

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: P879323

Luminaire Tested: **LD4C02D010 EU4029035 4LBLDWWLI**

Issue Date: 10/1/2024

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: P879323
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2107-320-5)
Test Lab: INNOVATION CENTER
Issue Date: 10/1/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: PORTFOLIO
Catalog Number: LD4C02D010 EU4029035 4LBDWWLI
Description: 4 INCH 250 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 3500K, 90CRI LEDS AND 4LBDWW TRIM WITH LI FINISH
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

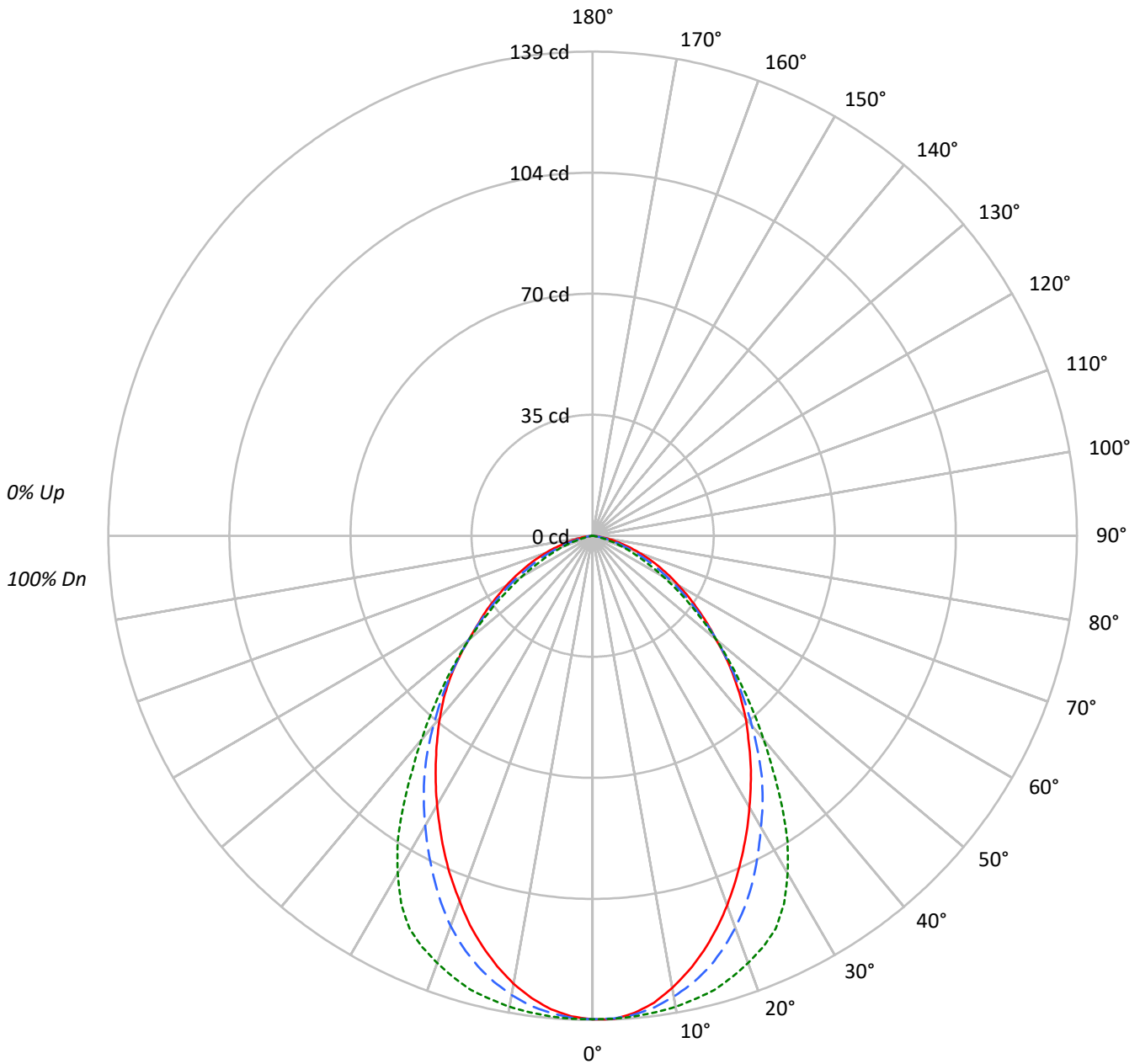
Lumens per Lamp: N/A
Luminaire Lumens: 255.0 lumens
Efficiency: N/A
Efficacy: 72.9 lumens/watt
Spacing Criteria (0/90/45): 1 / 1.19 / 1.15
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 3.5
Input Voltage (V): NR
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				20				
RC	80				70				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			100
1	111	107	104	101	108	105	102	99	101	98	96	97	95	93	93	92	90	88			88
2	103	96	90	85	100	94	89	84	91	86	83	87	84	81	85	82	79	77			77
3	95	86	79	74	93	84	78	73	82	76	72	79	74	70	77	73	69	67			67
4	88	78	70	64	86	76	69	64	74	68	63	72	66	62	70	65	61	59			59
5	82	70	62	57	80	69	62	56	67	61	56	65	60	55	64	59	55	53			53
6	76	64	56	50	74	63	56	50	61	55	50	60	54	49	58	53	49	47			47
7	71	59	51	45	69	58	50	45	56	50	45	55	49	45	54	48	44	42			42
8	66	54	46	41	65	53	46	41	52	45	41	51	45	40	50	44	40	38			38
9	62	50	42	37	61	49	42	37	48	42	37	47	41	37	46	41	37	35			35
10	59	46	39	34	57	46	39	34	45	39	34	44	38	34	43	38	34	32			32

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	17052	17052	17052
5°	16957	17080	16834
10°	16442	17128	16292
15°	15682	17170	15517
20°	14760	17061	14590
25°	13745	16863	13637
30°	12767	15874	12668
35°	11848	14203	11758
40°	10954	12253	10937
45°	9973	10459	10060
50°	8811	8849	8868
55°	7904	7240	7925
60°	6978	5750	7003
65°	6134	4390	6076
70°	5101	3125	5101
75°	3987	1804	3797
80°	2547	424	2476
85°	987	141	705



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	13.0	5.1
10°-20°	36.1	14.1
20°-30°	50.4	19.8
30°-40°	53.2	20.9
40°-50°	45.2	17.7
50°-60°	31.9	12.5
60°-70°	18.1	7.1
70°-80°	6.5	2.5
80°-90°	0.6	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°	99.5	39.0
0°-40°	152.7	59.9
0°-60°	229.8	90.1
0°-90°	255.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	255.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	139	139	139	139	139	
5°	138	138	138	138	136	13
15°	123	128	135	128	122	35
25°	101	109	124	108	101	47
35°	79	85	95	84	78	49
45°	57	58	60	58	58	44
55°	37	36	34	36	37	33
65°	21	18	15	18	21	21
75°	8	6	4	6	8	9
85°	1	0	0	0	0	1
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	138.8	138.8	138.8	138.8	138.8	138.8	138.8	138.8	138.8	138.8	138.8
2.5°	138.9	138.7	138.7	138.7	138.7	138.7	138.7	138.7	138.7	138.7	138.7
5°	137.5	137.4	137.3	137.3	137.3	137.3	137.4	137.6	137.7	137.9	138.0
7.5°	135.2	135.0	135.1	135.1	135.2	135.3	135.5	135.7	136.0	136.2	136.5
10°	131.8	131.6	131.8	131.9	132.3	132.4	132.7	133.0	133.6	133.9	134.3
12.5°	127.8	127.7	127.8	128.2	128.5	128.7	129.0	129.7	130.3	131.0	131.7
15°	123.3	123.1	123.2	123.7	124.3	124.6	124.9	125.8	126.6	127.6	128.5
17.5°	118.3	118.0	118.4	118.8	119.5	119.8	120.2	121.1	122.3	123.4	124.4
20°	112.9	112.8	113.0	113.6	114.3	114.7	115.0	116.1	117.1	118.6	119.8
22.5°	107.2	107.3	107.5	108.2	108.6	109.2	109.7	110.7	111.8	113.2	114.7
25°	101.4	101.6	101.9	102.3	103.1	103.4	104.0	105.0	106.0	107.4	109.0
27.5°	95.8	95.9	96.3	96.5	97.2	97.9	98.1	99.2	100.4	101.4	102.8
30°	90.0	90.2	90.5	91.0	91.8	92.0	92.3	93.3	94.2	95.5	96.6
32.5°	84.5	84.4	84.7	85.1	85.9	86.4	86.5	87.6	88.4	89.7	90.8
35°	79.0	78.7	79.2	79.5	80.2	80.6	80.8	81.7	82.5	83.5	84.7
37.5°	73.4	73.6	73.8	74.1	74.5	74.6	75.2	75.4	76.3	77.2	77.8
40°	68.3	68.2	68.1	68.3	68.8	69.0	69.1	69.6	69.8	70.7	71.1
42.5°	62.8	62.8	62.8	62.8	63.1	63.1	63.2	63.6	63.8	64.0	64.6
45°	57.4	57.4	57.3	57.3	57.4	57.3	57.4	57.5	57.8	57.8	58.3
47.5°	51.9	51.8	52.0	51.8	51.7	51.7	51.8	51.7	52.0	52.0	52.1
50°	46.1	46.1	46.4	46.3	46.4	46.2	46.3	46.3	46.3	46.3	46.5
52.5°	41.6	41.5	41.4	41.2	41.3	41.1	41.1	41.1	41.0	40.9	40.7
55°	36.9	37.0	36.8	36.7	36.7	36.5	36.5	36.1	35.9	35.8	35.6
57.5°	32.6	32.7	32.6	32.3	32.0	32.1	32.0	31.7	31.2	30.9	30.6
60°	28.4	28.5	28.4	28.1	28.0	27.8	27.8	27.4	27.0	26.6	26.3
62.5°	24.7	24.7	24.6	24.2	24.0	24.0	23.8	23.5	23.0	22.4	22.0
65°	21.1	21.1	20.8	20.7	20.5	20.2	20.0	19.6	19.2	18.7	18.1
67.5°	17.6	17.4	17.3	17.2	16.7	16.7	16.5	16.0	15.5	15.2	14.6
70°	14.2	14.1	13.9	13.9	13.6	13.4	13.1	12.7	12.3	11.7	11.3
72.5°	11.2	11.1	10.9	10.7	10.4	10.3	10.0	9.7	9.2	8.7	8.2
75°	8.4	8.3	8.2	7.9	7.7	7.4	7.3	7.0	6.5	6.2	5.7
77.5°	5.9	5.8	5.6	5.5	5.3	5.1	5.0	4.7	4.3	4.0	3.6
80°	3.6	3.5	3.4	3.4	3.2	3.2	3.0	2.8	2.5	2.3	2.0
82.5°	1.9	1.9	1.8	1.7	1.6	1.6	1.5	1.4	1.2	1.0	0.9
85°	0.7	0.7	0.6	0.6	0.6	0.5	0.5	0.5	0.4	0.4	0.3
87.5°	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	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



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CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	138.8	138.8	138.8	138.8	138.8	138.8	138.8	138.8	138.8	138.8	138.8
2.5°	138.8	138.7	138.8	138.8	138.8	138.8	138.8	138.8	138.8	138.8	138.8
5°	138.0	138.1	138.2	138.3	138.4	138.4	138.4	138.5	138.5	138.5	138.5
7.5°	136.7	137.0	137.3	137.5	137.6	137.7	137.9	138.0	138.1	138.0	138.0
10°	135.0	135.5	135.9	136.3	136.5	136.7	136.9	137.1	137.2	137.3	137.1
12.5°	132.5	133.2	133.9	134.6	134.9	135.1	135.6	136.0	136.2	136.2	136.0
15°	129.4	130.5	131.5	132.4	132.9	133.2	134.0	134.5	134.8	135.0	134.7
17.5°	125.8	127.0	128.1	129.3	129.8	130.3	131.4	132.1	132.8	132.9	132.6
20°	121.0	122.5	123.9	125.3	125.9	126.6	127.8	129.0	130.1	130.5	129.7
22.5°	115.7	117.4	118.6	120.4	121.1	121.9	123.5	125.0	126.9	127.8	126.3
25°	110.2	111.6	113.1	114.8	115.9	116.7	118.6	120.5	123.0	124.4	122.2
27.5°	104.3	105.6	107.4	109.2	110.0	111.1	113.3	115.4	117.7	119.0	117.4
30°	98.2	99.7	101.5	103.1	104.3	105.3	107.1	108.9	110.9	111.9	110.8
32.5°	92.1	93.6	95.1	96.9	97.6	98.4	100.1	101.6	103.1	104.1	102.7
35°	85.7	87.1	88.4	89.7	90.0	91.0	92.3	93.2	93.9	94.7	93.8
37.5°	78.8	79.8	80.5	81.8	82.4	82.5	83.5	84.2	84.9	85.1	85.1
40°	71.7	72.6	73.2	74.0	74.5	74.5	75.2	75.8	76.3	76.4	76.3
42.5°	65.1	65.6	66.0	66.6	66.5	67.1	67.4	67.7	68.1	68.1	68.2
45°	58.5	58.8	59.2	59.3	59.8	59.8	60.0	60.1	60.3	60.2	60.0
47.5°	52.3	52.4	52.5	53.0	53.1	52.7	53.0	53.1	53.0	53.0	52.9
50°	46.4	46.5	46.5	46.3	46.4	46.5	46.4	46.2	46.3	46.3	46.4
52.5°	40.7	40.5	40.4	40.4	40.2	40.2	39.9	39.8	39.8	39.6	39.8
55°	35.5	35.2	34.7	34.6	34.4	34.4	34.1	33.8	33.7	33.8	33.7
57.5°	30.4	30.0	29.6	29.5	29.4	29.1	28.7	28.5	28.4	28.3	28.3
60°	25.9	25.3	24.9	24.4	24.5	24.2	23.9	23.7	23.6	23.4	23.5
62.5°	21.7	21.1	20.6	20.1	19.8	19.7	19.4	19.2	19.0	18.8	19.1
65°	17.6	17.1	16.6	16.1	15.9	15.8	15.5	15.1	15.1	15.1	15.2
67.5°	13.9	13.4	12.9	12.6	12.4	12.2	12.0	11.8	11.7	11.6	11.6
70°	10.7	10.2	9.8	9.5	9.3	9.2	8.9	8.8	8.8	8.7	8.7
72.5°	7.8	7.4	7.0	6.8	6.6	6.4	6.3	6.2	6.1	6.1	6.1
75°	5.3	5.0	4.6	4.4	4.3	4.1	3.9	3.8	3.7	3.8	3.8
77.5°	3.2	2.9	2.6	2.4	2.4	2.2	2.1	2.0	1.8	1.8	1.9
80°	1.8	1.5	1.3	1.1	1.0	1.0	0.8	0.8	0.7	0.6	0.6
82.5°	0.8	0.6	0.5	0.5	0.4	0.4	0.3	0.3	0.3	0.2	0.3
85°	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
87.5°	0.1	0.0	0.0	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	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	138.8	138.8	138.8	138.8	138.8	138.8	138.8	138.8	138.8	138.8	138.8
2.5°	138.7	138.7	138.7	138.7	138.7	138.6	138.6	138.5	138.5	138.4	138.3
5°	138.4	138.3	138.2	138.2	138.1	138.0	137.8	137.7	137.5	137.3	137.2
7.5°	137.9	137.7	137.5	137.4	137.2	136.9	136.6	136.4	136.1	135.7	135.3
10°	137.0	136.7	136.4	136.1	135.9	135.4	134.9	134.5	133.9	133.4	132.8
12.5°	135.7	135.4	134.7	134.4	134.1	133.4	132.8	131.9	131.1	130.4	129.7
15°	134.2	133.5	132.8	132.4	131.9	130.8	129.8	128.8	127.8	126.9	125.8
17.5°	131.9	130.9	129.9	129.4	128.8	127.5	126.3	125.0	123.8	122.7	121.3
20°	128.5	127.4	126.0	125.3	124.8	123.1	121.9	120.5	119.2	117.9	116.4
22.5°	124.5	123.0	121.5	120.4	119.8	118.2	116.6	115.3	113.9	112.4	111.3
25°	119.9	118.1	116.3	115.2	114.3	112.6	111.0	109.7	108.0	106.7	105.6
27.5°	114.9	112.7	110.6	109.6	108.7	106.8	105.1	103.7	102.1	100.9	99.8
30°	108.8	106.9	104.8	104.0	103.0	101.0	99.1	97.9	96.1	94.9	93.6
32.5°	101.2	100.0	98.3	97.2	96.7	94.9	93.3	91.8	90.2	89.3	88.0
35°	92.9	91.8	90.5	89.8	89.2	88.0	86.7	85.4	84.2	83.3	82.1
37.5°	84.5	83.4	82.6	81.9	81.5	80.4	79.7	78.7	77.8	77.0	76.3
40°	75.8	75.4	74.6	74.3	74.1	73.0	72.3	71.6	71.0	70.5	70.1
42.5°	68.0	67.5	66.8	66.9	66.6	65.9	65.5	65.0	64.6	64.3	64.0
45°	60.4	60.0	59.7	59.9	59.4	59.2	58.8	58.8	58.5	58.1	57.9
47.5°	53.1	53.1	53.1	53.0	52.9	52.8	52.8	52.5	52.3	52.1	51.9
50°	46.5	46.5	46.6	46.8	46.4	46.6	46.5	46.5	46.5	46.3	46.4
52.5°	40.0	40.1	40.2	40.3	40.4	40.4	40.6	40.7	40.9	41.1	41.1
55°	34.0	34.3	34.5	34.8	34.6	34.9	35.1	35.6	35.7	35.7	35.9
57.5°	28.6	28.9	29.1	29.4	29.5	29.8	30.2	30.4	30.8	31.1	31.4
60°	23.6	23.8	24.2	24.7	24.6	25.2	25.5	25.9	26.4	26.6	27.0
62.5°	19.2	19.4	19.7	19.9	20.3	20.6	21.3	21.7	22.1	22.6	23.1
65°	15.3	15.5	15.8	16.1	16.3	16.7	17.1	17.8	18.2	18.7	19.2
67.5°	11.7	12.0	12.3	12.5	12.6	13.0	13.6	13.9	14.6	15.2	15.5
70°	8.7	9.0	9.3	9.2	9.5	9.8	10.2	10.7	11.2	11.7	12.2
72.5°	6.1	6.3	6.5	6.6	6.8	7.1	7.4	7.7	8.2	8.7	9.2
75°	3.8	3.9	4.1	4.2	4.3	4.6	4.9	5.2	5.6	6.0	6.4
77.5°	1.9	2.1	2.2	2.3	2.3	2.6	2.9	3.2	3.5	3.9	4.3
80°	0.7	0.8	0.9	1.0	1.1	1.2	1.5	1.6	1.9	2.2	2.4
82.5°	0.3	0.3	0.4	0.4	0.4	0.5	0.6	0.7	0.9	1.0	1.1
85°	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.3
87.5°	0.0	0.0	0.0	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	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	138.8	138.8	138.8	138.8	138.8	138.8	138.8	138.8
2.5°	138.3	138.3	138.2	138.2	138.2	138.2	138.1	138.1
5°	137.0	136.9	136.8	136.7	136.7	136.6	136.5	136.5
7.5°	135.0	134.8	134.6	134.5	134.3	134.1	134.1	133.9
10°	132.3	131.9	131.7	131.5	131.2	130.9	130.8	130.6
12.5°	129.0	128.2	128.0	127.6	127.2	127.0	126.6	126.6
15°	125.0	124.1	123.6	123.4	122.9	122.5	122.4	122.0
17.5°	120.3	119.6	118.9	118.5	118.0	117.5	117.3	117.2
20°	115.5	114.4	113.9	113.5	112.8	112.4	112.1	111.6
22.5°	110.0	109.0	108.3	108.0	107.4	106.7	106.2	106.2
25°	104.2	103.3	102.9	102.2	101.6	101.3	100.7	100.6
27.5°	98.6	97.7	97.0	96.6	95.9	95.5	95.0	94.8
30°	92.8	91.8	91.3	91.2	90.3	89.9	89.5	89.3
32.5°	87.1	86.2	85.7	85.4	84.9	84.3	84.0	83.8
35°	81.4	80.8	80.3	80.0	79.3	79.0	78.7	78.4
37.5°	75.4	74.9	74.7	74.4	74.0	73.5	73.4	73.2
40°	69.6	69.0	69.0	68.7	68.4	68.4	68.2	68.2
42.5°	63.6	63.3	63.2	63.3	63.1	63.0	62.8	63.2
45°	57.6	57.8	57.5	57.6	57.5	57.7	57.7	57.9
47.5°	52.1	51.9	52.0	52.1	52.3	52.3	52.2	52.2
50°	46.3	46.5	46.7	46.4	46.5	46.6	46.3	46.4
52.5°	41.2	41.3	41.4	41.3	41.4	41.4	41.5	41.3
55°	36.3	36.3	36.6	36.6	36.7	36.8	36.9	37.0
57.5°	31.6	31.9	32.1	32.1	32.3	32.5	32.3	32.5
60°	27.5	27.7	28.0	28.1	28.2	28.4	28.4	28.5
62.5°	23.4	23.8	24.0	24.2	24.2	24.4	24.6	24.7
65°	19.6	20.1	20.3	20.4	20.5	20.7	21.0	20.9
67.5°	16.1	16.4	16.6	16.7	17.0	17.1	17.3	17.6
70°	12.6	13.0	13.2	13.4	13.7	13.9	14.1	14.2
72.5°	9.7	10.0	10.1	10.3	10.5	10.7	10.9	11.0
75°	6.8	7.3	7.3	7.5	7.7	7.9	8.1	8.0
77.5°	4.5	4.8	4.9	5.1	5.3	5.5	5.6	5.6
80°	2.6	2.9	2.9	3.0	3.2	3.3	3.4	3.5
82.5°	1.2	1.4	1.5	1.5	1.6	1.7	1.7	1.7
85°	0.4	0.4	0.5	0.5	0.5	0.5	0.6	0.5
87.5°	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1
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)