

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 EX4C089040 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 EX4C089040 4LBSQLWWH
Description: 4 INCH 800 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 4000K, 90CRI LEDS AND 4LBSQLWW TRIM WITH H FINISH
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

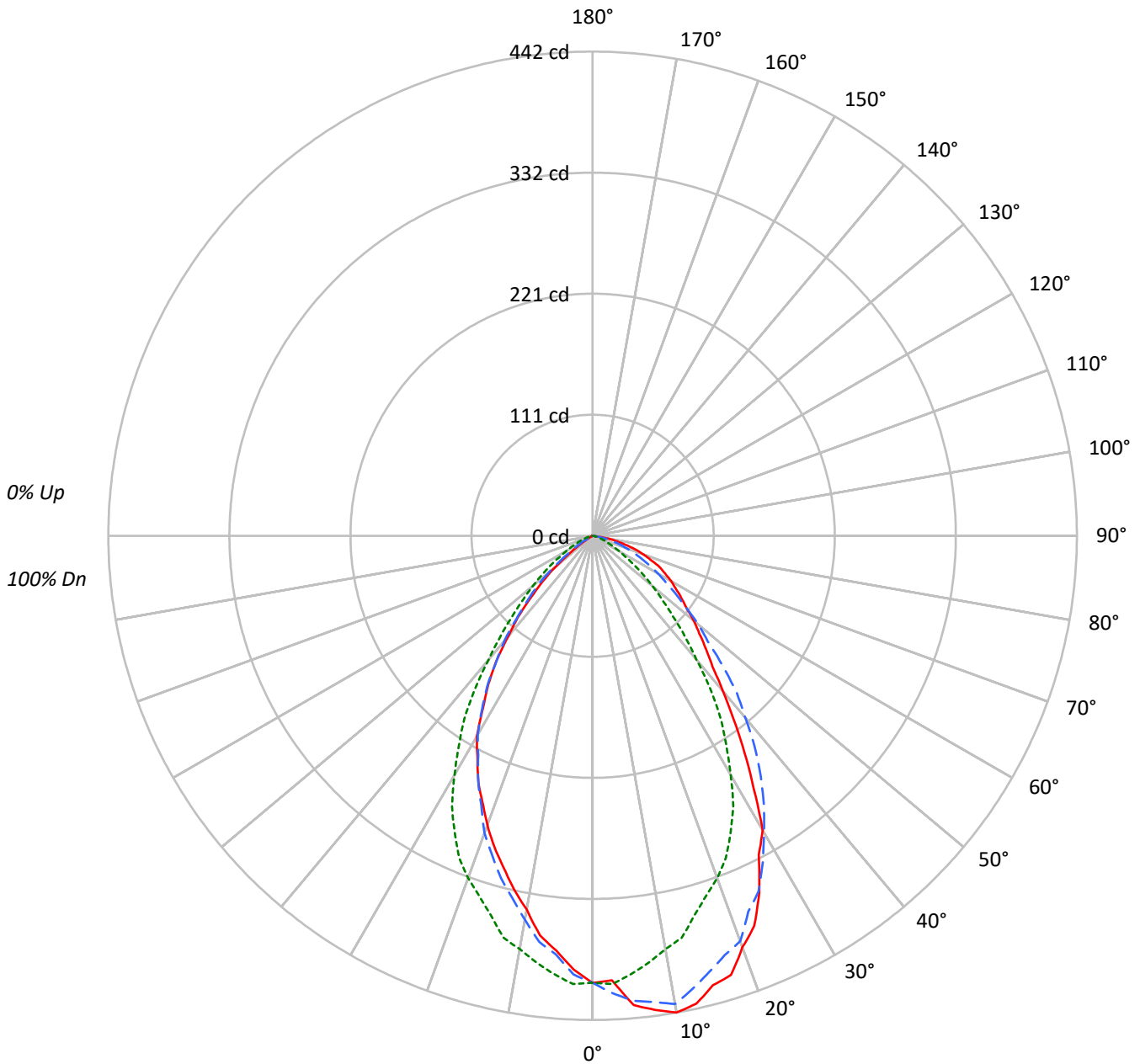
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 585.0 lumens
Efficiency: N/A
Efficacy: 59.1 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°	39377	39377	39377
5°	41658	38917	36825
10°	43296	37545	33949
15°	42434	35831	31336
20°	41052	34121	28843
25°	38295	31726	26307
30°	34572	28077	23553
35°	28470	24041	19542
40°	23239	18554	15039
45°	19963	14096	10821
50°	18073	10733	6830
55°	16620	7738	2473
60°	15959	5288	386
65°	15411	3585	114
70°	13795	2483	141
75°	11296	1268	0
80°	7057	556	0
85°	0	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	38.2	6.5
10°-20°	103.0	17.6
20°-30°	137.6	23.5
30°-40°	130.6	22.3
40°-50°	90.3	15.4
50°-60°	49.9	8.5
60°-70°	24.8	4.2
70°-80°	9.8	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°	278.8	47.7
0°-40°	409.4	70.0
0°-60°	549.6	93.9
0°-90°	585.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	585.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	408	408	408	408	408	
5°	430	426	402	384	380	41
15°	425	412	359	324	314	120
25°	360	358	298	247	247	164
35°	242	267	204	168	166	151
45°	146	168	103	85	79	114
55°	99	93	46	24	15	89
65°	68	49	16	0	0	66
75°	30	19	3	0	0	32
85°	0	0	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°	408.1	408.1	408.1	408.1	408.1	408.1	408.1	408.1	408.1	408.1	408.1
2.5°	406.2	417.4	418.4	417.4	418.9	418.4	420.8	418.4	421.3	416.9	417.9
5°	430.1	425.7	435.0	430.1	430.1	429.7	428.2	427.7	429.7	423.3	426.2
7.5°	436.5	442.9	451.2	440.9	441.4	441.4	438.5	437.5	437.5	425.7	429.2
10°	441.9	438.0	442.4	438.5	441.9	441.4	443.3	437.0	441.4	434.5	434.0
12.5°	437.5	436.0	441.9	435.5	433.6	434.0	431.6	430.1	431.6	423.8	423.3
15°	424.8	426.2	435.0	428.2	427.2	426.2	423.3	418.4	422.3	411.5	412.0
17.5°	420.4	417.9	419.4	413.5	415.0	414.0	413.5	409.1	408.1	401.3	401.3
20°	399.8	405.2	405.2	401.3	401.3	400.8	394.4	398.3	393.9	392.0	393.9
22.5°	385.6	386.1	386.1	382.7	383.2	381.2	377.8	375.3	377.8	375.3	371.4
25°	359.7	360.7	366.5	360.2	359.2	361.1	358.2	356.7	356.2	350.4	358.2
27.5°	328.4	338.1	337.7	335.2	338.1	334.2	332.8	333.2	334.7	334.2	336.2
30°	310.3	311.7	313.2	311.2	311.7	310.3	310.3	310.7	314.6	313.2	312.7
32.5°	273.5	278.4	282.4	282.4	282.8	284.3	283.8	294.1	296.5	291.7	290.7
35°	241.7	245.2	248.6	249.1	255.4	255.9	256.4	259.4	266.2	267.7	267.2
37.5°	211.4	214.8	215.8	220.2	223.6	227.1	231.0	234.9	240.8	245.6	243.2
40°	184.5	185.9	188.4	190.4	197.2	197.2	199.2	207.0	213.4	217.3	216.8
42.5°	162.0	162.5	164.4	167.8	174.2	172.7	174.2	179.6	188.9	189.4	194.8
45°	146.3	145.8	147.3	147.8	151.7	153.7	154.6	158.6	166.4	167.4	167.8
47.5°	132.1	131.6	134.1	135.1	136.5	138.5	138.5	139.0	141.9	144.4	142.4
50°	120.4	120.4	120.4	121.4	123.8	123.3	123.8	125.8	127.2	126.2	125.8
52.5°	107.6	109.6	111.1	111.6	112.1	112.1	112.6	111.6	111.1	109.6	106.7
55°	98.8	100.8	100.8	100.8	100.8	102.8	100.3	100.8	100.8	96.9	93.0
57.5°	90.0	92.0	93.5	91.5	93.5	91.5	90.5	90.0	89.1	85.1	79.3
60°	82.7	83.7	83.2	82.7	83.7	82.2	81.2	79.3	78.3	72.9	69.0
62.5°	74.4	74.9	75.4	74.4	73.4	72.9	71.0	68.0	66.1	61.7	58.2
65°	67.5	66.1	65.6	65.1	64.1	62.6	61.2	57.7	56.3	52.4	48.9
67.5°	57.2	56.8	57.7	56.3	53.8	53.8	52.4	49.4	46.0	43.6	40.1
70°	48.9	48.4	47.5	46.0	45.5	43.6	43.6	40.1	39.1	34.7	31.8
72.5°	40.1	40.1	38.7	37.2	35.7	34.7	34.3	31.8	30.3	27.9	25.4
75°	30.3	30.3	29.9	28.4	27.4	26.4	25.9	24.0	22.5	20.1	18.6
77.5°	21.5	21.5	19.6	18.6	19.1	18.1	17.1	16.6	16.1	14.7	12.7
80°	12.7	12.2	10.8	11.3	10.8	10.8	10.3	9.8	8.8	7.8	6.8
82.5°	3.4	3.9	3.9	3.9	4.4	3.4	3.4	3.4	3.9	3.9	2.5
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	1.0	2.0	2.0	2.0	2.0	2.0	1.5	1.5	1.5	1.0
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):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	408.1	408.1	408.1	408.1	408.1	408.1	408.1	408.1	408.1	408.1	408.1
2.5°	413.0	412.5	413.0	409.6	417.4	411.5	410.6	409.6	413.0	409.6	404.7
5°	421.8	416.9	415.5	414.0	418.4	411.5	410.1	410.6	408.1	401.8	402.2
7.5°	424.8	420.4	416.0	406.7	410.6	409.1	405.2	402.2	398.3	392.9	392.0
10°	425.7	420.8	414.5	411.5	405.7	403.7	402.2	397.4	392.5	383.2	380.7
12.5°	422.8	416.9	409.1	406.7	402.2	395.9	392.5	387.6	383.2	375.8	370.4
15°	410.1	405.2	402.7	394.4	392.5	388.5	381.7	374.8	368.5	358.7	355.8
17.5°	395.4	393.4	391.0	384.6	384.1	380.2	373.9	368.0	359.7	344.5	339.6
20°	380.2	380.2	372.4	370.0	374.8	367.0	362.1	356.7	339.6	332.3	323.5
22.5°	369.0	363.6	359.2	355.3	355.8	350.9	344.0	333.2	326.9	318.1	307.8
25°	347.0	348.9	339.1	337.7	339.1	327.9	324.4	315.6	306.3	298.0	290.2
27.5°	333.2	327.9	321.5	316.1	316.1	311.7	301.9	300.0	285.8	278.0	268.2
30°	312.7	308.8	303.4	295.6	294.6	291.2	283.3	278.4	263.8	252.0	246.6
32.5°	286.8	285.3	280.9	272.1	269.2	265.2	255.4	247.1	240.3	227.1	220.7
35°	268.2	262.8	253.5	246.1	243.7	236.8	229.0	223.1	215.8	204.1	195.7
37.5°	240.3	234.9	226.1	217.3	217.3	210.4	199.7	193.8	183.5	176.6	169.8
40°	215.8	209.0	200.2	189.9	188.4	178.6	174.2	164.4	158.1	147.3	146.3
42.5°	188.4	182.0	174.2	166.4	160.5	155.6	144.4	137.0	130.2	124.8	123.3
45°	163.4	155.1	148.3	138.5	132.6	126.7	119.4	114.5	109.1	103.3	99.8
47.5°	141.9	135.1	125.3	116.5	110.6	107.6	99.3	94.0	89.6	85.6	83.2
50°	119.9	111.6	106.2	96.4	95.4	88.6	81.7	77.3	74.9	71.5	68.0
52.5°	103.3	95.4	88.1	80.8	76.8	74.4	68.0	63.6	60.2	57.7	55.8
55°	87.1	80.3	74.4	67.0	64.6	61.2	53.8	52.9	49.4	46.0	43.6
57.5°	74.9	68.5	61.7	56.8	52.4	49.9	44.0	40.1	38.2	35.2	32.8
60°	63.6	56.8	51.4	45.5	43.6	40.1	35.7	32.3	29.9	27.4	25.0
62.5°	53.3	47.5	41.6	36.7	33.8	31.8	28.4	25.4	23.0	21.1	19.1
65°	44.0	38.7	33.8	28.9	27.4	25.0	22.5	20.1	18.1	15.7	13.7
67.5°	36.2	31.3	26.4	23.0	21.5	20.6	17.6	15.2	13.7	12.2	10.3
70°	28.4	25.0	21.1	18.1	16.6	15.2	13.2	11.8	9.8	8.8	7.3
72.5°	22.0	19.1	15.7	13.2	12.2	11.3	9.3	7.8	6.8	5.9	4.9
75°	15.7	13.2	11.3	8.8	8.3	7.8	6.4	5.4	4.4	3.4	2.9
77.5°	10.8	8.8	6.8	5.9	5.4	4.4	3.9	2.9	2.5	2.0	1.5
80°	5.9	4.4	3.4	2.9	2.5	2.0	2.0	1.5	1.0	1.0	0.5
82.5°	2.0	1.5	1.0	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#

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CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	408.1	408.1	408.1	408.1	408.1	408.1	408.1	408.1	408.1	408.1	408.1
2.5°	407.6	402.2	403.7	403.7	402.7	402.7	401.8	400.3	400.8	397.8	391.5
5°	403.2	396.4	395.4	396.4	392.5	391.5	389.5	392.5	383.6	387.1	383.2
7.5°	390.5	384.1	382.7	386.1	381.2	378.3	377.8	381.7	373.9	370.0	365.5
10°	376.3	373.9	369.5	367.0	365.5	366.0	362.1	357.2	355.8	354.8	350.9
12.5°	363.6	358.2	354.3	351.4	350.4	350.4	344.0	343.0	338.6	337.7	331.8
15°	348.4	342.1	339.6	335.7	332.3	334.2	326.9	324.9	323.5	317.1	318.1
17.5°	335.2	328.4	322.5	320.0	317.1	314.2	307.3	308.8	305.3	305.3	296.5
20°	318.1	310.7	306.3	301.4	301.4	297.5	292.6	293.1	288.7	284.3	276.5
22.5°	300.0	292.1	286.8	284.8	279.9	278.9	273.1	271.6	265.7	266.2	259.4
25°	280.9	273.1	265.7	266.2	261.8	259.9	256.4	249.6	247.1	244.2	242.2
27.5°	258.4	253.0	246.6	246.1	237.8	238.3	233.9	232.0	226.1	227.5	223.1
30°	237.8	230.0	224.1	222.7	219.2	218.3	211.4	208.5	209.5	205.5	203.1
32.5°	216.8	205.0	202.6	199.7	197.7	195.2	190.4	192.3	187.9	188.9	185.0
35°	188.9	184.0	177.6	177.6	175.7	173.7	170.3	172.3	167.8	165.9	162.0
37.5°	165.4	161.0	154.6	156.6	153.2	150.2	147.3	147.8	143.9	143.4	139.5
40°	140.0	137.5	133.1	133.1	130.7	130.7	129.2	127.7	125.3	122.3	117.9
42.5°	116.0	114.0	112.1	112.6	109.1	112.1	108.1	110.6	102.8	102.3	99.3
45°	98.4	94.0	94.4	92.5	90.5	91.5	88.1	89.1	84.7	83.7	80.8
47.5°	79.8	78.3	75.4	74.4	74.4	72.9	71.5	71.0	69.0	66.5	62.6
50°	65.6	60.2	59.2	57.7	56.8	56.8	54.8	51.9	52.4	49.9	46.0
52.5°	51.4	47.0	45.0	44.5	42.6	41.6	39.1	37.2	35.7	34.7	32.3
55°	39.6	35.7	33.3	33.3	30.3	30.3	26.9	25.4	23.5	21.5	20.1
57.5°	29.9	27.9	25.4	23.5	22.5	20.1	18.1	15.7	14.2	11.3	9.3
60°	22.5	20.6	18.1	16.6	15.7	13.2	10.8	8.8	5.4	4.4	3.9
62.5°	16.6	14.7	12.2	11.3	10.3	8.3	5.9	2.9	1.5	1.5	1.5
65°	12.2	9.8	7.8	6.8	5.9	4.4	2.0	1.0	0.5	0.5	0.5
67.5°	8.3	6.4	4.4	3.9	2.9	1.5	0.5	0.5	0.5	0.5	0.5
70°	5.4	3.9	2.0	1.5	1.0	0.5	0.5	0.5	0.5	0.5	0.5
72.5°	3.4	2.0	1.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75°	2.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	1.0	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 EX4C089040 4LBSQLWWH

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	408.1	408.1	408.1	408.1	408.1	408.1	408.1	408.1
2.5°	398.3	394.9	396.9	392.5	394.4	397.8	395.4	396.4
5°	384.6	382.7	380.2	373.9	378.8	382.7	380.7	380.2
7.5°	370.0	363.1	366.5	364.6	363.6	367.5	363.1	368.0
10°	354.8	349.9	349.4	346.0	346.0	348.9	349.4	346.5
12.5°	332.3	329.8	329.8	329.3	328.8	331.8	332.3	330.8
15°	316.1	315.1	312.7	312.2	309.3	313.7	314.2	313.7
17.5°	296.5	297.0	294.6	294.6	296.5	298.0	294.1	298.0
20°	283.3	280.9	279.9	275.5	278.0	280.4	280.4	280.9
22.5°	264.2	260.3	261.8	259.4	257.9	261.3	261.3	262.8
25°	242.7	242.7	243.7	242.2	243.2	245.2	243.7	247.1
27.5°	222.2	224.1	224.1	222.2	223.1	229.0	231.5	227.5
30°	203.1	203.6	205.0	204.1	207.0	209.0	208.5	211.4
32.5°	181.6	184.0	185.0	183.5	184.5	188.9	186.4	185.9
35°	164.9	160.5	160.0	160.5	162.5	163.4	162.5	165.9
37.5°	140.9	139.5	137.5	138.0	139.5	141.4	142.4	144.8
40°	117.9	116.0	116.0	115.5	114.0	119.4	119.4	119.4
42.5°	97.9	97.4	94.9	94.9	96.9	98.4	97.4	100.8
45°	80.3	78.3	76.8	76.8	78.3	78.3	79.8	79.3
47.5°	63.1	61.2	61.7	60.2	61.7	63.6	61.2	61.7
50°	47.5	47.5	46.5	47.5	47.0	47.5	46.5	45.5
52.5°	32.3	36.7	37.2	35.2	30.8	26.9	24.5	26.4
55°	18.6	16.6	16.6	16.1	15.2	14.7	13.2	14.7
57.5°	9.3	8.3	8.3	8.3	7.8	7.3	6.4	6.4
60°	3.9	3.4	3.4	2.9	2.5	2.0	1.5	2.0
62.5°	1.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0
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)