724	690	677	691	724	70
15°	765	657	636	657	765	217
25°	780	588	594	582	780	360
35°	752	492	546	484	752	469
45°	659	388	488	378	659	507
55°	518	287	414	279	518	463
65°	353	189	308	185	353	349
75°	182	96	167	95	182	193
85°	36	18	30	18	36	45
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°	697.3	697.3	697.3	697.3	697.3	697.3	697.3	697.3	697.3	697.3	697.3
2.5°	712.7	702.3	702.5	711.6	704.6	708.0	698.3	702.0	700.9	701.7	693.7
5°	724.0	712.7	712.6	720.4	712.6	714.0	701.7	704.1	700.5	698.3	689.7
7.5°	735.8	724.6	723.5	730.3	720.1	718.9	705.3	705.3	698.8	693.1	684.9
10°	747.6	736.0	734.5	739.7	727.1	723.3	706.7	704.1	695.5	687.0	678.3
12.5°	756.3	744.6	743.5	746.7	732.4	725.6	706.7	701.7	689.0	677.1	670.3
15°	764.6	752.6	749.5	751.1	734.7	725.6	704.5	696.6	680.4	664.8	656.8
17.5°	770.5	758.9	755.9	755.7	735.8	722.8	699.6	688.8	669.3	650.5	642.5
20°	776.3	764.8	760.9	758.0	735.5	719.1	692.4	677.9	655.2	634.0	627.4
22.5°	779.3	767.4	763.2	758.8	733.4	712.3	683.6	665.3	639.2	614.0	608.5
25°	779.8	767.6	763.0	756.7	729.2	704.1	672.2	650.0	620.8	592.9	588.2
27.5°	778.5	765.1	760.6	752.9	722.8	694.2	658.7	632.6	601.3	570.4	565.4
30°	773.9	760.4	756.0	746.1	713.9	682.0	643.9	613.2	579.7	546.8	542.4
32.5°	764.8	751.6	748.0	738.1	704.1	667.9	626.7	592.4	555.8	524.4	517.9
35°	751.5	738.3	736.0	725.6	690.5	650.9	607.8	569.6	530.4	498.4	492.0
37.5°	734.1	723.0	719.6	709.3	674.4	631.7	586.2	544.9	504.6	470.1	466.2
40°	712.1	701.7	699.1	690.0	655.7	610.4	562.8	519.4	477.9	445.8	440.3
42.5°	687.0	677.3	675.8	666.4	632.6	586.9	537.4	492.8	450.1	419.2	413.6
45°	658.6	649.1	648.8	639.9	607.3	560.7	510.7	466.0	422.9	390.9	387.9
47.5°	627.2	618.7	618.7	610.4	579.2	531.9	483.2	438.0	395.6	367.3	362.1
50°	593.0	585.1	582.6	578.6	548.1	500.5	454.3	410.7	368.6	341.6	336.5
52.5°	556.6	549.8	551.4	543.9	514.5	467.8	425.0	380.0	341.4	316.8	311.8
55°	518.2	508.5	509.9	507.2	479.3	434.1	392.2	354.6	314.7	291.6	286.9
57.5°	478.4	465.7	470.9	469.3	441.9	399.6	362.1	325.8	288.2	266.9	262.4
60°	437.5	425.3	430.7	429.2	403.5	365.2	331.0	297.3	261.9	242.5	238.0
62.5°	395.6	384.4	389.2	388.1	364.5	329.9	300.1	269.2	235.4	218.0	213.7
65°	353.3	342.5	346.9	346.1	324.3	298.0	268.4	240.1	208.7	193.6	189.3
67.5°	310.0	300.1	304.2	304.2	284.2	258.9	236.5	210.6	182.5	169.5	165.6
70°	267.1	257.8	261.4	261.1	244.1	223.6	204.3	181.2	156.0	145.2	142.0
72.5°	223.8	215.7	218.9	218.6	204.5	191.3	172.1	152.1	130.1	121.5	118.6
75°	181.8	174.2	177.3	177.0	165.4	153.1	140.2	123.6	104.7	98.7	95.8
77.5°	141.8	134.0	136.6	136.6	128.2	119.2	109.0	96.1	82.8	76.3	74.2
80°	103.4	99.7	98.4	98.6	92.9	87.0	81.8	69.5	59.7	55.3	53.8
82.5°	68.0	64.9	63.6	63.9	60.7	57.1	53.8	45.2	38.7	36.1	35.3
85°	36.1	33.8	32.7	33.5	32.9	30.9	29.3	23.4	19.4	18.4	17.9
87.5°	11.4	9.9	9.1	12.0	10.2	9.1	8.8	7.0	5.4	5.4	5.2
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°	697.3	697.3	697.3	697.3	697.3	697.3	697.3	697.3	697.3	697.3	697.3
2.5°	696.3	696.3	690.0	688.5	687.9	688.7	682.3	681.2	690.3	687.2	680.2
5°	690.8	690.5	681.5	679.9	679.9	678.9	671.8	670.1	679.2	676.6	669.0
7.5°	684.0	683.0	672.4	671.3	669.6	669.0	661.0	659.9	667.7	666.1	658.9
10°	675.7	674.7	662.2	661.3	659.6	658.3	650.8	650.0	657.9	655.3	649.6
12.5°	664.8	663.0	650.1	649.3	647.8	647.4	640.0	639.7	648.5	645.9	639.9
15°	650.5	649.0	634.7	635.0	635.2	635.2	629.3	629.0	637.6	636.5	630.0
17.5°	634.7	632.7	619.1	620.0	621.2	622.5	617.9	618.7	627.8	626.4	620.5
20°	616.8	614.8	601.5	604.3	606.7	609.3	606.4	608.6	617.1	616.5	612.1
22.5°	596.8	594.8	582.5	586.7	590.8	595.6	594.3	596.9	605.9	605.7	601.8
25°	572.4	572.9	562.0	567.2	574.0	580.8	581.3	585.6	595.5	594.5	590.9
27.5°	549.6	550.3	538.7	547.5	556.6	565.4	567.5	573.4	583.4	582.6	579.5
30°	525.7	526.5	515.3	527.3	538.4	549.1	553.7	561.6	571.9	571.9	568.6
32.5°	500.8	502.3	490.6	506.7	519.5	532.0	540.0	548.3	560.0	559.7	556.9
35°	475.3	476.9	466.2	486.7	499.5	514.8	524.7	535.8	546.2	546.4	544.2
37.5°	449.2	451.2	441.4	463.9	478.5	496.6	509.3	520.3	531.9	532.5	530.6
40°	423.4	425.5	417.0	438.7	457.2	477.4	492.0	505.0	517.7	518.1	516.7
42.5°	397.5	399.8	393.5	414.6	435.6	457.2	474.5	489.3	502.3	503.1	501.6
45°	372.3	374.3	369.7	392.8	413.0	436.6	456.4	473.2	486.3	487.5	487.0
47.5°	347.3	349.1	345.0	366.1	389.4	414.4	437.4	455.9	469.9	471.2	470.9
50°	322.7	324.2	319.8	341.9	365.0	391.7	415.6	437.0	452.7	454.0	453.8
52.5°	298.3	299.8	296.0	319.3	340.3	368.4	394.4	417.7	433.1	435.1	435.4
55°	274.7	275.4	272.4	294.7	315.1	344.5	374.4	397.0	412.5	414.1	415.1
57.5°	251.1	251.3	248.9	270.2	289.7	319.8	351.2	374.9	389.6	391.2	392.6
60°	227.7	227.6	224.8	245.4	264.1	293.9	326.6	350.2	364.3	365.8	367.8
62.5°	204.5	204.0	201.5	220.6	238.1	267.6	300.4	323.2	336.7	337.7	340.3
65°	181.4	180.9	178.6	196.2	212.1	240.2	272.4	294.1	306.3	307.6	307.1
67.5°	158.6	157.6	155.8	171.6	186.1	212.1	243.0	263.7	273.7	274.9	278.0
70°	135.8	134.7	130.6	147.4	160.1	183.3	212.1	230.5	238.9	240.1	239.6
72.5°	113.4	112.2	107.8	123.3	134.0	154.4	180.1	195.3	202.7	203.6	203.6
75°	91.6	90.9	88.2	99.9	108.8	125.4	147.2	159.9	165.6	166.7	166.4
77.5°	70.6	70.1	67.3	77.4	84.4	96.8	114.3	124.3	128.5	129.8	132.6
80°	50.6	50.4	46.0	56.0	59.0	69.5	82.3	89.9	92.2	94.0	96.0
82.5°	32.4	32.5	28.1	36.6	37.9	44.6	52.5	57.3	58.9	60.3	61.8
85°	15.8	16.4	14.0	19.4	19.5	22.9	26.3	28.1	28.8	29.9	31.2
87.5°	4.1	4.7	2.6	5.5	4.9	6.3	7.3	7.8	7.6	8.5	8.9
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):

	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°	285°
0°	697.3	697.3	697.3	697.3	697.3	697.3	697.3	697.3	697.3	697.3	697.3
2.5°	682.5	687.7	685.1	693.6	696.8	691.6	700.7	700.9	694.4	702.0	706.2
5°	671.9	677.3	675.7	684.4	688.5	684.0	695.0	697.1	690.8	699.4	706.2
7.5°	661.2	667.5	665.4	674.4	679.2	675.7	687.5	691.0	686.1	695.5	704.6
10°	651.9	657.3	655.0	664.4	668.7	665.7	677.5	683.8	679.2	690.8	701.7
12.5°	642.8	647.2	644.6	652.4	656.5	652.7	667.0	672.9	669.6	681.7	695.7
15°	631.1	636.0	632.4	639.4	642.5	639.2	650.9	661.0	657.0	670.1	685.6
17.5°	622.1	624.9	620.0	625.6	627.4	623.0	634.8	644.8	641.8	656.1	674.0
20°	612.2	614.5	607.7	610.8	610.6	605.1	616.0	625.7	623.8	639.6	659.9
22.5°	601.2	602.3	594.3	595.0	594.7	585.6	595.3	605.2	604.4	620.4	643.1
25°	589.5	589.6	579.4	579.0	575.5	564.7	573.4	584.6	582.1	599.4	623.3
27.5°	577.9	576.3	563.9	561.0	555.3	542.4	550.1	560.2	558.7	575.6	602.1
30°	565.5	563.4	548.3	542.9	534.6	519.8	526.2	535.6	536.4	551.2	579.0
32.5°	553.8	548.5	531.7	523.9	513.5	496.3	499.7	509.3	510.6	525.5	554.2
35°	538.7	535.1	514.5	501.1	490.9	472.0	475.6	482.3	484.2	498.9	528.0
37.5°	524.4	518.7	496.7	480.5	467.3	447.5	448.4	455.3	457.2	472.0	500.8
40°	509.6	501.5	477.9	458.8	443.7	422.9	421.8	428.9	430.4	444.9	470.9
42.5°	493.8	484.1	457.5	436.7	419.3	398.2	395.9	402.1	403.7	417.9	443.4
45°	477.9	466.2	436.7	414.0	394.9	373.3	371.0	375.7	378.2	391.5	416.1
47.5°	461.0	447.3	415.3	389.9	370.2	348.6	345.8	350.5	352.5	365.6	388.9
50°	443.2	426.6	393.1	365.2	345.6	324.3	320.3	325.8	327.6	339.9	362.7
52.5°	423.7	405.3	369.5	340.3	320.8	300.4	295.5	300.9	303.0	315.1	336.0
55°	403.1	383.2	345.8	317.3	296.2	276.3	272.3	274.4	279.0	290.3	309.9
57.5°	379.8	360.1	320.8	291.8	271.5	252.4	249.0	251.0	255.2	266.3	283.8
60°	355.1	334.3	295.2	266.3	246.6	228.5	225.4	227.2	231.8	241.9	258.1
62.5°	330.7	307.3	268.9	240.1	222.2	205.4	204.6	204.0	208.2	218.0	232.3
65°	301.1	278.6	241.4	214.1	197.8	182.7	179.4	180.9	184.9	193.9	208.8
67.5°	269.4	249.0	213.2	188.0	173.6	160.1	157.3	157.9	162.2	170.0	183.0
70°	235.7	217.8	184.4	161.8	149.6	137.0	135.2	135.3	139.4	146.2	157.6
72.5°	200.4	184.3	155.3	136.0	125.9	116.8	115.2	113.2	116.9	122.8	132.6
75°	164.4	150.3	126.4	110.6	102.6	95.0	93.5	91.6	95.3	100.4	108.0
77.5°	128.2	116.8	98.2	86.0	79.9	74.2	72.9	70.8	74.5	78.2	84.3
80°	92.7	84.4	73.4	60.5	58.4	54.7	53.4	51.1	54.7	57.1	61.6
82.5°	59.9	54.3	48.0	39.0	38.7	35.9	35.3	32.7	35.9	37.4	40.8
85°	30.3	27.7	26.0	19.8	20.5	18.7	18.5	15.8	18.4	19.0	21.0
87.5°	8.6	9.1	8.1	4.9	6.2	5.9	5.9	4.2	5.9	5.9	6.7
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-LD4-1HI-35-120-EDD

CANDELA DISTRIBUTION (continued):

	295°	305°	315°	325°	335°	345°	355°	360°
0°	697.3	697.3	697.3	697.3	697.3	697.3	697.3	697.3
2.5°	697.9	700.7	701.4	701.2	703.0	712.7	709.5	712.7
5°	699.6	705.8	707.4	709.7	712.6	723.6	720.1	724.0
7.5°	700.5	709.8	713.4	717.8	722.5	734.9	731.9	735.8
10°	700.5	712.6	717.8	725.1	731.5	745.8	743.0	747.6
12.5°	697.6	713.1	720.4	730.6	738.8	754.2	753.1	756.3
15°	691.6	710.6	720.7	733.9	744.0	761.2	760.7	764.6
17.5°	683.5	706.4	718.6	735.2	747.9	767.2	768.4	770.5
20°	673.2	698.4	714.4	734.7	750.6	772.0	773.4	776.3
22.5°	659.7	688.8	708.0	732.6	751.0	773.9	776.5	779.3
25°	643.8	677.3	699.7	728.5	749.3	773.7	777.3	779.8
27.5°	625.6	662.3	689.2	722.0	744.8	771.1	775.5	778.5
30°	604.4	646.4	677.1	713.6	738.6	766.3	771.0	773.9
32.5°	582.6	628.8	662.8	702.7	729.7	758.5	762.5	764.8
35°	558.9	607.5	645.6	688.7	718.1	745.9	749.0	751.5
37.5°	533.0	584.4	625.9	672.9	701.8	728.5	731.3	734.1
40°	506.3	560.2	603.8	653.5	682.5	707.2	710.1	712.1
42.5°	479.5	533.3	580.2	630.8	659.6	683.3	685.1	687.0
45°	452.3	505.5	553.7	605.6	634.0	656.3	657.0	658.6
47.5°	424.7	476.7	524.6	576.8	604.9	625.2	625.9	627.2
50°	396.9	447.9	493.5	545.7	573.2	594.7	591.7	593.0
52.5°	369.5	417.7	464.2	512.2	539.4	558.4	559.2	556.6
55°	342.7	388.1	430.9	477.1	502.9	517.7	517.2	518.2
57.5°	315.5	358.2	397.4	439.7	464.9	478.9	481.8	478.4
60°	287.9	327.9	363.0	401.3	425.7	437.4	440.8	437.5
62.5°	260.4	297.2	329.0	362.4	385.0	399.5	399.2	395.6
65°	232.9	266.3	294.7	323.0	342.7	357.2	356.5	353.3
67.5°	207.5	235.0	260.6	283.5	300.6	310.5	313.9	310.0
70°	179.6	203.3	225.8	244.1	258.3	267.2	270.5	267.1
72.5°	151.6	171.8	187.5	205.3	216.2	223.6	227.1	223.8
75°	123.9	140.5	153.4	167.2	174.9	181.2	185.1	181.8
77.5°	97.1	110.0	120.2	130.3	139.1	140.5	143.9	141.8
80°	71.6	80.8	88.3	95.0	101.3	102.0	104.7	103.4
82.5°	47.7	53.8	55.8	62.8	66.9	66.2	69.0	68.0
85°	25.2	29.0	32.4	34.5	36.8	34.6	37.1	36.1
87.5°	8.5	8.9	7.8	11.1	12.2	10.4	11.9	11.4
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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