

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: P880551

Luminaire Tested: **LD4C15D010 EU4159050 4LBDWNH**

Issue Date: 10/4/2024

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: P880551
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P251940)
Test Lab: INNOVATION CENTER
Issue Date: 10/4/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: PORTFOLIO
Catalog Number: LD4C15D010 EU4159050 4LBDWNH
Description: 4 INCH 1500 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 5000K, 90CRI LEDS
AND 4LBDWN TRIM WITH H FINISH
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

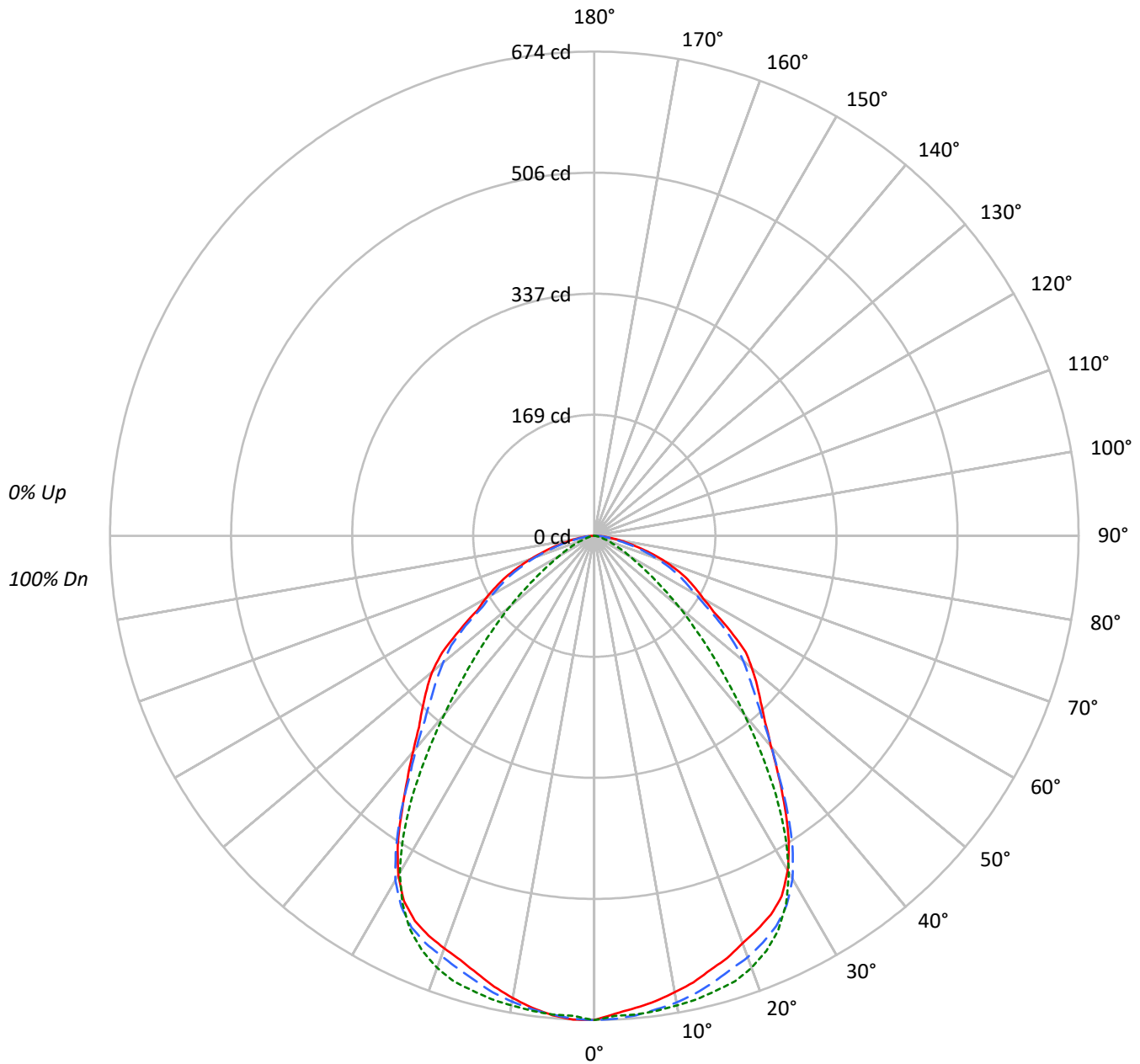
Lumens per Lamp: N/A
Luminaire Lumens: 1372.0 lumens
Efficiency: N/A
Efficacy: 86.8 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.18 / 1.19
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 15.8
Input Voltage (V): NR
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

TEST NUMBER: P880551

CATALOG NUMBER: LD4C15D010 EU4159050 4LBDWNH

Luminous Intensity Polar Plot





TEST NUMBER: P880551

CATALOG NUMBER: LD4C15D010 EU4159050 4LBDWNH

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	111	107	103	100	108	104	101	98	100	98	95	96	94	92	93	91	89	88		
2	102	95	89	84	100	93	88	83	90	85	81	87	83	80	84	81	78	76		
3	94	85	78	72	92	84	77	72	81	75	70	78	73	69	76	72	68	66		
4	87	77	69	63	85	75	68	62	73	67	62	71	65	61	69	64	60	58		
5	81	69	61	55	79	68	61	55	66	60	54	64	58	54	63	57	53	51		
6	75	63	55	49	73	62	55	49	60	54	49	59	53	48	57	52	48	46		
7	70	58	50	44	68	57	49	44	56	49	44	54	48	43	53	47	43	41		
8	66	53	45	40	64	52	45	40	51	44	40	50	44	39	49	43	39	37		
9	62	49	41	36	60	49	41	36	47	41	36	46	40	36	45	40	36	34		
10	58	46	38	33	57	45	38	33	44	38	33	43	37	33	42	37	33	31		

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	82816	82816	82816
5°	81356	82503	82626
10°	80475	82808	81511
15°	79543	83359	80204
20°	78913	83659	79868
25°	78865	82105	80139
30°	76363	76802	77384
35°	69379	66110	69994
40°	61375	52057	62867
45°	56935	39648	58742
50°	54719	29338	56306
55°	49542	20219	48878
60°	43072	13760	42827
65°	41599	9971	39506
70°	37608	6717	33513
75°	30996	4414	26581
80°	24974	2901	19810
85°	20439	1410	13109



TEST NUMBER: P880551

CATALOG NUMBER: LD4C15D010 EU4159050 4LBDWNH

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	63.6	4.6
10°-20°	182.0	13.3
20°-30°	274.9	20.0
30°-40°	287.7	21.0
40°-50°	233.0	17.0
50°-60°	169.5	12.4
60°-70°	104.5	7.6
70°-80°	47.2	3.4
80°-90°	9.6	0.7
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°	520.5	37.9
0°-40°	808.2	58.9
0°-60°	1210.6	88.2
0°-90°	1372.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1372.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	674	674	674	674	674	
5°	660	670	669	669	670	63
15°	625	643	655	641	631	177
25°	582	599	606	602	591	267
35°	463	469	441	469	467	288
45°	328	317	228	322	338	255
55°	231	217	94	219	228	206
65°	143	129	34	126	136	140
75°	65	56	9	49	56	71
85°	14	11	1	8	9	17
90°	0	0	0	0	0	



TEST NUMBER: P880551

CATALOG NUMBER: LD4C15D010 EU4159050 4LBDWNH

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	674.1	674.1	674.1	674.1	674.1	674.1	674.1	674.1	674.1	674.1	674.1
2.5°	665.8	665.8	672.1	679.3	673.1	666.9	671.0	669.0	676.2	676.2	673.1
5°	659.7	661.7	666.9	673.1	667.9	661.7	666.9	664.8	672.1	672.1	670.0
7.5°	653.4	654.4	660.7	667.9	662.7	656.5	660.7	659.7	665.8	666.9	664.8
10°	645.1	646.1	652.4	659.7	654.4	649.3	653.4	652.4	660.7	660.7	659.7
12.5°	636.8	637.8	644.1	650.3	645.1	639.9	644.1	644.1	652.4	653.4	652.4
15°	625.4	627.4	632.7	638.9	635.8	629.6	633.7	633.7	641.0	643.0	643.0
17.5°	616.1	617.1	622.3	628.5	624.4	619.2	623.3	623.3	630.6	632.7	632.7
20°	603.6	605.7	610.9	617.1	614.0	609.8	613.0	613.0	621.3	623.3	624.4
22.5°	593.3	595.3	599.4	607.8	602.6	599.4	603.6	602.6	611.9	613.0	613.0
25°	581.8	583.9	589.1	594.3	591.2	588.1	591.2	591.2	598.4	599.4	599.4
27.5°	565.3	566.3	571.4	576.7	573.5	569.4	573.5	572.5	579.7	580.8	579.7
30°	538.3	540.4	542.4	549.7	546.6	543.4	547.6	545.5	552.8	552.8	551.7
32.5°	504.0	504.0	508.2	513.4	509.3	507.1	510.3	511.3	516.5	516.5	513.4
35°	462.6	464.7	467.7	470.9	467.7	465.7	468.8	467.7	474.0	471.9	468.8
37.5°	421.1	422.1	425.2	429.4	425.2	422.1	423.1	422.1	427.3	427.3	422.1
40°	382.7	384.8	386.9	391.0	386.9	384.8	385.8	382.7	389.0	386.9	383.7
42.5°	351.6	352.6	355.7	357.8	353.7	352.6	353.7	351.6	354.7	352.6	346.4
45°	327.7	327.7	328.8	331.9	327.7	326.7	326.7	324.6	327.7	323.6	317.4
47.5°	307.0	308.0	309.1	311.1	308.0	305.0	306.0	301.8	303.9	300.7	292.5
50°	286.3	288.3	289.4	291.4	288.3	286.3	287.3	283.1	283.1	278.0	270.7
52.5°	265.5	266.6	265.5	267.6	265.5	262.4	263.4	259.3	259.3	253.1	245.8
55°	231.3	232.3	233.4	235.4	233.4	230.3	232.3	229.2	229.2	225.0	216.7
57.5°	197.0	198.1	199.1	200.2	200.2	198.1	199.1	197.0	196.0	192.9	186.7
60°	175.3	175.3	175.3	176.3	175.3	174.3	174.3	172.2	172.2	168.0	161.8
62.5°	158.7	159.7	159.7	160.7	159.7	158.7	157.7	155.6	154.5	150.4	145.2
65°	143.1	143.1	142.1	144.2	143.1	142.1	142.1	140.0	138.0	133.8	128.6
67.5°	124.4	125.5	124.4	125.5	125.5	124.4	123.4	121.3	120.3	117.2	111.0
70°	104.7	104.7	104.7	105.8	104.7	104.7	105.8	102.7	101.7	97.5	92.3
72.5°	85.0	86.1	86.1	85.0	86.1	84.0	84.0	84.0	83.0	78.8	73.6
75°	65.3	66.4	66.4	67.4	66.4	65.3	65.3	64.3	63.3	60.1	56.0
77.5°	48.7	48.7	49.8	49.8	49.8	48.7	48.7	46.7	46.7	44.6	40.4
80°	35.3	35.3	34.3	35.3	35.3	34.3	34.3	33.2	33.2	31.1	28.0
82.5°	22.8	23.9	23.9	23.9	23.9	22.8	22.8	22.8	21.8	20.7	18.7
85°	14.5	14.5	14.5	14.5	15.6	14.5	15.6	14.5	14.5	12.4	11.4
87.5°	6.3	6.3	6.3	7.3	7.3	6.3	6.3	6.3	6.3	6.3	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



TEST NUMBER: P880551

CATALOG NUMBER: LD4C15D010 EU4159050 4LBDWNH

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	674.1	674.1	674.1	674.1	674.1	674.1	674.1	674.1	674.1	674.1	674.1
2.5°	673.1	674.1	671.0	675.2	672.1	673.1	674.1	673.1	669.0	669.0	680.4
5°	669.0	671.0	667.9	673.1	671.0	671.0	673.1	672.1	667.9	669.0	679.3
7.5°	664.8	667.9	665.8	671.0	667.9	667.9	670.0	670.0	665.8	666.9	676.2
10°	658.6	662.7	661.7	666.9	663.8	663.8	666.9	666.9	662.7	663.8	673.1
12.5°	653.4	657.6	656.5	661.7	659.7	660.7	661.7	663.8	658.6	660.7	669.0
15°	645.1	649.3	649.3	654.4	652.4	654.4	656.5	659.7	655.4	655.4	663.8
17.5°	635.8	641.0	641.0	645.1	645.1	646.1	650.3	653.4	649.3	650.3	657.6
20°	625.4	631.7	631.7	636.8	635.8	637.8	641.0	644.1	639.9	639.9	648.2
22.5°	615.0	620.2	621.3	624.4	624.4	625.4	628.5	630.6	625.4	625.4	633.7
25°	600.5	605.7	606.7	608.8	606.7	606.7	608.8	610.9	605.7	605.7	613.0
27.5°	580.8	586.0	586.0	585.0	582.9	583.9	582.9	583.9	578.7	577.7	585.0
30°	551.7	554.9	554.9	553.8	550.7	550.7	547.6	548.7	541.4	541.4	547.6
32.5°	512.4	515.4	513.4	511.3	507.1	505.1	503.0	502.0	494.7	494.7	502.0
35°	465.7	467.7	464.7	460.5	455.3	452.2	449.1	445.0	439.7	440.8	445.0
37.5°	418.0	418.0	413.8	405.5	401.4	396.2	391.0	391.0	382.7	381.7	384.8
40°	377.5	373.4	366.1	354.7	347.4	342.3	335.0	330.8	324.6	324.6	329.8
42.5°	341.2	333.0	323.6	308.0	300.7	294.6	285.2	281.1	273.8	272.7	275.9
45°	309.1	300.7	287.3	270.7	261.4	254.1	240.6	235.4	229.2	228.2	230.3
47.5°	283.1	273.8	257.2	235.4	226.1	216.7	203.3	196.0	190.8	187.7	190.8
50°	260.3	247.9	230.3	207.4	195.0	186.7	170.1	162.8	155.6	153.5	154.5
52.5°	235.4	223.0	204.3	180.4	169.0	156.6	141.0	130.7	124.4	121.3	124.4
55°	208.4	196.0	177.4	153.5	141.0	129.7	113.0	104.7	97.5	94.4	97.5
57.5°	179.4	168.0	151.4	127.6	116.2	105.8	90.3	82.0	74.7	72.6	74.7
60°	154.5	145.2	128.6	105.8	96.4	85.0	71.6	63.3	57.0	56.0	57.0
62.5°	138.0	127.6	112.0	90.3	80.9	71.6	59.1	50.8	45.6	44.6	45.6
65°	121.3	110.0	95.4	76.7	67.4	60.1	47.7	40.4	35.3	34.3	35.3
67.5°	102.7	92.3	79.9	63.3	56.0	48.7	38.4	31.1	27.0	26.0	27.0
70°	85.0	75.7	63.3	50.8	43.6	38.4	29.0	23.9	19.7	18.7	19.7
72.5°	67.4	59.1	48.7	38.4	34.3	29.0	22.8	17.6	14.5	13.5	14.5
75°	51.9	45.6	37.3	28.0	24.9	21.8	15.6	12.4	10.4	9.3	10.4
77.5°	36.3	32.1	26.0	20.7	17.6	15.6	11.4	8.3	7.3	6.3	7.3
80°	24.9	21.8	17.6	13.5	11.4	9.3	7.3	5.2	4.1	4.1	4.1
82.5°	16.6	13.5	10.4	8.3	7.3	6.3	4.1	3.1	3.1	2.1	2.1
85°	9.3	8.3	6.3	5.2	4.1	3.1	2.1	2.1	1.0	1.0	1.0
87.5°	4.1	3.1	2.1	2.1	1.0	1.0	1.0	1.0	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: P880551

CATALOG NUMBER: LD4C15D010 EU4159050 4LBDWNH

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	674.1	674.1	674.1	674.1	674.1	674.1	674.1	674.1	674.1	674.1	674.1
2.5°	677.3	674.1	678.3	674.1	672.1	674.1	672.1	678.3	673.1	669.0	673.1
5°	676.2	672.1	676.2	673.1	670.0	671.0	669.0	675.2	669.0	665.8	667.9
7.5°	674.1	671.0	673.1	670.0	666.9	667.9	665.8	671.0	664.8	661.7	663.8
10°	671.0	667.9	669.0	666.9	663.8	663.8	661.7	665.8	658.6	654.4	656.5
12.5°	666.9	662.7	664.8	661.7	657.6	657.6	655.4	658.6	651.3	647.2	648.2
15°	661.7	657.6	657.6	654.4	650.3	650.3	646.1	649.3	641.0	636.8	636.8
17.5°	655.4	650.3	650.3	647.2	642.0	641.0	637.8	641.0	631.7	627.4	627.4
20°	646.1	642.0	641.0	638.9	633.7	632.7	628.5	629.6	622.3	619.2	618.1
22.5°	633.7	629.6	630.6	627.4	623.3	622.3	618.1	621.3	614.0	610.9	611.9
25°	611.9	609.8	611.9	610.9	607.8	607.8	605.7	607.8	601.5	599.4	600.5
27.5°	587.0	586.0	587.0	587.0	585.0	585.0	585.0	588.1	581.8	580.8	580.8
30°	550.7	550.7	551.7	552.8	552.8	554.9	553.8	558.0	553.8	551.7	553.8
32.5°	503.0	507.1	510.3	510.3	510.3	512.4	514.4	517.5	513.4	514.4	514.4
35°	449.1	452.2	454.3	459.4	456.4	463.6	465.7	469.8	468.8	470.9	469.8
37.5°	389.0	393.1	397.2	404.5	403.4	411.7	415.9	424.2	422.1	426.3	428.3
40°	333.0	339.1	345.4	350.6	354.7	363.0	371.3	381.7	384.8	387.9	389.0
42.5°	279.0	285.2	295.6	302.8	309.1	322.6	334.0	346.4	349.5	355.7	357.8
45°	235.4	240.6	253.1	262.4	267.6	287.3	300.7	316.3	321.5	328.8	331.9
47.5°	195.0	204.3	216.7	228.2	235.4	256.2	273.8	290.4	297.7	306.0	310.1
50°	159.7	170.1	186.7	197.0	207.4	230.3	250.0	267.6	274.8	284.2	288.3
52.5°	130.7	142.1	157.7	169.0	180.4	204.3	225.0	241.7	251.0	257.2	263.4
55°	102.7	115.1	130.7	143.1	152.4	178.4	196.0	212.6	218.8	224.0	227.1
57.5°	79.9	89.2	104.7	115.1	126.5	149.3	167.0	179.4	184.6	190.8	192.9
60°	62.3	71.6	86.1	96.4	106.8	128.6	146.3	158.7	163.9	169.0	172.2
62.5°	49.8	59.1	72.6	82.0	91.3	111.0	126.5	139.0	145.2	150.4	153.5
65°	39.4	47.7	59.1	68.4	75.7	93.3	108.9	120.3	126.5	131.7	134.8
67.5°	31.1	38.4	48.7	55.0	62.3	76.7	90.3	100.6	105.8	112.0	115.1
70°	23.9	29.0	38.4	43.6	48.7	61.2	71.6	82.0	87.1	91.3	93.3
72.5°	17.6	21.8	29.0	33.2	36.3	46.7	55.0	62.3	66.4	70.5	72.6
75°	12.4	15.6	20.7	23.9	26.0	33.2	40.4	45.6	48.7	51.9	55.0
77.5°	8.3	10.4	13.5	15.6	17.6	22.8	27.0	31.1	34.3	37.3	38.4
80°	5.2	7.3	9.3	10.4	11.4	14.5	18.7	20.7	22.8	24.9	26.0
82.5°	3.1	4.1	5.2	6.3	7.3	9.3	11.4	13.5	14.5	16.6	17.6
85°	1.0	2.1	2.1	3.1	3.1	5.2	6.3	7.3	8.3	9.3	10.4
87.5°	0.0	0.0	1.0	1.0	1.0	1.0	2.1	2.1	2.1	2.1	2.1
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: P880551

CATALOG NUMBER: LD4C15D010 EU4159050 4LBDWNH

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	674.1	674.1	674.1	674.1	674.1	674.1	674.1	674.1
2.5°	677.3	674.1	672.1	671.0	678.3	669.0	673.1	674.1
5°	673.1	670.0	667.9	666.9	673.1	664.8	667.9	670.0
7.5°	666.9	664.8	661.7	660.7	666.9	657.6	661.7	662.7
10°	659.7	656.5	654.4	653.4	658.6	649.3	653.4	653.4
12.5°	650.3	648.2	644.1	644.1	648.2	639.9	643.0	643.0
15°	637.8	635.8	631.7	631.7	635.8	627.4	630.6	630.6
17.5°	627.4	625.4	622.3	621.3	625.4	617.1	620.2	619.2
20°	619.2	617.1	613.0	613.0	616.1	607.8	610.9	610.9
22.5°	611.9	610.9	606.7	606.7	610.9	602.6	604.7	602.6
25°	600.5	599.4	595.3	596.4	598.4	590.1	593.3	591.2
27.5°	581.8	581.8	577.7	576.7	579.7	572.5	574.6	573.5
30°	552.8	553.8	548.7	548.7	549.7	543.4	546.6	545.5
32.5°	513.4	514.4	510.3	509.3	512.4	507.1	509.3	509.3
35°	469.8	470.9	467.7	467.7	470.9	467.7	467.7	466.7
37.5°	426.3	428.3	426.3	427.3	429.4	426.3	428.3	427.3
40°	391.0	393.1	390.0	392.0	394.1	391.0	394.1	392.0
42.5°	358.9	362.0	359.9	362.0	364.0	362.0	364.0	361.0
45°	335.0	337.1	336.0	337.1	339.1	338.1	339.1	338.1
47.5°	312.2	316.3	314.3	316.3	319.4	317.4	319.4	316.3
50°	291.4	294.6	293.5	295.6	296.6	295.6	297.7	294.6
52.5°	264.4	267.6	266.6	266.6	268.6	266.6	268.6	266.6
55°	229.2	230.3	230.3	231.3	230.3	229.2	230.3	228.2
57.5°	195.0	197.0	194.0	197.0	196.0	195.0	195.0	192.9
60°	173.2	176.3	174.3	176.3	175.3	175.3	175.3	174.3
62.5°	155.6	157.7	155.6	156.6	156.6	156.6	155.6	154.5
65°	135.9	139.0	136.9	138.0	136.9	135.9	136.9	135.9
67.5°	116.2	117.2	117.2	116.2	116.2	116.2	116.2	114.1
70°	94.4	95.4	94.4	96.4	95.4	94.4	95.4	93.3
72.5°	73.6	74.7	73.6	74.7	73.6	73.6	73.6	73.6
75°	55.0	56.0	56.0	56.0	56.0	56.0	54.0	56.0
77.5°	39.4	39.4	39.4	40.4	39.4	39.4	39.4	39.4
80°	27.0	27.0	27.0	28.0	27.0	28.0	27.0	28.0
82.5°	17.6	17.6	17.6	17.6	17.6	17.6	17.6	17.6
85°	9.3	10.4	10.4	9.3	9.3	9.3	9.3	9.3
87.5°	2.1	1.0	1.0	1.0	1.0	1.0	1.0	1.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



Report Generated By 670246072 / DESKTOP-50001EG





— 0°-180° - - 45°-225° - - - 90°-270°













(END OF REPORT)