

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: **LD4C10D010 EX4C109040 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: LD4C10D010 EX4C109040 4LBSQLWWH
Description: 4 INCH 1000 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 4000K, 90CRI LEDS
AND 4LBSQLWW TRIM WITH H FINISH
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

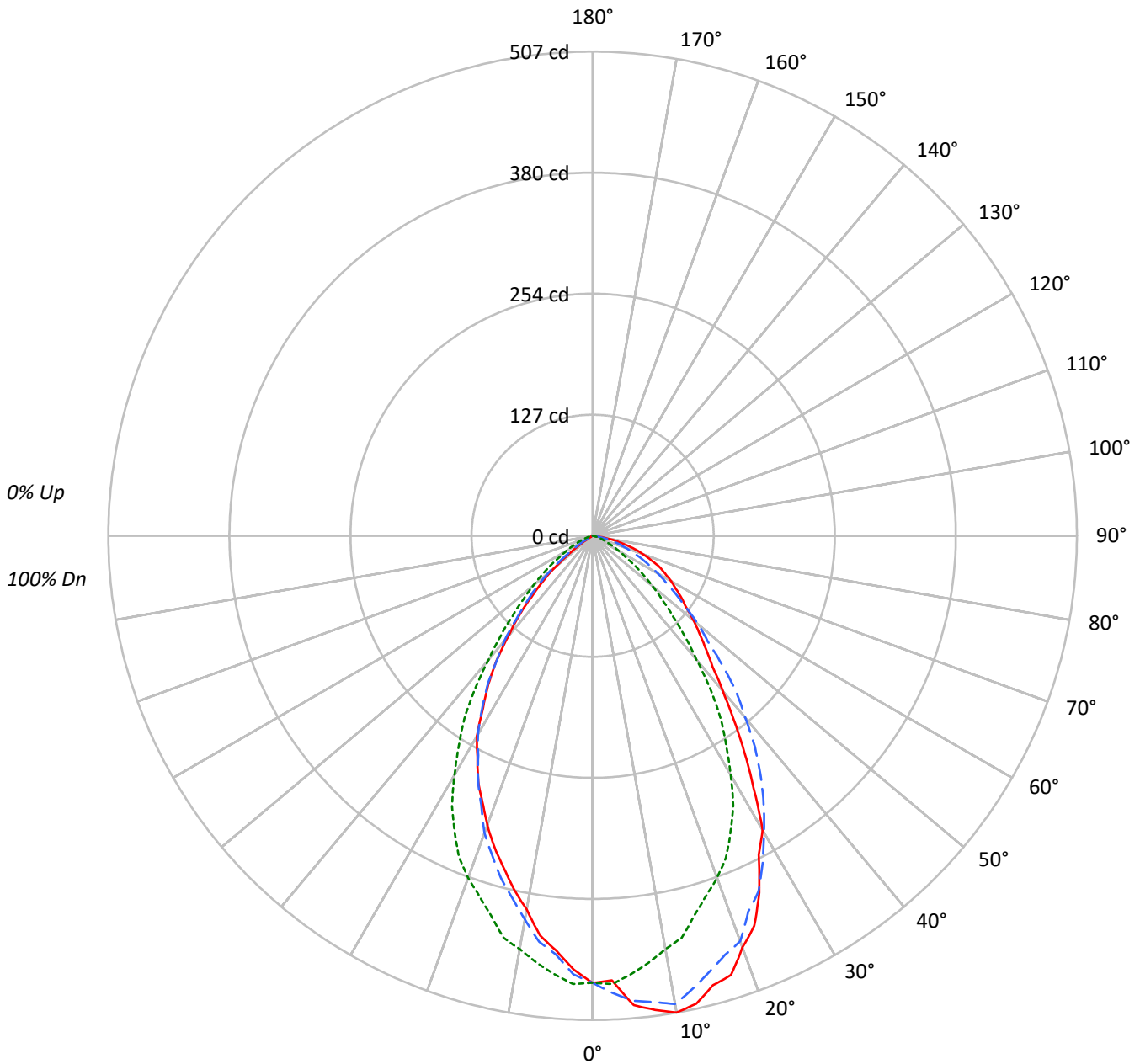
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 671.0 lumens
Efficiency: N/A
Efficacy: 68.5 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): 9.8
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°	45166	45166	45166
5°	47789	44632	42240
10°	49665	43061	38936
15°	48668	41096	35941
20°	47090	39132	33084
25°	43927	36389	30182
30°	39653	32210	27018
35°	32663	27575	22416
40°	26653	21287	17256
45°	22897	16156	12404
50°	20730	12309	7836
55°	19077	8882	2826
60°	18314	6060	425
65°	17671	4110	137
70°	15827	2849	169
75°	12974	1454	0
80°	8113	611	0
85°	0	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	43.9	6.5
10°-20°	118.2	17.6
20°-30°	157.8	23.5
30°-40°	149.8	22.3
40°-50°	103.5	15.4
50°-60°	57.2	8.5
60°-70°	28.4	4.2
70°-80°	11.2	1.7
80°-90°	1.1	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°	319.8	47.7
0°-40°	469.6	70.0
0°-60°	630.3	93.9
0°-90°	671.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	671.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	468	468	468	468	468	
5°	493	489	461	440	436	47
15°	487	473	411	371	360	138
25°	413	411	342	284	284	188
35°	277	306	234	192	190	174
45°	168	192	118	97	91	131
55°	113	107	53	27	17	102
65°	77	56	18	1	1	75
75°	35	21	4	0	0	37
85°	0	1	0	0	0	3
90°	0	0	0	0	0	



TEST NUMBER: P#

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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	468.1	468.1	468.1	468.1	468.1	468.1	468.1	468.1	468.1	468.1	468.1
2.5°	465.9	478.8	479.9	478.8	480.5	479.9	482.7	479.9	483.3	478.2	479.3
5°	493.4	488.3	499.0	493.4	493.4	492.8	491.1	490.6	492.8	485.5	488.9
7.5°	500.7	508.0	517.5	505.7	506.3	506.3	502.9	501.8	501.8	488.3	492.3
10°	506.9	502.3	507.4	502.9	506.9	506.3	508.5	501.2	506.3	498.4	497.9
12.5°	501.8	500.1	506.9	499.6	497.3	497.9	495.1	493.4	495.1	486.1	485.5
15°	487.2	488.9	499.0	491.1	490.0	488.9	485.5	479.9	484.4	472.0	472.6
17.5°	482.2	479.3	481.0	474.3	476.0	474.9	474.3	469.2	468.1	460.3	460.3
20°	458.6	464.7	464.7	460.3	460.3	459.7	452.4	456.9	451.8	449.6	451.8
22.5°	442.3	442.9	442.9	438.9	439.5	437.3	433.3	430.5	433.3	430.5	426.0
25°	412.6	413.7	420.4	413.1	412.0	414.2	410.9	409.2	408.6	401.9	410.9
27.5°	376.6	387.8	387.3	384.5	387.8	383.4	381.7	382.2	383.9	383.4	385.6
30°	355.9	357.5	359.2	357.0	357.5	355.9	355.9	356.4	360.9	359.2	358.7
32.5°	313.8	319.4	323.9	323.9	324.4	326.1	325.5	337.3	340.1	334.5	333.4
35°	277.3	281.2	285.1	285.7	293.0	293.5	294.1	297.5	305.3	307.0	306.5
37.5°	242.5	246.4	247.5	252.6	256.5	260.4	264.9	269.4	276.2	281.8	279.0
40°	211.6	213.3	216.1	218.3	226.2	226.2	228.4	237.4	244.7	249.2	248.6
42.5°	185.8	186.3	188.6	192.5	199.8	198.1	199.8	206.0	216.6	217.2	223.4
45°	167.8	167.3	169.0	169.5	174.0	176.3	177.4	181.9	190.8	192.0	192.5
47.5°	151.6	151.0	153.8	154.9	156.6	158.8	158.8	159.4	162.8	165.6	163.3
50°	138.1	138.1	138.1	139.2	142.0	141.4	142.0	144.3	145.9	144.8	144.3
52.5°	123.5	125.7	127.4	128.0	128.5	128.5	129.1	128.0	127.4	125.7	122.4
55°	113.4	115.6	115.6	115.6	115.6	117.9	115.1	115.6	115.6	111.1	106.7
57.5°	103.3	105.5	107.2	105.0	107.2	105.0	103.8	103.3	102.1	97.7	90.9
60°	94.9	96.0	95.4	94.9	96.0	94.3	93.2	90.9	89.8	83.6	79.1
62.5°	85.3	85.9	86.4	85.3	84.2	83.6	81.4	78.0	75.8	70.7	66.8
65°	77.4	75.8	75.2	74.7	73.5	71.8	70.2	66.2	64.5	60.1	56.1
67.5°	65.7	65.1	66.2	64.5	61.7	61.7	60.1	56.7	52.8	50.0	46.0
70°	56.1	55.6	54.4	52.8	52.2	50.0	50.0	46.0	44.9	39.8	36.5
72.5°	46.0	46.0	44.3	42.7	41.0	39.8	39.3	36.5	34.8	32.0	29.2
75°	34.8	34.8	34.2	32.5	31.4	30.3	29.8	27.5	25.8	23.0	21.3
77.5°	24.7	24.7	22.5	21.3	21.9	20.8	19.6	19.1	18.5	16.8	14.6
80°	14.6	14.0	12.4	12.9	12.4	12.4	11.8	11.2	10.1	9.0	7.9
82.5°	3.9	4.5	4.5	4.5	5.1	3.9	3.9	3.9	4.5	4.5	2.8
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.6	0.6
87.5°	0.6	1.1	2.2	2.2	2.2	2.2	2.2	1.7	1.7	1.7	1.1
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):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	468.1	468.1	468.1	468.1	468.1	468.1	468.1	468.1	468.1	468.1	468.1
2.5°	473.7	473.2	473.7	469.8	478.8	472.0	470.9	469.8	473.7	469.8	464.2
5°	483.8	478.2	476.5	474.9	479.9	472.0	470.4	470.9	468.1	460.8	461.4
7.5°	487.2	482.2	477.1	466.4	470.9	469.2	464.7	461.4	456.9	450.7	449.6
10°	488.3	482.7	475.4	472.0	465.3	463.1	461.4	455.8	450.2	439.5	436.7
12.5°	484.9	478.2	469.2	466.4	461.4	454.1	450.2	444.5	439.5	431.1	424.9
15°	470.4	464.7	461.9	452.4	450.2	445.7	437.8	430.0	422.7	411.4	408.0
17.5°	453.5	451.3	448.5	441.2	440.6	436.1	428.8	422.1	412.6	395.1	389.5
20°	436.1	436.1	427.1	424.3	430.0	421.0	415.4	409.2	389.5	381.1	371.0
22.5°	423.2	417.0	412.0	407.5	408.0	402.4	394.6	382.2	374.9	364.8	353.1
25°	398.0	400.2	389.0	387.3	389.0	376.1	372.1	362.0	351.4	341.8	332.8
27.5°	382.2	376.1	368.8	362.6	362.6	357.5	346.3	344.1	327.8	318.8	307.6
30°	358.7	354.2	348.0	339.0	337.9	334.0	325.0	319.4	302.5	289.1	282.9
32.5°	328.9	327.2	322.2	312.1	308.7	304.2	293.0	283.5	275.6	260.4	253.2
35°	307.6	301.4	290.8	282.3	279.5	271.7	262.7	255.9	247.5	234.1	224.5
37.5°	275.6	269.4	259.3	249.2	249.2	241.4	229.0	222.3	210.5	202.6	194.8
40°	247.5	239.7	229.6	217.8	216.1	204.9	199.8	188.6	181.3	169.0	167.8
42.5°	216.1	208.8	199.8	190.8	184.1	178.5	165.6	157.2	149.3	143.1	141.4
45°	187.5	177.9	170.1	158.8	152.1	145.4	137.0	131.3	125.2	118.4	114.5
47.5°	162.8	154.9	143.7	133.6	126.9	123.5	113.9	107.8	102.7	98.2	95.4
50°	137.5	128.0	121.8	110.6	109.4	101.6	93.7	88.7	85.9	82.0	78.0
52.5°	118.4	109.4	101.0	92.6	88.1	85.3	78.0	73.0	69.0	66.2	64.0
55°	99.9	92.1	85.3	76.9	74.1	70.2	61.7	60.6	56.7	52.8	50.0
57.5°	85.9	78.6	70.7	65.1	60.1	57.3	50.5	46.0	43.8	40.4	37.6
60°	73.0	65.1	58.9	52.2	50.0	46.0	41.0	37.1	34.2	31.4	28.6
62.5°	61.2	54.4	47.7	42.1	38.7	36.5	32.5	29.2	26.4	24.1	21.9
65°	50.5	44.3	38.7	33.1	31.4	28.6	25.8	23.0	20.8	18.0	15.7
67.5°	41.5	35.9	30.3	26.4	24.7	23.6	20.2	17.4	15.7	14.0	11.8
70°	32.5	28.6	24.1	20.8	19.1	17.4	15.2	13.5	11.2	10.1	8.4
72.5°	25.3	21.9	18.0	15.2	14.0	12.9	10.7	9.0	7.9	6.7	5.6
75°	18.0	15.2	12.9	10.1	9.5	9.0	7.3	6.2	5.1	3.9	3.4
77.5°	12.4	10.1	7.9	6.7	6.2	5.1	4.5	3.4	2.8	2.2	1.7
80°	6.7	5.1	3.9	3.4	2.8	2.2	2.2	1.7	1.1	1.1	0.6
82.5°	2.2	1.7	1.1	0.6	0.6	0.6	0.6	0.6	0.6	0.0	0.6
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°	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	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#

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CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	468.1	468.1	468.1	468.1	468.1	468.1	468.1	468.1	468.1	468.1	468.1
2.5°	467.6	461.4	463.1	463.1	461.9	461.9	460.8	459.1	459.7	456.3	449.0
5°	462.5	454.6	453.5	454.6	450.2	449.0	446.8	450.2	440.0	444.0	439.5
7.5°	447.9	440.6	438.9	442.9	437.3	433.9	433.3	437.8	428.8	424.3	419.3
10°	431.6	428.8	423.8	421.0	419.3	419.8	415.4	409.7	408.0	406.9	402.4
12.5°	417.0	410.9	406.4	403.0	401.9	401.9	394.6	393.5	388.4	387.3	380.6
15°	399.6	392.3	389.5	385.0	381.1	383.4	374.9	372.7	371.0	363.7	364.8
17.5°	384.5	376.6	369.9	367.1	363.7	360.4	352.5	354.2	350.2	350.2	340.1
20°	364.8	356.4	351.4	345.8	345.8	341.3	335.7	336.2	331.2	326.1	317.1
22.5°	344.1	335.1	328.9	326.7	321.1	319.9	313.2	311.5	304.8	305.3	297.5
25°	322.2	313.2	304.8	305.3	300.3	298.1	294.1	286.3	283.5	280.1	277.8
27.5°	296.4	290.2	282.9	282.3	272.8	273.3	268.3	266.1	259.3	261.0	255.9
30°	272.8	263.8	257.1	255.4	251.5	250.3	242.5	239.1	240.2	235.7	232.9
32.5°	248.6	235.2	232.4	229.0	226.8	223.9	218.3	220.6	215.5	216.6	212.2
35°	216.6	211.0	203.7	203.7	201.5	199.3	195.3	197.6	192.5	190.3	185.8
37.5°	189.7	184.7	177.4	179.6	175.7	172.3	169.0	169.5	165.0	164.5	160.0
40°	160.5	157.7	152.7	152.7	149.9	149.9	148.2	146.5	143.7	140.3	135.3
42.5°	133.0	130.8	128.5	129.1	125.2	128.5	124.0	126.9	117.9	117.3	113.9
45°	112.8	107.8	108.3	106.1	103.8	105.0	101.0	102.1	97.1	96.0	92.6
47.5°	91.5	89.8	86.4	85.3	85.3	83.6	82.0	81.4	79.1	76.3	71.8
50°	75.2	69.0	67.9	66.2	65.1	65.1	62.9	59.5	60.1	57.3	52.8
52.5°	58.9	53.9	51.6	51.1	48.8	47.7	44.9	42.7	41.0	39.8	37.1
55°	45.5	41.0	38.2	38.2	34.8	34.8	30.9	29.2	26.9	24.7	23.0
57.5°	34.2	32.0	29.2	26.9	25.8	23.0	20.8	18.0	16.3	12.9	10.7
60°	25.8	23.6	20.8	19.1	18.0	15.2	12.4	10.1	6.2	5.1	4.5
62.5°	19.1	16.8	14.0	12.9	11.8	9.5	6.7	3.4	1.7	1.7	1.7
65°	14.0	11.2	9.0	7.9	6.7	5.1	2.2	1.1	0.6	0.6	0.6
67.5°	9.5	7.3	5.1	4.5	3.4	1.7	0.6	0.6	0.6	0.6	0.6
70°	6.2	4.5	2.2	1.7	1.1	0.6	0.6	0.6	0.6	0.6	0.6
72.5°	3.9	2.2	1.1	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75°	2.2	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	1.1	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	0.6	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	0.6	0.6	0.6
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: LD4C10D010 EX4C109040 4LBSQLWWH

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	468.1	468.1	468.1	468.1	468.1	468.1	468.1	468.1
2.5°	456.9	453.0	455.2	450.2	452.4	456.3	453.5	454.6
5°	441.2	438.9	436.1	428.8	434.4	438.9	436.7	436.1
7.5°	424.3	416.5	420.4	418.2	417.0	421.5	416.5	422.1
10°	406.9	401.3	400.8	396.8	396.8	400.2	400.8	397.4
12.5°	381.1	378.3	378.3	377.7	377.2	380.6	381.1	379.4
15°	362.6	361.5	358.7	358.1	354.7	359.8	360.4	359.8
17.5°	340.1	340.7	337.9	337.9	340.1	341.8	337.3	341.8
20°	325.0	322.2	321.1	316.0	318.8	321.6	321.6	322.2
22.5°	303.1	298.6	300.3	297.5	295.8	299.7	299.7	301.4
25°	278.4	278.4	279.5	277.8	279.0	281.2	279.5	283.5
27.5°	254.8	257.1	257.1	254.8	255.9	262.7	265.5	261.0
30°	232.9	233.5	235.2	234.1	237.4	239.7	239.1	242.5
32.5°	208.2	211.0	212.2	210.5	211.6	216.6	213.9	213.3
35°	189.2	184.1	183.6	184.1	186.3	187.5	186.3	190.3
37.5°	161.6	160.0	157.7	158.3	160.0	162.2	163.3	166.1
40°	135.3	133.0	133.0	132.5	130.8	137.0	137.0	137.0
42.5°	112.3	111.7	108.9	108.9	111.1	112.8	111.7	115.6
45°	92.1	89.8	88.1	88.1	89.8	89.8	91.5	90.9
47.5°	72.4	70.2	70.7	69.0	70.7	73.0	70.2	70.7
50°	54.4	54.4	53.3	54.4	53.9	54.4	53.3	52.2
52.5°	37.1	42.1	42.7	40.4	35.4	30.9	28.1	30.3
55°	21.3	19.1	19.1	18.5	17.4	16.8	15.2	16.8
57.5°	10.7	9.5	9.5	9.5	9.0	8.4	7.3	7.3
60°	4.5	3.9	3.9	3.4	2.8	2.2	1.7	2.2
62.5°	1.7	1.1	1.1	1.1	1.1	1.1	1.1	1.1
65°	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
67.5°	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
70°	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
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)