

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: PORTFOLIO

Report Number: P#

Luminaire Tested: **LD4C08D010 EX4C089027 4LBSQLWWH**

Issue Date: 2/18/2022

This test was performed under the Supervised Manufacturer's Testing Program. The results of this test have not been influenced by sources from within Cooper Lighting Solutions or from external interests.



Test Information

Test Method: LM-79-08
Report Number: P#
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P219529)
Test Lab: INNOVATION CENTER
Issue Date: 2/18/2022
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: PORTFOLIO
Catalog Number: LD4C08D010 EX4C089027 4LBSQLWWH
Description: 4 INCH 800 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 2700K, 90CRI LEDS AND 4LBSQLWW TRIM WITH H FINISH
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

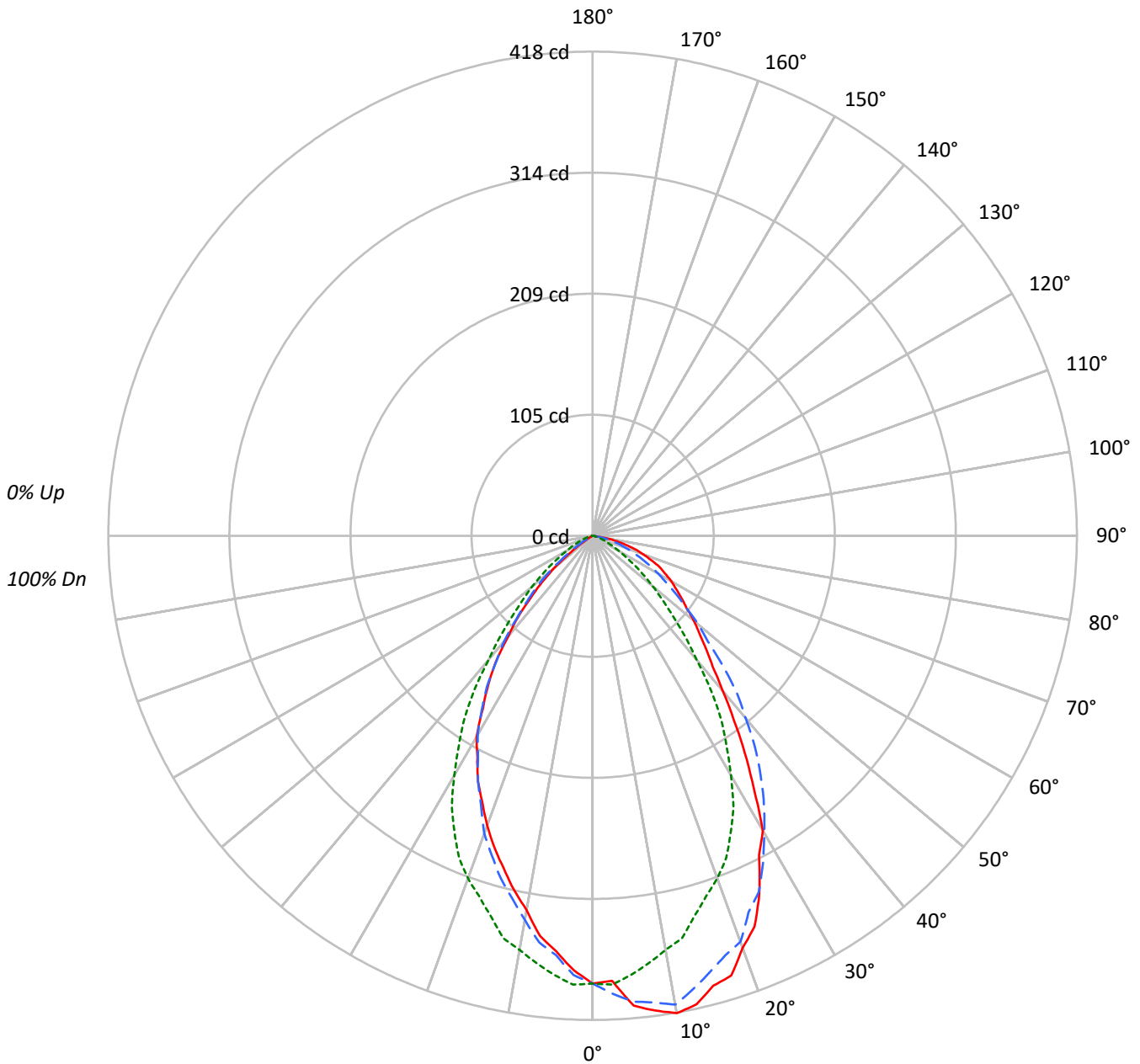
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 554.0 lumens
Efficiency: N/A
Efficacy: 56.0 lumens/watt
Spacing Criteria (0/90/45): 1.01 / 1 / 1.06
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 9.9
Input Voltage (V):
Input Current (A_{in}): 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									
RC	80									50									30									10									0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0																
RCR																																					
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100																			
1	112	108	105	102	109	106	103	101	102	100	98	98	96	95	95	93	92	90																			
2	104	98	93	89	102	96	92	88	93	89	86	90	87	84	87	84	82	80																			
3	97	89	83	78	95	88	82	77	85	80	76	82	78	75	80	77	74	72																			
4	91	81	74	69	89	80	74	69	78	72	68	76	71	67	74	70	66	64																			
5	85	75	67	62	83	74	67	62	72	66	61	70	65	60	68	64	60	58																			
6	80	69	61	56	78	68	61	56	66	60	55	65	59	55	63	58	54	53																			
7	75	63	56	51	73	63	56	51	61	55	50	60	54	50	59	54	50	48																			
8	70	59	52	47	69	58	51	46	57	51	46	56	50	46	55	50	46	44																			
9	66	55	48	43	65	54	47	43	53	47	43	52	46	42	51	46	42	41																			
10	62	51	44	40	61	51	44	40	50	44	39	49	43	39	48	43	39	38																			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	37293	37293	37293
5°	39450	36854	34878
10°	41004	35556	32146
15°	40177	33934	29668
20°	38875	32314	27313
25°	36262	30044	24913
30°	32734	26595	22305
35°	26962	22769	18505
40°	22005	17571	14246
45°	18913	13345	10248
50°	17113	10162	6470
55°	15746	7335	2338
60°	15110	4998	367
65°	14589	3379	114
70°	13062	2342	141
75°	10699	1193	0
80°	6723	500	0
85°	0	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	36.2	6.5
10°-20°	97.6	17.6
20°-30°	130.3	23.5
30°-40°	123.7	22.3
40°-50°	85.5	15.4
50°-60°	47.2	8.5
60°-70°	23.5	4.2
70°-80°	9.2	1.7
80°-90°	0.9	0.2
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°	264.0	47.7
0°-40°	387.7	70.0
0°-60°	520.4	93.9
0°-90°	554.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	554.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	386	386	386	386	386	
5°	407	404	380	363	360	39
15°	402	390	340	306	297	114
25°	341	339	282	234	234	155
35°	229	253	193	159	157	143
45°	139	159	98	80	75	108
55°	94	88	44	22	14	84
65°	64	46	15	0	0	62
75°	29	18	3	0	0	31
85°	0	0	0	0	0	3
90°	0	0	0	0	0	



TEST NUMBER: P#

CATALOG NUMBER: LD4C08D010 EX4C089027 4LBSQLWWH

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	386.5	386.5	386.5	386.5	386.5	386.5	386.5	386.5	386.5	386.5	386.5
2.5°	384.6	395.3	396.2	395.3	396.7	396.2	398.5	396.2	399.0	394.8	395.8
5°	407.3	403.2	412.0	407.3	407.3	406.9	405.5	405.0	406.9	400.9	403.6
7.5°	413.4	419.4	427.3	417.5	418.0	418.0	415.2	414.3	414.3	403.2	406.4
10°	418.5	414.8	418.9	415.2	418.5	418.0	419.9	413.8	418.0	411.5	411.0
12.5°	414.3	412.9	418.5	412.4	410.6	411.0	408.7	407.3	408.7	401.3	400.9
15°	402.2	403.6	412.0	405.5	404.6	403.6	400.9	396.2	399.9	389.7	390.2
17.5°	398.1	395.8	397.2	391.6	393.0	392.1	391.6	387.4	386.5	380.0	380.0
20°	378.6	383.7	383.7	380.0	380.0	379.5	373.5	377.2	373.0	371.2	373.0
22.5°	365.2	365.6	365.6	362.4	362.9	361.0	357.8	355.4	357.8	355.4	351.7
25°	340.6	341.5	347.1	341.1	340.1	342.0	339.2	337.8	337.4	331.8	339.2
27.5°	311.0	320.2	319.8	317.4	320.2	316.5	315.1	315.6	317.0	316.5	318.4
30°	293.8	295.2	296.6	294.7	295.2	293.8	293.8	294.3	298.0	296.6	296.1
32.5°	259.0	263.7	267.4	267.4	267.9	269.3	268.8	278.5	280.8	276.2	275.3
35°	228.9	232.2	235.4	235.9	241.9	242.4	242.8	245.6	252.1	253.5	253.0
37.5°	200.2	203.4	204.4	208.5	211.8	215.0	218.7	222.4	228.0	232.6	230.3
40°	174.7	176.1	178.4	180.3	186.8	186.8	188.6	196.0	202.1	205.8	205.3
42.5°	153.4	153.9	155.7	159.0	165.0	163.6	165.0	170.1	178.9	179.3	184.4
45°	138.6	138.1	139.5	139.9	143.7	145.5	146.4	150.1	157.6	158.5	159.0
47.5°	125.1	124.7	127.0	127.9	129.3	131.1	131.1	131.6	134.4	136.7	134.9
50°	114.0	114.0	114.0	114.9	117.3	116.8	117.3	119.1	120.5	119.6	119.1
52.5°	101.9	103.8	105.2	105.7	106.1	106.1	106.6	105.7	105.2	103.8	101.0
55°	93.6	95.5	95.5	95.5	95.5	97.3	95.0	95.5	95.5	91.8	88.1
57.5°	85.3	87.1	88.5	86.7	88.5	86.7	85.7	85.3	84.3	80.6	75.1
60°	78.3	79.3	78.8	78.3	79.3	77.9	76.9	75.1	74.1	69.0	65.3
62.5°	70.4	70.9	71.4	70.4	69.5	69.0	67.2	64.4	62.6	58.4	55.1
65°	63.9	62.6	62.1	61.6	60.7	59.3	57.9	54.7	53.3	49.6	46.3
67.5°	54.2	53.8	54.7	53.3	51.0	51.0	49.6	46.8	43.6	41.3	38.0
70°	46.3	45.9	45.0	43.6	43.1	41.3	41.3	38.0	37.1	32.9	30.1
72.5°	38.0	38.0	36.6	35.2	33.8	32.9	32.4	30.1	28.7	26.4	24.1
75°	28.7	28.7	28.3	26.9	25.9	25.0	24.6	22.7	21.3	19.0	17.6
77.5°	20.4	20.4	18.5	17.6	18.1	17.1	16.2	15.8	15.3	13.9	12.1
80°	12.1	11.6	10.2	10.7	10.2	10.2	9.7	9.3	8.3	7.4	6.5
82.5°	3.2	3.7	3.7	3.7	4.2	3.2	3.2	3.2	3.7	3.7	2.3
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.5	0.5
87.5°	0.5	0.9	1.9	1.9	1.9	1.9	1.9	1.4	1.4	1.4	0.9
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: P#

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CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	386.5	386.5	386.5	386.5	386.5	386.5	386.5	386.5	386.5	386.5	386.5
2.5°	391.1	390.7	391.1	387.9	395.3	389.7	388.8	387.9	391.1	387.9	383.3
5°	399.5	394.8	393.4	392.1	396.2	389.7	388.4	388.8	386.5	380.5	380.9
7.5°	402.2	398.1	393.9	385.1	388.8	387.4	383.7	380.9	377.2	372.1	371.2
10°	403.2	398.5	392.5	389.7	384.2	382.3	380.9	376.3	371.7	362.9	360.5
12.5°	400.4	394.8	387.4	385.1	380.9	374.9	371.7	367.0	362.9	355.9	350.8
15°	388.4	383.7	381.4	373.5	371.7	367.9	361.5	355.0	349.0	339.7	336.9
17.5°	374.4	372.6	370.3	364.2	363.8	360.1	354.1	348.5	340.6	326.2	321.6
20°	360.1	360.1	352.7	350.4	355.0	347.6	342.9	337.8	321.6	314.7	306.3
22.5°	349.4	344.3	340.1	336.4	336.9	332.3	325.8	315.6	309.6	301.2	291.5
25°	328.6	330.4	321.2	319.8	321.2	310.5	307.3	298.9	290.1	282.2	274.8
27.5°	315.6	310.5	304.5	299.4	299.4	295.2	285.9	284.1	270.6	263.2	253.9
30°	296.1	292.4	287.3	279.9	279.0	275.7	268.3	263.7	249.8	238.7	233.6
32.5°	271.6	270.2	266.0	257.7	254.9	251.2	241.9	234.0	227.5	215.0	209.0
35°	253.9	248.9	240.1	233.1	230.8	224.3	216.9	211.3	204.4	193.3	185.4
37.5°	227.5	222.4	214.1	205.8	205.8	199.3	189.1	183.5	173.8	167.3	160.8
40°	204.4	197.9	189.5	179.8	178.4	169.1	165.0	155.7	149.7	139.5	138.6
42.5°	178.4	172.4	165.0	157.6	152.0	147.4	136.7	129.8	123.3	118.2	116.8
45°	154.8	146.9	140.4	131.1	125.6	120.0	113.1	108.4	103.3	97.8	94.5
47.5°	134.4	127.9	118.6	110.3	104.7	101.9	94.1	89.0	84.8	81.1	78.8
50°	113.5	105.7	100.6	91.3	90.4	83.9	77.4	73.2	70.9	67.7	64.4
52.5°	97.8	90.4	83.4	76.5	72.8	70.4	64.4	60.2	57.0	54.7	52.8
55°	82.5	76.0	70.4	63.5	61.2	57.9	51.0	50.1	46.8	43.6	41.3
57.5°	70.9	64.9	58.4	53.8	49.6	47.3	41.7	38.0	36.1	33.4	31.0
60°	60.2	53.8	48.7	43.1	41.3	38.0	33.8	30.6	28.3	25.9	23.6
62.5°	50.5	45.0	39.4	34.8	32.0	30.1	26.9	24.1	21.8	19.9	18.1
65°	41.7	36.6	32.0	27.3	25.9	23.6	21.3	19.0	17.1	14.8	13.0
67.5°	34.3	29.7	25.0	21.8	20.4	19.5	16.7	14.4	13.0	11.6	9.7
70°	26.9	23.6	19.9	17.1	15.8	14.4	12.5	11.1	9.3	8.3	7.0
72.5°	20.9	18.1	14.8	12.5	11.6	10.7	8.8	7.4	6.5	5.6	4.6
75°	14.8	12.5	10.7	8.3	7.9	7.4	6.0	5.1	4.2	3.2	2.8
77.5°	10.2	8.3	6.5	5.6	5.1	4.2	3.7	2.8	2.3	1.9	1.4
80°	5.6	4.2	3.2	2.8	2.3	1.9	1.9	1.4	0.9	0.9	0.5
82.5°	1.9	1.4	0.9	0.5	0.5	0.5	0.5	0.5	0.5	0.0	0.5
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.0	0.0	0.0
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: P#

CATALOG NUMBER: LD4C08D010 EX4C089027 4LBSQLWWH

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	386.5	386.5	386.5	386.5	386.5	386.5	386.5	386.5	386.5	386.5	386.5
2.5°	386.0	380.9	382.3	382.3	381.4	381.4	380.5	379.1	379.5	376.8	370.7
5°	381.9	375.4	374.4	375.4	371.7	370.7	368.9	371.7	363.3	366.6	362.9
7.5°	369.8	363.8	362.4	365.6	361.0	358.2	357.8	361.5	354.1	350.4	346.2
10°	356.4	354.1	349.9	347.6	346.2	346.6	342.9	338.3	336.9	336.0	332.3
12.5°	344.3	339.2	335.5	332.7	331.8	331.8	325.8	324.9	320.7	319.8	314.2
15°	329.9	323.9	321.6	317.9	314.7	316.5	309.6	307.7	306.3	300.3	301.2
17.5°	317.4	311.0	305.4	303.1	300.3	297.5	291.0	292.4	289.2	289.2	280.8
20°	301.2	294.3	290.1	285.5	285.5	281.8	277.1	277.6	273.4	269.3	261.8
22.5°	284.1	276.7	271.6	269.7	265.1	264.1	258.6	257.2	251.6	252.1	245.6
25°	266.0	258.6	251.6	252.1	247.9	246.1	242.8	236.4	234.0	231.3	229.4
27.5°	244.7	239.6	233.6	233.1	225.2	225.7	221.5	219.7	214.1	215.5	211.3
30°	225.2	217.8	212.2	210.9	207.6	206.7	200.2	197.4	198.4	194.6	192.3
32.5°	205.3	194.2	191.9	189.1	187.2	184.9	180.3	182.1	177.9	178.9	175.2
35°	178.9	174.2	168.2	168.2	166.4	164.5	161.3	163.1	159.0	157.1	153.4
37.5°	156.6	152.5	146.4	148.3	145.0	142.3	139.5	139.9	136.2	135.8	132.1
40°	132.5	130.2	126.1	126.1	123.7	123.7	122.3	121.0	118.6	115.9	111.7
42.5°	109.8	108.0	106.1	106.6	103.3	106.1	102.4	104.7	97.3	96.9	94.1
45°	93.1	89.0	89.4	87.6	85.7	86.7	83.4	84.3	80.2	79.3	76.5
47.5°	75.5	74.1	71.4	70.4	70.4	69.0	67.7	67.2	65.3	63.0	59.3
50°	62.1	57.0	56.1	54.7	53.8	53.8	51.9	49.1	49.6	47.3	43.6
52.5°	48.7	44.5	42.6	42.2	40.3	39.4	37.1	35.2	33.8	32.9	30.6
55°	37.5	33.8	31.5	31.5	28.7	28.7	25.5	24.1	22.2	20.4	19.0
57.5°	28.3	26.4	24.1	22.2	21.3	19.0	17.1	14.8	13.4	10.7	8.8
60°	21.3	19.5	17.1	15.8	14.8	12.5	10.2	8.3	5.1	4.2	3.7
62.5°	15.8	13.9	11.6	10.7	9.7	7.9	5.6	2.8	1.4	1.4	1.4
65°	11.6	9.3	7.4	6.5	5.6	4.2	1.9	0.9	0.5	0.5	0.5
67.5°	7.9	6.0	4.2	3.7	2.8	1.4	0.5	0.5	0.5	0.5	0.5
70°	5.1	3.7	1.9	1.4	0.9	0.5	0.5	0.5	0.5	0.5	0.5
72.5°	3.2	1.9	0.9	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75°	1.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	0.9	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.5	0.5
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: P#

CATALOG NUMBER: LD4C08D010 EX4C089027 4LBSQLWWH

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	386.5	386.5	386.5	386.5	386.5	386.5	386.5	386.5
2.5°	377.2	374.0	375.8	371.7	373.5	376.8	374.4	375.4
5°	364.2	362.4	360.1	354.1	358.7	362.4	360.5	360.1
7.5°	350.4	343.9	347.1	345.3	344.3	348.0	343.9	348.5
10°	336.0	331.3	330.9	327.6	327.6	330.4	330.9	328.1
12.5°	314.7	312.4	312.4	311.9	311.4	314.2	314.7	313.3
15°	299.4	298.4	296.1	295.7	292.9	297.0	297.5	297.0
17.5°	280.8	281.3	279.0	279.0	280.8	282.2	278.5	282.2
20°	268.3	266.0	265.1	260.9	263.2	265.5	265.5	266.0
22.5°	250.2	246.5	247.9	245.6	244.2	247.5	247.5	248.9
25°	229.9	229.9	230.8	229.4	230.3	232.2	230.8	234.0
27.5°	210.4	212.2	212.2	210.4	211.3	216.9	219.2	215.5
30°	192.3	192.8	194.2	193.3	196.0	197.9	197.4	200.2
32.5°	171.9	174.2	175.2	173.8	174.7	178.9	176.6	176.1
35°	156.2	152.0	151.5	152.0	153.9	154.8	153.9	157.1
37.5°	133.5	132.1	130.2	130.7	132.1	133.9	134.9	137.2
40°	111.7	109.8	109.8	109.4	108.0	113.1	113.1	113.1
42.5°	92.7	92.2	89.9	89.9	91.8	93.1	92.2	95.5
45°	76.0	74.1	72.8	72.8	74.1	74.1	75.5	75.1
47.5°	59.8	57.9	58.4	57.0	58.4	60.2	57.9	58.4
50°	45.0	45.0	44.0	45.0	44.5	45.0	44.0	43.1
52.5°	30.6	34.8	35.2	33.4	29.2	25.5	23.2	25.0
55°	17.6	15.8	15.8	15.3	14.4	13.9	12.5	13.9
57.5°	8.8	7.9	7.9	7.9	7.4	7.0	6.0	6.0
60°	3.7	3.2	3.2	2.8	2.3	1.9	1.4	1.9
62.5°	1.4	0.9	0.9	0.9	0.9	0.9	0.9	0.9
65°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
67.5°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
70°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
72.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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— 0°-180° - - 45°-225° - - - - 90°-270°













(END OF REPORT)