

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: P837857

Luminaire Tested: **ORLG-24-2-INS-ASY2R-LD4-1LO-30-120-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: P837857
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-LD4-1LO-30-120-EDD
Description: 2FT x 2FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2 and
RFI grid
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

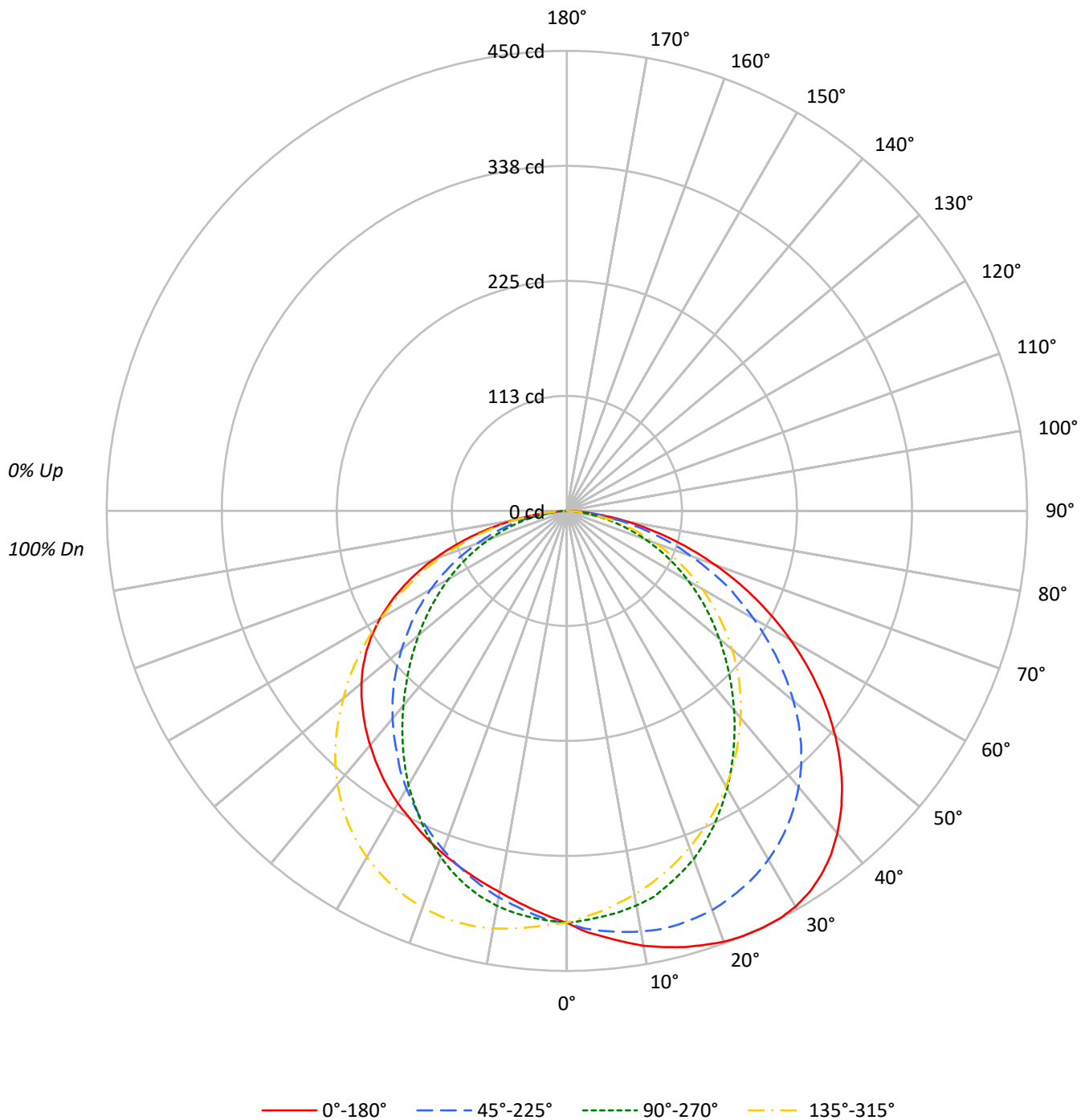
Lumens per Lamp: N/A
Luminaire Lumens: 1181.9 lumens
Efficiency: N/A
Efficacy: 101.0 lumens/watt
Spacing Criteria (0/90/45): 1.43 / 1.16 / 1.4
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 11.7
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°	1084	1084	1084	1084
5°	1130	1076	1056	1078
10°	1180	1071	1035	1072
15°	1231	1057	1024	1058
20°	1284	1038	1020	1032
25°	1338	1009	1020	999
30°	1389	974	1027	963
35°	1426	934	1037	919
40°	1445	894	1051	874
45°	1448	853	1072	832
50°	1434	814	1098	792
55°	1405	778	1123	756
60°	1361	740	1137	721
65°	1300	697	1131	680
70°	1214	645	1091	633
75°	1093	576	1001	573
80°	927	482	841	490
85°	645	318	534	327

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	38.2	3.2
10°-20°	110.8	9.4
20°-30°	169.7	14.4
30°-40°	206.4	17.5
40°-50°	214.6	18.2
50°-60°	193.8	16.4
60°-70°	147.3	12.5
70°-80°	82.1	7.0
80°-90°	18.9	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°	318.8	27.0
0°-40°	525.2	44.4
0°-60°	933.5	79.0
0°-90°	1181.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1181.9	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	403	403	403	403	403	
5°	418	398	391	399	418	40
15°	442	380	368	380	442	125
25°	450	340	344	336	450	208
35°	434	284	316	280	434	271
45°	380	224	282	218	380	293
55°	299	166	239	161	299	267
65°	204	109	178	107	204	202
75°	105	55	96	55	105	112
85°	21	10	17	11	21	26
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°	402.9	402.9	402.9	402.9	402.9	402.9	402.9	402.9	402.9	402.9	402.9
2.5°	411.8	405.8	405.9	411.1	407.1	409.1	403.4	405.6	404.9	405.4	400.8
5°	418.3	411.8	411.7	416.2	411.7	412.5	405.4	406.8	404.7	403.4	398.4
7.5°	425.1	418.7	418.0	421.9	416.0	415.4	407.5	407.5	403.7	400.4	395.7
10°	431.9	425.2	424.4	427.4	420.1	417.9	408.3	406.8	401.8	396.9	391.9
12.5°	437.0	430.2	429.6	431.4	423.2	419.2	408.3	405.4	398.1	391.2	387.3
15°	441.8	434.8	433.0	434.0	424.5	419.2	407.0	402.5	393.1	384.1	379.5
17.5°	445.2	438.5	436.7	436.6	425.1	417.6	404.2	398.0	386.7	375.8	371.2
20°	448.5	441.9	439.6	437.9	424.9	415.5	400.0	391.7	378.5	366.3	362.5
22.5°	450.2	443.4	440.9	438.4	423.7	411.5	395.0	384.4	369.3	354.8	351.6
25°	450.5	443.5	440.8	437.2	421.3	406.8	388.4	375.5	358.7	342.5	339.8
27.5°	449.8	442.1	439.4	435.0	417.6	401.1	380.6	365.5	347.4	329.6	326.7
30°	447.1	439.3	436.8	431.1	412.5	394.0	372.0	354.3	334.9	315.9	313.4
32.5°	441.9	434.3	432.2	426.5	406.8	385.9	362.1	342.3	321.1	303.0	299.2
35°	434.2	426.5	425.2	419.2	398.9	376.1	351.2	329.1	306.4	287.9	284.3
37.5°	424.1	417.7	415.7	409.8	389.6	365.0	338.7	314.8	291.5	271.6	269.3
40°	411.4	405.4	403.9	398.6	378.8	352.7	325.1	300.1	276.1	257.6	254.4
42.5°	396.9	391.3	390.5	385.0	365.5	339.1	310.5	284.7	260.0	242.2	239.0
45°	380.5	375.0	374.9	369.7	350.9	323.9	295.1	269.2	244.3	225.8	224.1
47.5°	362.4	357.5	357.5	352.7	334.6	307.3	279.2	253.1	228.5	212.2	209.2
50°	342.6	338.0	336.6	334.3	316.7	289.2	262.5	237.3	212.9	197.3	194.4
52.5°	321.6	317.6	318.6	314.2	297.2	270.3	245.6	219.5	197.3	183.1	180.1
55°	299.4	293.8	294.6	293.0	276.9	250.8	226.6	204.9	181.8	168.5	165.8
57.5°	276.4	269.0	272.1	271.1	255.3	230.9	209.2	188.2	166.5	154.2	151.6
60°	252.8	245.7	248.8	248.0	233.1	211.0	191.2	171.8	151.3	140.1	137.5
62.5°	228.5	222.1	224.9	224.2	210.6	190.6	173.4	155.5	136.0	125.9	123.5
65°	204.1	197.9	200.4	200.0	187.4	172.2	155.1	138.7	120.6	111.8	109.4
67.5°	179.1	173.4	175.7	175.7	164.2	149.6	136.6	121.7	105.4	97.9	95.7
70°	154.3	148.9	151.0	150.8	141.1	129.2	118.0	104.7	90.1	83.9	82.0
72.5°	129.3	124.6	126.5	126.3	118.1	110.5	99.4	87.9	75.2	70.2	68.5
75°	105.1	100.6	102.4	102.2	95.6	88.4	81.0	71.4	60.5	57.0	55.4
77.5°	81.9	77.4	78.9	78.9	74.1	68.9	63.0	55.5	47.8	44.1	42.9
80°	59.8	57.6	56.9	56.9	53.7	50.3	47.3	40.1	34.5	32.0	31.1
82.5°	39.3	37.5	36.7	36.9	35.1	33.0	31.1	26.1	22.4	20.9	20.4
85°	20.9	19.5	18.9	19.4	19.0	17.9	16.9	13.5	11.2	10.6	10.3
87.5°	6.6	5.7	5.3	7.0	5.9	5.3	5.1	4.0	3.1	3.1	3.0
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°	402.9	402.9	402.9	402.9	402.9	402.9	402.9	402.9	402.9	402.9	402.9
2.5°	402.3	402.3	398.6	397.8	397.4	397.9	394.2	393.6	398.8	397.0	393.0
5°	399.1	398.9	393.8	392.8	392.8	392.2	388.1	387.2	392.4	390.9	386.5
7.5°	395.2	394.6	388.5	387.8	386.9	386.5	381.9	381.3	385.8	384.8	380.7
10°	390.4	389.8	382.6	382.1	381.1	380.3	376.0	375.5	380.1	378.6	375.3
12.5°	384.1	383.0	375.6	375.1	374.3	374.0	369.8	369.6	374.7	373.2	369.7
15°	375.8	375.0	366.7	366.9	367.0	367.0	363.6	363.4	368.4	367.7	364.0
17.5°	366.7	365.6	357.7	358.2	358.9	359.6	357.0	357.5	362.7	361.9	358.5
20°	356.3	355.2	347.5	349.1	350.5	352.0	350.3	351.6	356.5	356.2	353.6
22.5°	344.8	343.7	336.5	339.0	341.3	344.1	343.4	344.9	350.1	350.0	347.7
25°	330.7	331.0	324.7	327.7	331.6	335.6	335.9	338.3	344.0	343.5	341.4
27.5°	317.5	317.9	311.2	316.3	321.6	326.7	327.9	331.3	337.1	336.6	334.8
30°	303.7	304.2	297.7	304.7	311.1	317.3	319.9	324.5	330.4	330.4	328.5
32.5°	289.3	290.2	283.4	292.7	300.2	307.4	312.0	316.8	323.6	323.4	321.8
35°	274.6	275.5	269.3	281.2	288.6	297.4	303.2	309.5	315.6	315.7	314.4
37.5°	259.6	260.7	255.0	268.0	276.5	286.9	294.2	300.6	307.3	307.7	306.5
40°	244.6	245.8	240.9	253.4	264.2	275.8	284.3	291.8	299.1	299.3	298.6
42.5°	229.7	231.0	227.3	239.5	251.7	264.2	274.1	282.7	290.2	290.7	289.8
45°	215.1	216.2	213.6	226.9	238.6	252.2	263.7	273.4	281.0	281.6	281.4
47.5°	200.6	201.7	199.3	211.5	225.0	239.4	252.7	263.4	271.5	272.2	272.1
50°	186.4	187.3	184.8	197.5	210.9	226.3	240.1	252.5	261.5	262.3	262.2
52.5°	172.3	173.2	171.0	184.5	196.6	212.9	227.9	241.3	250.3	251.4	251.6
55°	158.7	159.1	157.4	170.3	182.0	199.0	216.3	229.4	238.3	239.3	239.8
57.5°	145.1	145.2	143.8	156.1	167.4	184.8	202.9	216.6	225.1	226.0	226.9
60°	131.6	131.5	129.9	141.8	152.6	169.8	188.7	202.3	210.5	211.3	212.5
62.5°	118.1	117.8	116.4	127.4	137.6	154.6	173.6	186.7	194.5	195.1	196.6
65°	104.8	104.5	103.2	113.3	122.5	138.8	157.4	169.9	177.0	177.7	177.4
67.5°	91.6	91.1	90.0	99.1	107.5	122.5	140.4	152.3	158.2	158.8	160.6
70°	78.5	77.8	75.5	85.1	92.5	105.9	122.5	133.2	138.0	138.7	138.4
72.5°	65.5	64.8	62.3	71.2	77.4	89.2	104.0	112.9	117.1	117.7	117.7
75°	52.9	52.5	50.9	57.7	62.9	72.5	85.0	92.4	95.7	96.3	96.1
77.5°	40.8	40.5	38.9	44.7	48.8	55.9	66.1	71.8	74.2	75.0	76.6
80°	29.2	29.1	26.6	32.3	34.1	40.1	47.6	52.0	53.3	54.3	55.4
82.5°	18.7	18.8	16.3	21.1	21.9	25.7	30.4	33.1	34.0	34.9	35.7
85°	9.1	9.5	8.1	11.2	11.3	13.3	15.2	16.3	16.6	17.3	18.0
87.5°	2.3	2.7	1.5	3.2	2.8	3.7	4.2	4.5	4.4	4.9	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):

	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°	285°
0°	402.9	402.9	402.9	402.9	402.9	402.9	402.9	402.9	402.9	402.9	402.9
2.5°	394.3	397.3	395.8	400.7	402.6	399.6	404.8	404.9	401.2	405.6	408.0
5°	388.2	391.3	390.4	395.4	397.8	395.2	401.5	402.8	399.1	404.1	408.0
7.5°	382.0	385.7	384.4	389.6	392.4	390.4	397.2	399.2	396.4	401.8	407.1
10°	376.6	379.7	378.4	383.9	386.3	384.6	391.4	395.1	392.4	399.1	405.4
12.5°	371.4	373.9	372.4	376.9	379.3	377.1	385.4	388.8	386.9	393.8	401.9
15°	364.6	367.4	365.4	369.4	371.2	369.3	376.1	381.9	379.6	387.2	396.1
17.5°	359.4	361.0	358.2	361.4	362.5	359.9	366.8	372.5	370.8	379.1	389.4
20°	353.7	355.0	351.1	352.9	352.8	349.6	355.9	361.5	360.4	369.5	381.3
22.5°	347.3	348.0	343.4	343.8	343.6	338.3	343.9	349.7	349.2	358.4	371.6
25°	340.6	340.7	334.7	334.5	332.5	326.3	331.3	337.7	336.3	346.3	360.1
27.5°	333.9	332.9	325.8	324.1	320.8	313.4	317.8	323.6	322.8	332.6	347.9
30°	326.7	325.5	316.8	313.7	308.9	300.3	304.0	309.5	309.9	318.5	334.5
32.5°	320.0	316.9	307.2	302.7	296.7	286.7	288.7	294.2	295.0	303.6	320.2
35°	311.2	309.2	297.2	289.5	283.6	272.7	274.8	278.6	279.8	288.2	305.0
37.5°	303.0	299.7	287.0	277.6	270.0	258.5	259.1	263.0	264.2	272.7	289.3
40°	294.4	289.7	276.1	265.1	256.4	244.3	243.7	247.8	248.7	257.0	272.1
42.5°	285.3	279.7	264.3	252.3	242.3	230.0	228.7	232.3	233.2	241.4	256.2
45°	276.1	269.3	252.3	239.2	228.2	215.7	214.4	217.1	218.5	226.2	240.4
47.5°	266.3	258.4	239.9	225.3	213.9	201.4	199.8	202.5	203.6	211.3	224.7
50°	256.1	246.5	227.1	211.0	199.7	187.4	185.0	188.2	189.3	196.4	209.6
52.5°	244.8	234.2	213.5	196.6	185.3	173.6	170.8	173.9	175.1	182.0	194.1
55°	232.9	221.4	199.8	183.3	171.1	159.7	157.3	158.5	161.2	167.7	179.0
57.5°	219.4	208.1	185.3	168.6	156.8	145.8	143.9	145.0	147.4	153.8	164.0
60°	205.1	193.1	170.6	153.8	142.5	132.0	130.2	131.3	133.9	139.7	149.1
62.5°	191.0	177.5	155.3	138.7	128.4	118.7	118.2	117.8	120.3	125.9	134.2
65°	173.9	161.0	139.5	123.7	114.3	105.5	103.7	104.5	106.8	112.0	120.7
67.5°	155.6	143.9	123.2	108.6	100.3	92.5	90.9	91.2	93.7	98.2	105.7
70°	136.2	125.8	106.6	93.5	86.5	79.1	78.1	78.2	80.5	84.5	91.1
72.5°	115.8	106.5	89.7	78.6	72.7	67.5	66.5	65.4	67.6	71.0	76.6
75°	95.0	86.8	73.0	63.9	59.3	54.9	54.0	52.9	55.1	58.0	62.4
77.5°	74.1	67.5	56.8	49.7	46.1	42.9	42.1	40.9	43.0	45.2	48.7
80°	53.6	48.8	42.4	35.0	33.7	31.6	30.8	29.5	31.6	33.0	35.6
82.5°	34.6	31.4	27.7	22.6	22.4	20.8	20.4	18.9	20.8	21.6	23.6
85°	17.5	16.0	15.0	11.5	11.8	10.8	10.7	9.1	10.6	11.0	12.1
87.5°	5.0	5.3	4.7	2.8	3.6	3.4	3.4	2.4	3.4	3.4	3.9
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):

	295°	305°	315°	325°	335°	345°	355°	360°
0°	402.9	402.9	402.9	402.9	402.9	402.9	402.9	402.9
2.5°	403.2	404.8	405.2	405.1	406.2	411.8	409.9	411.8
5°	404.2	407.8	408.7	410.0	411.7	418.1	416.0	418.3
7.5°	404.7	410.1	412.2	414.7	417.4	424.6	422.9	425.1
10°	404.7	411.7	414.7	418.9	422.6	430.9	429.3	431.9
12.5°	403.1	412.0	416.2	422.1	426.8	435.8	435.1	437.0
15°	399.6	410.6	416.4	424.0	429.8	439.8	439.5	441.8
17.5°	394.9	408.1	415.2	424.8	432.1	443.3	443.9	445.2
20°	389.0	403.5	412.7	424.5	433.7	446.0	446.8	448.5
22.5°	381.2	398.0	409.1	423.3	433.9	447.1	448.6	450.2
25°	371.9	391.3	404.3	420.9	432.9	447.0	449.1	450.5
27.5°	361.4	382.7	398.2	417.1	430.3	445.5	448.1	449.8
30°	349.2	373.5	391.2	412.3	426.7	442.7	445.4	447.1
32.5°	336.6	363.3	382.9	406.0	421.6	438.2	440.5	441.9
35°	322.9	351.0	373.0	397.9	414.9	431.0	432.7	434.2
37.5°	308.0	337.6	361.6	388.8	405.5	420.9	422.5	424.1
40°	292.5	323.6	348.8	377.6	394.3	408.6	410.3	411.4
42.5°	277.0	308.1	335.2	364.4	381.1	394.8	395.8	396.9
45°	261.3	292.1	319.9	349.9	366.3	379.2	379.6	380.5
47.5°	245.4	275.4	303.1	333.2	349.5	361.2	361.6	362.4
50°	229.3	258.8	285.1	315.3	331.2	343.6	341.9	342.6
52.5°	213.5	241.3	268.2	295.9	311.6	322.6	323.1	321.6
55°	198.0	224.2	248.9	275.6	290.6	299.1	298.8	299.4
57.5°	182.3	206.9	229.6	254.0	268.6	276.7	278.4	276.4
60°	166.3	189.5	209.7	231.8	245.9	252.7	254.7	252.8
62.5°	150.5	171.7	190.1	209.4	222.4	230.8	230.6	228.5
65°	134.6	153.8	170.3	186.6	198.0	206.4	206.0	204.1
67.5°	119.9	135.8	150.5	163.8	173.7	179.4	181.4	179.1
70°	103.7	117.5	130.4	141.1	149.2	154.4	156.3	154.3
72.5°	87.6	99.2	108.4	118.6	124.9	129.2	131.2	129.3
75°	71.6	81.2	88.6	96.6	101.0	104.7	106.9	105.1
77.5°	56.1	63.5	69.4	75.3	80.3	81.2	83.2	81.9
80°	41.3	46.7	51.0	54.9	58.5	58.9	60.5	59.8
82.5°	27.5	31.1	32.2	36.3	38.6	38.2	39.8	39.3
85°	14.6	16.7	18.7	19.9	21.2	20.0	21.4	20.9
87.5°	4.9	5.2	4.5	6.4	7.0	6.0	6.9	6.6
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)