

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: **LD4C05D010 EX4C059027 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: LD4C05D010 EX4C059027 4LBSQLWWH
Description: 4 INCH 500 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 2700K, 90CRI LEDS AND 4LBSQLWW TRIM WITH H FINISH
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

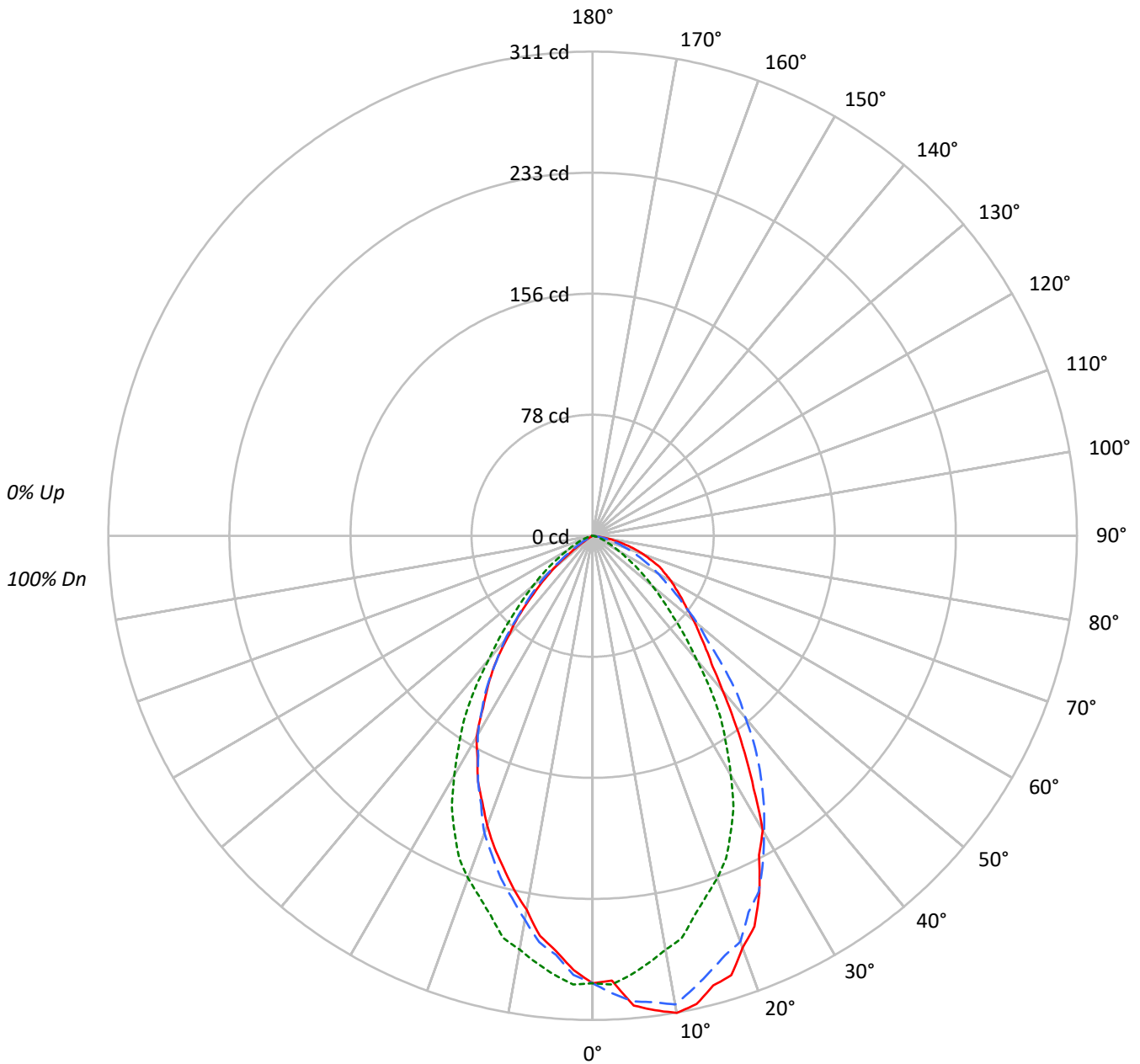
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 412.0 lumens
Efficiency: N/A
Efficacy: 57.2 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): 7.2
Input Voltage (V):
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									
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°	27731	27731	27731
5°	29338	27411	25938
10°	30491	26444	23906
15°	29878	25233	22066
20°	28915	24027	20310
25°	26967	22347	18525
30°	24344	19776	16590
35°	20048	16927	13758
40°	16362	13062	10593
45°	14055	9920	7614
50°	12729	7551	4819
55°	11708	5450	1733
60°	11231	3724	270
65°	10868	2511	91
70°	9733	1749	113
75°	7978	895	0
80°	5001	389	0
85°	0	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	26.9	6.5
10°-20°	72.6	17.6
20°-30°	96.9	23.5
30°-40°	92.0	22.3
40°-50°	63.6	15.4
50°-60°	35.1	8.5
60°-70°	17.5	4.2
70°-80°	6.9	1.7
80°-90°	0.7	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°	196.4	47.7
0°-40°	288.3	70.0
0°-60°	387.0	93.9
0°-90°	412.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	412.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	287	287	287	287	287	
5°	303	300	283	270	268	29
15°	299	290	253	228	221	85
25°	253	252	210	174	174	115
35°	170	188	144	118	117	107
45°	103	118	73	60	56	80
55°	70	66	32	16	10	63
65°	48	34	11	0	0	46
75°	21	13	2	0	0	23
85°	0	0	0	0	0	2
90°	0	0	0	0	0	



TEST NUMBER: P#

CATALOG NUMBER: LD4C05D010 EX4C059027 4LBSQLWWH

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	287.4	287.4	287.4	287.4	287.4	287.4	287.4	287.4	287.4	287.4	287.4
2.5°	286.0	294.0	294.7	294.0	295.0	294.7	296.4	294.7	296.7	293.6	294.3
5°	302.9	299.8	306.4	302.9	302.9	302.6	301.6	301.2	302.6	298.1	300.2
7.5°	307.4	311.9	317.8	310.5	310.9	310.9	308.8	308.1	308.1	299.8	302.2
10°	311.2	308.4	311.5	308.8	311.2	310.9	312.2	307.8	310.9	306.0	305.7
12.5°	308.1	307.1	311.2	306.7	305.4	305.7	304.0	302.9	304.0	298.5	298.1
15°	299.1	300.2	306.4	301.6	300.9	300.2	298.1	294.7	297.4	289.8	290.2
17.5°	296.0	294.3	295.4	291.2	292.3	291.6	291.2	288.1	287.4	282.6	282.6
20°	281.6	285.4	285.4	282.6	282.6	282.3	277.8	280.5	277.4	276.1	277.4
22.5°	271.6	271.9	271.9	269.5	269.9	268.5	266.1	264.3	266.1	264.3	261.6
25°	253.3	254.0	258.1	253.7	253.0	254.3	252.3	251.2	250.9	246.8	252.3
27.5°	231.3	238.1	237.8	236.1	238.1	235.4	234.4	234.7	235.7	235.4	236.8
30°	218.5	219.5	220.6	219.2	219.5	218.5	218.5	218.8	221.6	220.6	220.2
32.5°	192.6	196.1	198.9	198.9	199.2	200.2	199.9	207.1	208.9	205.4	204.7
35°	170.2	172.7	175.1	175.4	179.9	180.2	180.6	182.7	187.5	188.5	188.2
37.5°	148.9	151.3	152.0	155.1	157.5	159.9	162.7	165.4	169.6	173.0	171.3
40°	129.9	131.0	132.7	134.1	138.9	138.9	140.3	145.8	150.3	153.0	152.7
42.5°	114.1	114.4	115.8	118.2	122.7	121.7	122.7	126.5	133.0	133.4	137.2
45°	103.0	102.7	103.7	104.1	106.8	108.2	108.9	111.7	117.2	117.9	118.2
47.5°	93.1	92.7	94.4	95.1	96.1	97.5	97.5	97.9	99.9	101.7	100.3
50°	84.8	84.8	84.8	85.5	87.2	86.8	87.2	88.6	89.6	88.9	88.6
52.5°	75.8	77.2	78.2	78.6	78.9	78.9	79.3	78.6	78.2	77.2	75.1
55°	69.6	71.0	71.0	71.0	71.0	72.4	70.7	71.0	71.0	68.2	65.5
57.5°	63.4	64.8	65.8	64.4	65.8	64.4	63.8	63.4	62.7	60.0	55.8
60°	58.2	58.9	58.6	58.2	58.9	57.9	57.2	55.8	55.1	51.3	48.6
62.5°	52.4	52.7	53.1	52.4	51.7	51.3	50.0	47.9	46.5	43.4	41.0
65°	47.6	46.5	46.2	45.8	45.2	44.1	43.1	40.7	39.6	36.9	34.5
67.5°	40.3	40.0	40.7	39.6	37.9	37.9	36.9	34.8	32.4	30.7	28.3
70°	34.5	34.1	33.4	32.4	32.1	30.7	30.7	28.3	27.6	24.5	22.4
72.5°	28.3	28.3	27.2	26.2	25.2	24.5	24.1	22.4	21.4	19.6	17.9
75°	21.4	21.4	21.0	20.0	19.3	18.6	18.3	16.9	15.9	14.1	13.1
77.5°	15.2	15.2	13.8	13.1	13.4	12.7	12.1	11.7	11.4	10.3	9.0
80°	9.0	8.6	7.6	7.9	7.6	7.6	7.2	6.9	6.2	5.5	4.8
82.5°	2.4	2.8	2.8	2.8	3.1	2.4	2.4	2.4	2.8	2.8	1.7
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.4	0.4
87.5°	0.4	0.7	1.4	1.4	1.4	1.4	1.4	1.0	1.0	1.0	0.7
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°	287.4	287.4	287.4	287.4	287.4	287.4	287.4	287.4	287.4	287.4	287.4
2.5°	290.9	290.5	290.9	288.5	294.0	289.8	289.1	288.5	290.9	288.5	285.0
5°	297.1	293.6	292.6	291.6	294.7	289.8	288.8	289.1	287.4	283.0	283.3
7.5°	299.1	296.0	292.9	286.4	289.1	288.1	285.4	283.3	280.5	276.7	276.1
10°	299.8	296.4	291.9	289.8	285.7	284.3	283.3	279.8	276.4	269.9	268.1
12.5°	297.8	293.6	288.1	286.4	283.3	278.8	276.4	272.9	269.9	264.7	260.9
15°	288.8	285.4	283.6	277.8	276.4	273.6	268.8	264.0	259.5	252.6	250.5
17.5°	278.5	277.1	275.4	270.9	270.5	267.8	263.3	259.2	253.3	242.6	239.2
20°	267.8	267.8	262.3	260.6	264.0	258.5	255.0	251.2	239.2	234.0	227.8
22.5°	259.9	256.1	253.0	250.2	250.5	247.1	242.3	234.7	230.2	224.0	216.8
25°	244.3	245.7	238.8	237.8	238.8	230.9	228.5	222.3	215.7	209.9	204.4
27.5°	234.7	230.9	226.4	222.6	222.6	219.5	212.6	211.3	201.3	195.8	188.9
30°	220.2	217.5	213.7	208.2	207.5	205.1	199.5	196.1	185.8	177.5	173.7
32.5°	202.0	200.9	197.8	191.6	189.6	186.8	179.9	174.0	169.2	159.9	155.4
35°	188.9	185.1	178.5	173.4	171.6	166.8	161.3	157.2	152.0	143.7	137.9
37.5°	169.2	165.4	159.2	153.0	153.0	148.2	140.6	136.5	129.2	124.4	119.6
40°	152.0	147.2	141.0	133.7	132.7	125.8	122.7	115.8	111.3	103.7	103.0
42.5°	132.7	128.2	122.7	117.2	113.0	109.6	101.7	96.5	91.7	87.9	86.8
45°	115.1	109.2	104.4	97.5	93.4	89.3	84.1	80.6	76.9	72.7	70.3
47.5°	99.9	95.1	88.2	82.0	77.9	75.8	70.0	66.2	63.1	60.3	58.6
50°	84.4	78.6	74.8	67.9	67.2	62.4	57.6	54.5	52.7	50.3	47.9
52.5°	72.7	67.2	62.0	56.9	54.1	52.4	47.9	44.8	42.4	40.7	39.3
55°	61.3	56.5	52.4	47.2	45.5	43.1	37.9	37.2	34.8	32.4	30.7
57.5°	52.7	48.2	43.4	40.0	36.9	35.2	31.0	28.3	26.9	24.8	23.1
60°	44.8	40.0	36.2	32.1	30.7	28.3	25.2	22.8	21.0	19.3	17.6
62.5°	37.6	33.4	29.3	25.8	23.8	22.4	20.0	17.9	16.2	14.8	13.4
65°	31.0	27.2	23.8	20.3	19.3	17.6	15.9	14.1	12.7	11.0	9.7
67.5°	25.5	22.1	18.6	16.2	15.2	14.5	12.4	10.7	9.7	8.6	7.2
70°	20.0	17.6	14.8	12.7	11.7	10.7	9.3	8.3	6.9	6.2	5.2
72.5°	15.5	13.4	11.0	9.3	8.6	7.9	6.5	5.5	4.8	4.1	3.4
75°	11.0	9.3	7.9	6.2	5.9	5.5	4.5	3.8	3.1	2.4	2.1
77.5°	7.6	6.2	4.8	4.1	3.8	3.1	2.8	2.1	1.7	1.4	1.0
80°	4.1	3.1	2.4	2.1	1.7	1.4	1.4	1.0	0.7	0.7	0.4
82.5°	1.4	1.0	0.7	0.4	0.4	0.4	0.4	0.4	0.4	0.0	0.4
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°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	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: LD4C05D010 EX4C059027 4LBSQLWWH

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	287.4	287.4	287.4	287.4	287.4	287.4	287.4	287.4	287.4	287.4	287.4
2.5°	287.1	283.3	284.3	284.3	283.6	283.6	283.0	281.9	282.3	280.2	275.7
5°	284.0	279.2	278.5	279.2	276.4	275.7	274.3	276.4	270.2	272.6	269.9
7.5°	275.0	270.5	269.5	271.9	268.5	266.4	266.1	268.8	263.3	260.6	257.4
10°	265.0	263.3	260.2	258.5	257.4	257.8	255.0	251.6	250.5	249.9	247.1
12.5°	256.1	252.3	249.5	247.5	246.8	246.8	242.3	241.6	238.5	237.8	233.7
15°	245.4	240.9	239.2	236.4	234.0	235.4	230.2	228.8	227.8	223.3	224.0
17.5°	236.1	231.3	227.1	225.4	223.3	221.3	216.4	217.5	215.0	215.0	208.9
20°	224.0	218.8	215.7	212.3	212.3	209.5	206.1	206.4	203.3	200.2	194.7
22.5°	211.3	205.7	202.0	200.6	197.1	196.4	192.3	191.3	187.1	187.5	182.7
25°	197.8	192.3	187.1	187.5	184.4	183.0	180.6	175.8	174.0	172.0	170.6
27.5°	182.0	178.2	173.7	173.4	167.5	167.8	164.7	163.4	159.2	160.3	157.2
30°	167.5	162.0	157.8	156.8	154.4	153.7	148.9	146.8	147.5	144.7	143.0
32.5°	152.7	144.4	142.7	140.6	139.2	137.5	134.1	135.4	132.3	133.0	130.3
35°	133.0	129.6	125.1	125.1	123.7	122.3	119.9	121.3	118.2	116.8	114.1
37.5°	116.5	113.4	108.9	110.3	107.9	105.8	103.7	104.1	101.3	101.0	98.2
40°	98.6	96.8	93.7	93.7	92.0	92.0	91.0	90.0	88.2	86.2	83.1
42.5°	81.7	80.3	78.9	79.3	76.9	78.9	76.2	77.9	72.4	72.0	70.0
45°	69.3	66.2	66.5	65.1	63.8	64.4	62.0	62.7	59.6	58.9	56.9
47.5°	56.2	55.1	53.1	52.4	52.4	51.3	50.3	50.0	48.6	46.9	44.1
50°	46.2	42.4	41.7	40.7	40.0	40.0	38.6	36.5	36.9	35.2	32.4
52.5°	36.2	33.1	31.7	31.4	30.0	29.3	27.6	26.2	25.2	24.5	22.8
55°	27.9	25.2	23.4	23.4	21.4	21.4	19.0	17.9	16.5	15.2	14.1
57.5°	21.0	19.6	17.9	16.5	15.9	14.1	12.7	11.0	10.0	7.9	6.5
60°	15.9	14.5	12.7	11.7	11.0	9.3	7.6	6.2	3.8	3.1	2.8
62.5°	11.7	10.3	8.6	7.9	7.2	5.9	4.1	2.1	1.0	1.0	1.0
65°	8.6	6.9	5.5	4.8	4.1	3.1	1.4	0.7	0.4	0.4	0.4
67.5°	5.9	4.5	3.1	2.8	2.1	1.0	0.4	0.4	0.4	0.4	0.4
70°	3.8	2.8	1.4	1.0	0.7	0.4	0.4	0.4	0.4	0.4	0.4
72.5°	2.4	1.4	0.7	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75°	1.4	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	0.7	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	0.4	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	0.4	0.4	0.4
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: LD4C05D010 EX4C059027 4LBSQLWWH

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	287.4	287.4	287.4	287.4	287.4	287.4	287.4	287.4
2.5°	280.5	278.1	279.5	276.4	277.8	280.2	278.5	279.2
5°	270.9	269.5	267.8	263.3	266.7	269.5	268.1	267.8
7.5°	260.6	255.7	258.1	256.8	256.1	258.8	255.7	259.2
10°	249.9	246.4	246.1	243.7	243.7	245.7	246.1	244.0
12.5°	234.0	232.3	232.3	231.9	231.6	233.7	234.0	233.0
15°	222.6	221.9	220.2	219.9	217.8	220.9	221.3	220.9
17.5°	208.9	209.2	207.5	207.5	208.9	209.9	207.1	209.9
20°	199.5	197.8	197.1	194.0	195.8	197.5	197.5	197.8
22.5°	186.1	183.3	184.4	182.7	181.6	184.0	184.0	185.1
25°	170.9	170.9	171.6	170.6	171.3	172.7	171.6	174.0
27.5°	156.5	157.8	157.8	156.5	157.2	161.3	163.0	160.3
30°	143.0	143.4	144.4	143.7	145.8	147.2	146.8	148.9
32.5°	127.9	129.6	130.3	129.2	129.9	133.0	131.3	131.0
35°	116.1	113.0	112.7	113.0	114.4	115.1	114.4	116.8
37.5°	99.3	98.2	96.8	97.2	98.2	99.6	100.3	102.0
40°	83.1	81.7	81.7	81.3	80.3	84.1	84.1	84.1
42.5°	68.9	68.6	66.9	66.9	68.2	69.3	68.6	71.0
45°	56.5	55.1	54.1	54.1	55.1	55.1	56.2	55.8
47.5°	44.5	43.1	43.4	42.4	43.4	44.8	43.1	43.4
50°	33.4	33.4	32.7	33.4	33.1	33.4	32.7	32.1
52.5°	22.8	25.8	26.2	24.8	21.7	19.0	17.2	18.6
55°	13.1	11.7	11.7	11.4	10.7	10.3	9.3	10.3
57.5°	6.5	5.9	5.9	5.9	5.5	5.2	4.5	4.5
60°	2.8	2.4	2.4	2.1	1.7	1.4	1.0	1.4
62.5°	1.0	0.7	0.7	0.7	0.7	0.7	0.7	0.7
65°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
67.5°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
70°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
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)