

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: P838181

Luminaire Tested: **ORLG-24-4-INS-ASY2R-LD4-1LO-30-120-EDD-90**

Issue Date: 5/21/2024



Test Information

Test Method: LM-79-08
Report Number: P838181
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-LD4-1LO-30-120-EDD-90
Description: 2FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2 and
RFI grid
Light Source: 3000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

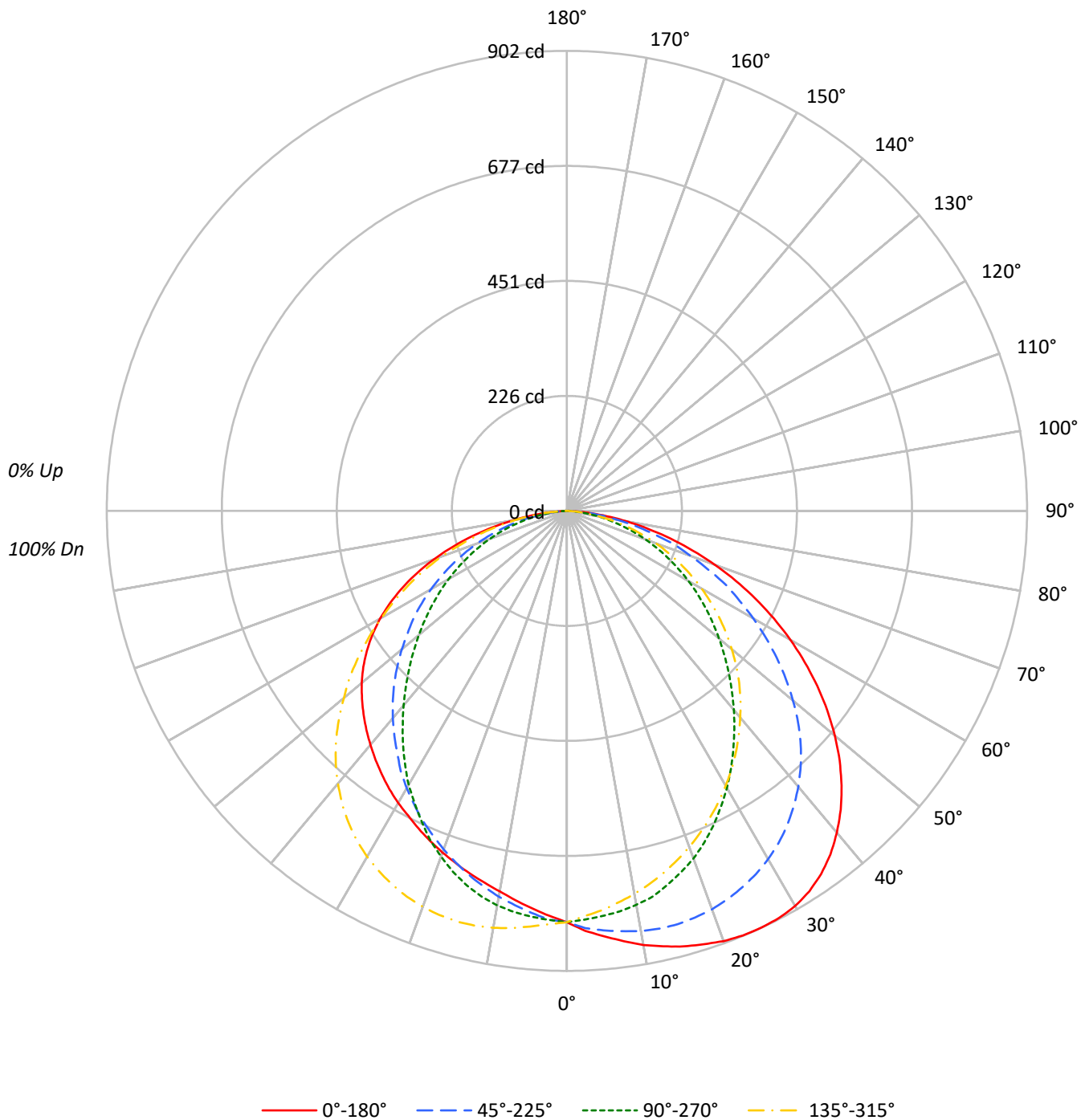
Lumens per Lamp: N/A
Luminaire Lumens: 2365.4 lumens
Efficiency: N/A
Efficacy: 101.1 lumens/watt
Spacing Criteria (0/90/45): 1.43 / 1.16 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 23.4
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
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°	1085	1085	1085	1085
5°	1131	1077	1057	1079
10°	1181	1071	1035	1073
15°	1232	1058	1025	1058
20°	1285	1039	1021	1033
25°	1339	1010	1021	999
30°	1390	974	1027	964
35°	1427	934	1038	920
40°	1446	894	1052	874
45°	1449	853	1072	832
50°	1435	814	1099	793
55°	1406	778	1123	757
60°	1361	740	1138	721
65°	1301	697	1132	681
70°	1215	646	1092	634
75°	1093	576	1002	573
80°	927	483	842	490
85°	645	320	534	329

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	76.5	3.2
10°-20°	221.7	9.4
20°-30°	339.7	14.4
30°-40°	413.1	17.5
40°-50°	429.4	18.2
50°-60°	387.9	16.4
60°-70°	294.9	12.5
70°-80°	164.4	7.0
80°-90°	37.9	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°	637.9	27.0
0°-40°	1051.0	44.4
0°-60°	1868.3	79.0
0°-90°	2365.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2365.4	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	806	806	806	806	806	
5°	837	797	782	799	837	81
15°	884	759	736	760	884	251
25°	902	680	687	673	902	416
35°	869	569	632	560	869	543
45°	762	448	564	437	762	586
55°	599	332	479	322	599	535
65°	408	219	356	214	408	404
75°	210	111	193	110	210	223
85°	42	21	35	21	42	53
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°	806.3	806.3	806.3	806.3	806.3	806.3	806.3	806.3	806.3	806.3	806.3
2.5°	824.1	812.1	812.3	822.8	814.7	818.7	807.4	811.7	810.4	811.3	802.1
5°	837.1	824.1	823.9	833.0	823.9	825.6	811.3	814.2	810.0	807.4	797.4
7.5°	850.8	837.8	836.5	844.4	832.6	831.3	815.5	815.5	807.9	801.4	792.0
10°	864.4	851.0	849.3	855.3	840.7	836.3	817.2	814.2	804.2	794.4	784.2
12.5°	874.5	861.0	859.7	863.4	846.9	839.0	817.2	811.3	796.7	782.9	775.0
15°	884.1	870.2	866.6	868.5	849.5	839.0	814.5	805.5	786.7	768.6	759.4
17.5°	890.9	877.5	874.0	873.8	850.8	835.8	808.9	796.5	773.9	752.1	742.9
20°	897.7	884.3	879.8	876.4	850.4	831.5	800.6	783.9	757.5	733.1	725.4
22.5°	901.0	887.3	882.4	877.3	848.0	823.6	790.5	769.2	739.1	710.0	703.6
25°	901.6	887.5	882.2	874.9	843.1	814.2	777.3	751.5	717.9	685.5	680.1
27.5°	900.1	884.7	879.4	870.6	835.8	802.7	761.7	731.4	695.3	659.6	653.7
30°	894.8	879.2	874.1	862.7	825.4	788.6	744.6	709.0	670.3	632.3	627.2
32.5°	884.3	869.1	864.9	853.5	814.2	772.2	724.6	684.9	642.6	606.3	598.8
35°	868.9	853.6	851.0	839.0	798.4	752.7	702.8	658.6	613.3	576.2	568.9
37.5°	848.8	836.0	832.0	820.2	779.7	730.5	677.8	630.0	583.4	543.5	539.0
40°	823.4	811.3	808.3	797.8	758.1	705.8	650.7	600.5	552.5	515.5	509.1
42.5°	794.4	783.1	781.4	770.5	731.4	678.6	621.4	569.9	520.4	484.7	478.3
45°	761.5	750.6	750.2	739.9	702.3	648.3	590.5	538.8	489.0	451.9	448.5
47.5°	725.2	715.4	715.4	705.8	669.7	615.0	558.8	506.5	457.4	424.7	418.6
50°	685.7	676.5	673.7	669.0	633.8	578.7	525.3	474.9	426.2	394.9	389.1
52.5°	643.6	635.7	637.6	628.9	594.9	540.9	491.4	439.3	394.8	366.4	360.5
55°	599.2	587.9	589.6	586.4	554.2	502.0	453.4	410.0	363.9	337.2	331.8
57.5°	553.1	538.4	544.5	542.6	511.0	462.1	418.6	376.7	333.3	308.6	303.4
60°	505.9	491.8	498.0	496.3	466.6	422.2	382.7	343.8	302.8	280.4	275.1
62.5°	457.4	444.4	450.1	448.7	421.5	381.4	347.0	311.3	272.1	252.0	247.1
65°	408.5	396.1	401.2	400.2	375.0	344.5	310.3	277.6	241.3	223.8	218.9
67.5°	358.5	347.0	351.7	351.7	328.6	299.4	273.5	243.5	211.0	196.0	191.5
70°	308.8	298.1	302.2	301.9	282.3	258.6	236.2	209.5	180.4	167.9	164.2
72.5°	258.8	249.4	253.1	252.8	236.4	221.2	199.0	175.8	150.5	140.5	137.1
75°	210.3	201.4	205.0	204.6	191.3	177.0	162.1	142.9	121.1	114.2	110.8
77.5°	164.0	155.0	158.0	158.0	148.2	137.9	126.0	111.1	95.7	88.2	85.8
80°	119.6	115.3	113.8	114.0	107.4	100.6	94.6	80.3	69.0	63.9	62.3
82.5°	78.6	75.0	73.5	73.9	70.1	66.0	62.3	52.3	44.8	41.8	40.8
85°	41.8	39.1	37.8	38.7	38.0	35.7	33.9	27.1	22.4	21.3	20.7
87.5°	13.2	11.5	10.5	13.9	11.8	10.5	10.2	8.1	6.2	6.2	6.0
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°	806.3	806.3	806.3	806.3	806.3	806.3	806.3	806.3	806.3	806.3	806.3
2.5°	805.1	805.1	797.8	796.1	795.3	796.3	789.0	787.6	798.2	794.6	786.5
5°	798.7	798.4	788.0	786.1	786.1	785.0	776.7	774.8	785.4	782.4	773.5
7.5°	790.8	789.7	777.5	776.2	774.3	773.5	764.3	763.0	772.0	770.1	761.9
10°	781.2	780.1	765.6	764.7	762.6	761.1	752.5	751.5	760.7	757.7	751.1
12.5°	768.6	766.6	751.7	750.8	749.1	748.5	740.1	739.7	749.8	746.8	739.9
15°	752.1	750.4	733.8	734.2	734.4	734.4	727.6	727.3	737.2	735.9	728.4
17.5°	733.8	731.6	715.8	716.9	718.2	719.7	714.5	715.4	725.9	724.3	717.5
20°	713.2	710.9	695.5	698.7	701.5	704.5	701.1	703.8	713.5	712.8	707.7
22.5°	690.0	687.8	673.5	678.4	683.1	688.7	687.2	690.2	700.6	700.4	695.9
25°	661.8	662.4	649.8	655.8	663.7	671.6	672.2	677.0	688.5	687.4	683.3
27.5°	635.5	636.2	622.9	633.0	643.6	653.7	656.2	662.9	674.6	673.7	670.1
30°	607.8	608.8	595.8	609.7	622.5	634.9	640.2	649.4	661.3	661.3	657.5
32.5°	579.1	580.8	567.2	585.8	600.7	615.2	624.4	634.0	647.5	647.1	643.9
35°	549.5	551.4	539.0	562.7	577.6	595.2	606.7	619.5	631.5	631.7	629.3
37.5°	519.4	521.7	510.4	536.4	553.3	574.2	588.8	601.6	615.0	615.7	613.5
40°	489.5	492.0	482.2	507.2	528.7	552.0	568.9	584.0	598.6	599.0	597.5
42.5°	459.6	462.3	454.9	479.4	503.6	528.7	548.6	565.7	580.8	581.7	580.0
45°	430.5	432.7	427.5	454.2	477.5	504.8	527.7	547.1	562.3	563.6	563.1
47.5°	401.5	403.6	398.9	423.3	450.2	479.2	505.7	527.2	543.3	544.8	544.5
50°	373.1	374.8	369.7	395.3	422.0	452.9	480.5	505.3	523.4	524.9	524.7
52.5°	344.9	346.6	342.3	369.2	393.4	426.0	456.1	483.0	500.8	503.1	503.5
55°	317.6	318.4	315.0	340.8	364.3	398.3	432.9	459.1	476.9	478.8	480.0
57.5°	290.4	290.6	287.7	312.4	335.0	369.7	406.0	433.5	450.4	452.3	454.0
60°	263.3	263.1	259.9	283.8	305.4	339.8	377.6	404.9	421.3	423.0	425.2
62.5°	236.4	235.8	233.0	255.0	275.3	309.4	347.4	373.7	389.3	390.4	393.4
65°	209.7	209.1	206.5	226.8	245.2	277.8	315.0	340.0	354.1	355.6	355.1
67.5°	183.4	182.2	180.2	198.4	215.2	245.2	281.0	304.9	316.5	317.8	321.4
70°	157.0	155.7	151.0	170.4	185.1	212.0	245.2	266.5	276.3	277.6	277.0
72.5°	131.1	129.8	124.7	142.6	155.0	178.5	208.2	225.9	234.3	235.5	235.5
75°	105.9	105.1	101.9	115.5	125.8	145.0	170.2	184.9	191.5	192.8	192.4
77.5°	81.6	81.1	77.9	89.5	97.6	111.9	132.2	143.7	148.6	150.1	153.3
80°	58.5	58.3	53.2	64.7	68.3	80.3	95.2	104.0	106.6	108.7	111.0
82.5°	37.4	37.6	32.5	42.3	43.8	51.5	60.7	66.2	68.1	69.8	71.5
85°	18.2	19.0	16.2	22.4	22.6	26.5	30.5	32.5	33.3	34.6	36.1
87.5°	4.7	5.5	3.0	6.4	5.6	7.3	8.5	9.0	8.8	9.8	10.3
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°	806.3	806.3	806.3	806.3	806.3	806.3	806.3	806.3	806.3	806.3	806.3
2.5°	789.1	795.2	792.1	801.9	805.7	799.7	810.2	810.4	802.9	811.7	816.6
5°	776.9	783.1	781.2	791.4	796.1	790.8	803.6	806.1	798.7	808.7	816.6
7.5°	764.5	771.8	769.4	779.7	785.4	781.2	795.0	798.9	793.3	804.2	814.7
10°	753.8	760.0	757.4	768.3	773.2	769.8	783.3	790.6	785.4	798.7	811.3
12.5°	743.3	748.3	745.3	754.3	759.0	754.7	771.3	778.0	774.3	788.2	804.4
15°	729.7	735.4	731.2	739.3	742.9	739.1	752.7	764.3	759.6	774.8	792.7
17.5°	719.4	722.6	716.9	723.3	725.4	720.3	734.0	745.5	742.1	758.7	779.4
20°	707.9	710.5	702.6	706.2	706.0	699.6	712.2	723.5	721.2	739.5	763.0
22.5°	695.1	696.4	687.2	688.0	687.6	677.0	688.3	699.8	698.9	717.3	743.6
25°	681.6	681.8	669.9	669.5	665.4	653.0	662.9	675.9	673.1	693.0	720.7
27.5°	668.2	666.3	652.0	648.7	642.1	627.2	636.1	647.7	646.0	665.6	696.2
30°	653.9	651.5	634.0	627.8	618.2	601.1	608.4	619.3	620.3	637.4	669.5
32.5°	640.4	634.2	614.8	605.8	593.7	573.8	577.7	588.8	590.3	607.7	640.8
35°	622.9	618.7	594.9	579.4	567.6	545.8	549.9	557.6	559.9	576.8	610.5
37.5°	606.3	599.8	574.4	555.6	540.3	517.4	518.5	526.4	528.7	545.8	579.1
40°	589.2	579.8	552.5	530.5	513.1	489.0	487.7	495.9	497.6	514.4	544.5
42.5°	571.0	559.7	529.0	505.0	484.8	460.4	457.8	464.9	466.8	483.2	512.7
45°	552.5	539.0	505.0	478.6	456.6	431.6	429.0	434.4	437.3	452.7	481.1
47.5°	533.0	517.2	480.1	450.8	428.0	403.0	399.8	405.3	407.5	422.8	449.7
50°	512.5	493.3	454.6	422.2	399.6	375.0	370.3	376.7	378.8	393.1	419.4
52.5°	489.9	468.7	427.3	393.4	370.9	347.4	341.7	347.9	350.4	364.3	388.6
55°	466.0	443.1	399.8	366.9	342.5	319.5	314.8	317.3	322.5	335.7	358.3
57.5°	439.1	416.4	370.9	337.4	313.9	291.9	287.9	290.2	295.1	307.9	328.2
60°	410.6	386.5	341.3	307.9	285.1	264.2	260.7	262.7	268.0	279.7	298.5
62.5°	382.3	355.3	310.9	277.6	256.9	237.5	236.6	235.8	240.7	252.0	268.6
65°	348.1	322.2	279.1	247.5	228.7	211.2	207.4	209.1	213.8	224.2	241.5
67.5°	311.4	287.9	246.6	217.4	200.7	185.1	181.9	182.6	187.5	196.5	211.6
70°	272.5	251.8	213.3	187.1	173.0	158.4	156.3	156.5	161.2	169.1	182.2
72.5°	231.7	213.1	179.6	157.2	145.6	135.0	133.2	130.9	135.2	142.0	153.3
75°	190.1	173.8	146.1	127.9	118.7	109.8	108.1	105.9	110.2	116.0	124.9
77.5°	148.2	135.0	113.6	99.5	92.3	85.8	84.3	81.8	86.1	90.5	97.4
80°	107.2	97.6	84.8	70.0	67.5	63.2	61.7	59.1	63.2	66.0	71.3
82.5°	69.2	62.8	55.5	45.1	44.8	41.6	40.8	37.8	41.6	43.3	47.2
85°	35.0	32.0	30.1	22.9	23.7	21.6	21.4	18.2	21.3	22.0	24.3
87.5°	10.0	10.5	9.4	5.6	7.1	6.8	6.8	4.9	6.8	6.8	7.7
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-24-4-INS-ASY2R-LD4-1LO-30-120-EDD-90

CANDELA DISTRIBUTION (continued):

	295°	305°	315°	325°	335°	345°	355°	360°
0°	806.3	806.3	806.3	806.3	806.3	806.3	806.3	806.3
2.5°	807.0	810.2	811.0	810.8	812.8	824.1	820.4	824.1
5°	808.9	816.0	817.9	820.5	823.9	836.7	832.6	837.1
7.5°	810.0	820.7	824.9	830.0	835.4	849.7	846.3	850.8
10°	810.0	823.9	830.0	838.4	845.7	862.3	859.1	864.4
12.5°	806.6	824.5	833.0	844.8	854.2	872.1	870.8	874.5
15°	799.7	821.7	833.3	848.6	860.2	880.2	879.6	884.1
17.5°	790.3	816.8	830.9	850.1	864.7	887.1	888.4	890.9
20°	778.4	807.6	826.0	849.5	867.9	892.6	894.3	897.7
22.5°	762.8	796.5	818.7	847.1	868.3	894.8	897.8	901.0
25°	744.4	783.1	809.1	842.4	866.4	894.6	898.8	901.6
27.5°	723.3	765.8	796.9	834.8	861.2	891.6	896.7	900.1
30°	698.9	747.4	782.9	825.1	854.0	886.0	891.4	894.8
32.5°	673.7	727.1	766.4	812.5	843.7	877.0	881.7	884.3
35°	646.2	702.4	746.4	796.3	830.3	862.5	866.1	868.9
37.5°	616.3	675.7	723.7	778.0	811.5	842.4	845.6	848.8
40°	585.5	647.7	698.1	755.7	789.1	817.7	821.1	823.4
42.5°	554.4	616.7	670.8	729.3	762.6	790.1	792.1	794.4
45°	523.0	584.5	640.2	700.2	733.1	758.9	759.6	761.5
47.5°	491.0	551.2	606.5	666.9	699.4	722.9	723.7	725.2
50°	458.9	517.9	570.6	631.0	662.8	687.6	684.2	685.7
52.5°	427.3	483.0	536.8	592.2	623.6	645.6	646.6	643.6
55°	396.3	448.7	498.2	551.6	581.5	598.6	598.1	599.2
57.5°	364.9	414.1	459.5	508.4	537.5	553.7	557.1	553.1
60°	332.9	379.1	419.8	464.0	492.2	505.7	509.7	505.9
62.5°	301.1	343.6	380.5	419.0	445.2	461.9	461.5	457.4
65°	269.3	307.9	340.8	373.5	396.3	413.0	412.2	408.5
67.5°	240.0	271.8	301.3	327.8	347.6	359.0	363.0	358.5
70°	207.6	235.1	261.0	282.3	298.7	309.0	312.8	308.8
72.5°	175.3	198.6	216.8	237.3	249.9	258.6	262.5	258.8
75°	143.3	162.5	177.3	193.3	202.2	209.5	214.0	210.3
77.5°	112.3	127.1	139.0	150.6	160.8	162.5	166.4	164.0
80°	82.8	93.5	102.1	109.8	117.2	117.9	121.1	119.6
82.5°	55.1	62.3	64.5	72.6	77.3	76.5	79.7	78.6
85°	29.2	33.5	37.4	39.9	42.5	40.1	42.9	41.8
87.5°	9.8	10.3	9.0	12.8	14.1	12.0	13.7	13.2
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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