

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: P879319

Luminaire Tested: **LD4C02D010 EU4029027 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: P879319
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 EU4029027 4LBDWWLI
Description: 4 INCH 250 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 2700K, 90CRI LEDS AND 4LBDWW TRIM WITH LI FINISH
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

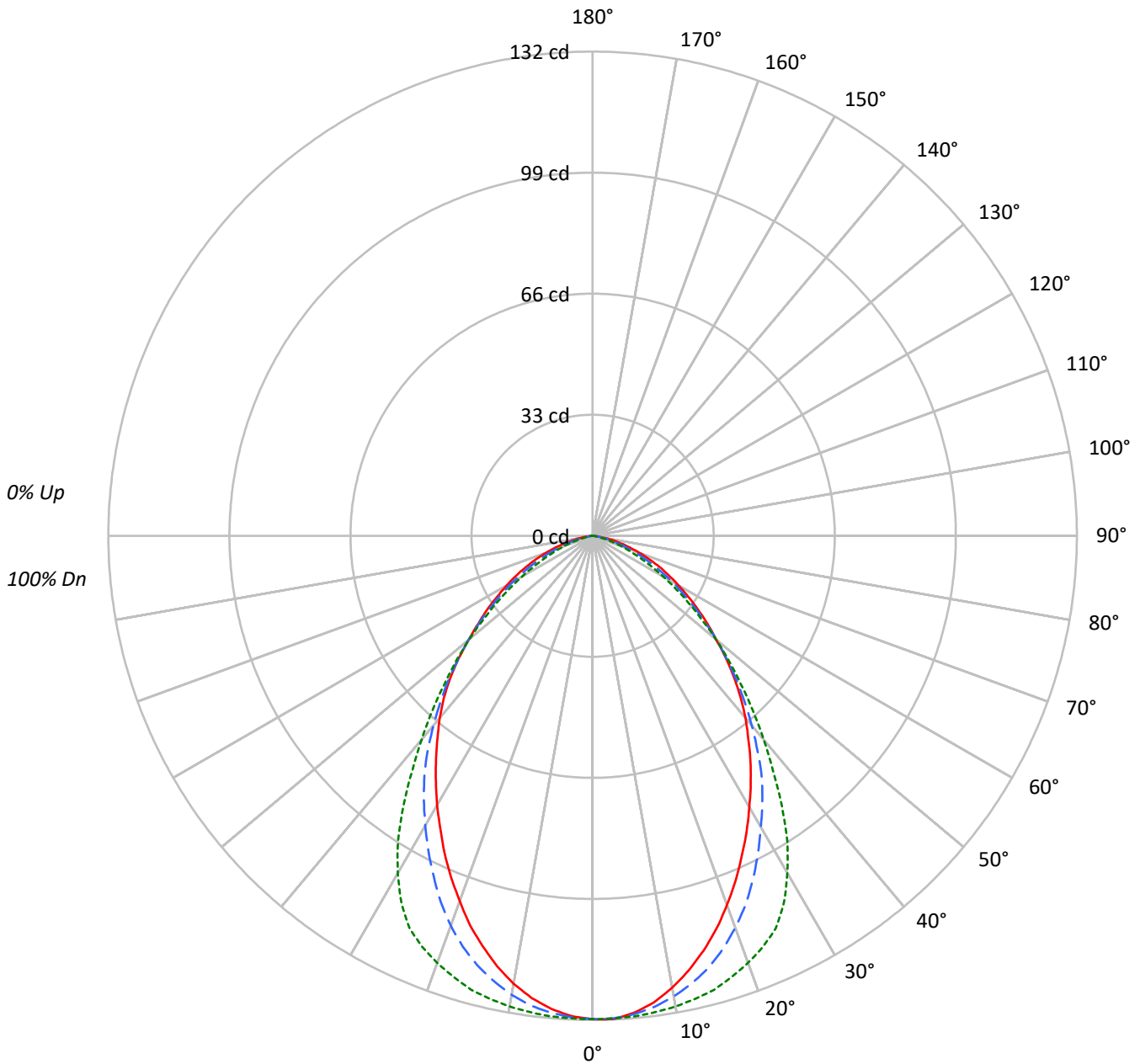
Lumens per Lamp: N/A
Luminaire Lumens: 242.0 lumens
Efficiency: N/A
Efficacy: 69.1 lumens/watt
Spacing Criteria (0/90/45): 1 / 1.19 / 1.15
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

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

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	16192	16192	16192
5°	16094	16217	15970
10°	15606	16255	15469
15°	14881	16293	14728
20°	14002	16198	13845
25°	13040	16009	12945
30°	12115	15065	12030
35°	11248	13483	11158
40°	10392	11627	10392
45°	9469	9921	9538
50°	8371	8390	8410
55°	7497	6854	7518
60°	6634	5455	6634
65°	5843	4157	5785
70°	4849	2981	4849
75°	3750	1709	3607
80°	2405	424	2335
85°	846	141	705



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	12.4	5.1
10°-20°	34.2	14.1
20°-30°	47.8	19.8
30°-40°	50.5	20.9
40°-50°	42.9	17.7
50°-60°	30.3	12.5
60°-70°	17.2	7.1
70°-80°	6.1	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°	94.4	39.0
0°-40°	144.9	59.9
0°-60°	218.1	90.1
0°-90°	242.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	242.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	132	132	132	132	132	
5°	130	131	132	130	130	12
15°	117	122	128	121	116	33
25°	96	103	118	102	96	44
35°	75	80	90	80	74	47
45°	54	55	57	56	55	42
55°	35	34	32	34	35	31
65°	20	17	14	17	20	20
75°	8	5	4	5	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°	131.8	131.8	131.8	131.8	131.8	131.8	131.8	131.8	131.8	131.8	131.8
2.5°	131.9	131.6	131.6	131.6	131.6	131.6	131.6	131.6	131.6	131.7	131.7
5°	130.5	130.4	130.3	130.3	130.3	130.3	130.4	130.6	130.7	130.8	130.9
7.5°	128.3	128.1	128.2	128.2	128.3	128.4	128.6	128.8	129.1	129.3	129.5
10°	125.1	124.9	125.1	125.2	125.5	125.7	125.9	126.2	126.8	127.1	127.5
12.5°	121.3	121.2	121.3	121.7	122.0	122.2	122.5	123.1	123.7	124.3	125.0
15°	117.0	116.8	116.9	117.4	117.9	118.3	118.5	119.3	120.1	121.1	122.0
17.5°	112.3	112.0	112.4	112.7	113.4	113.7	114.0	115.0	116.0	117.1	118.1
20°	107.1	107.0	107.3	107.8	108.5	108.9	109.1	110.2	111.1	112.6	113.7
22.5°	101.8	101.9	102.1	102.6	103.1	103.6	104.1	105.0	106.1	107.5	108.9
25°	96.2	96.4	96.7	97.1	97.9	98.2	98.7	99.7	100.6	101.9	103.4
27.5°	90.9	91.0	91.4	91.6	92.2	92.9	93.1	94.2	95.3	96.2	97.6
30°	85.4	85.6	85.8	86.4	87.1	87.3	87.6	88.6	89.4	90.6	91.7
32.5°	80.2	80.1	80.4	80.7	81.5	81.9	82.1	83.2	83.9	85.2	86.1
35°	75.0	74.7	75.1	75.4	76.1	76.5	76.7	77.6	78.3	79.3	80.4
37.5°	69.7	69.9	70.1	70.3	70.7	70.8	71.4	71.6	72.4	73.2	73.8
40°	64.8	64.7	64.6	64.8	65.3	65.5	65.5	66.1	66.3	67.1	67.5
42.5°	59.6	59.6	59.6	59.6	59.9	59.9	60.0	60.4	60.5	60.8	61.3
45°	54.5	54.5	54.4	54.4	54.5	54.4	54.5	54.6	54.9	54.9	55.3
47.5°	49.2	49.1	49.3	49.2	49.1	49.0	49.2	49.0	49.3	49.3	49.4
50°	43.8	43.8	44.0	44.0	44.1	43.9	43.9	43.9	44.0	43.9	44.1
52.5°	39.5	39.4	39.3	39.1	39.2	39.0	39.0	39.0	38.9	38.8	38.6
55°	35.0	35.1	34.9	34.8	34.8	34.6	34.6	34.3	34.1	34.0	33.8
57.5°	30.9	31.0	30.9	30.7	30.4	30.5	30.4	30.1	29.6	29.3	29.1
60°	27.0	27.1	27.0	26.7	26.6	26.4	26.4	26.0	25.6	25.2	24.9
62.5°	23.4	23.4	23.4	23.0	22.8	22.8	22.6	22.3	21.8	21.3	20.8
65°	20.1	20.0	19.8	19.6	19.4	19.2	19.0	18.6	18.2	17.8	17.2
67.5°	16.7	16.6	16.5	16.3	15.9	15.8	15.6	15.2	14.7	14.4	13.9
70°	13.5	13.4	13.2	13.2	12.9	12.7	12.4	12.1	11.6	11.1	10.7
72.5°	10.6	10.5	10.3	10.2	9.9	9.8	9.5	9.2	8.8	8.3	7.8
75°	7.9	7.8	7.8	7.5	7.3	7.0	6.9	6.6	6.2	5.9	5.4
77.5°	5.6	5.5	5.3	5.2	5.0	4.9	4.7	4.4	4.1	3.8	3.4
80°	3.4	3.4	3.3	3.2	3.1	3.0	2.8	2.7	2.4	2.2	1.9
82.5°	1.8	1.8	1.7	1.6	1.5	1.5	1.4	1.3	1.1	1.0	0.8
85°	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.4	0.3	0.3	0.2
87.5°	0.0	0.0	0.1	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):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	131.8	131.8	131.8	131.8	131.8	131.8	131.8	131.8	131.8	131.8	131.8
2.5°	131.7	131.7	131.7	131.7	131.8	131.8	131.8	131.7	131.8	131.7	131.7
5°	130.9	131.1	131.2	131.3	131.3	131.4	131.4	131.4	131.5	131.5	131.4
7.5°	129.7	130.0	130.3	130.5	130.6	130.7	130.8	130.9	131.0	131.0	130.9
10°	128.1	128.6	129.0	129.4	129.6	129.7	129.9	130.1	130.2	130.3	130.1
12.5°	125.8	126.4	127.1	127.7	128.0	128.2	128.7	129.1	129.3	129.3	129.1
15°	122.8	123.8	124.8	125.6	126.1	126.4	127.1	127.6	127.9	128.1	127.8
17.5°	119.3	120.5	121.6	122.7	123.2	123.6	124.7	125.4	126.0	126.1	125.8
20°	114.9	116.3	117.6	118.9	119.4	120.1	121.3	122.5	123.4	123.9	123.0
22.5°	109.8	111.4	112.6	114.2	115.0	115.7	117.2	118.7	120.4	121.3	119.8
25°	104.6	105.9	107.4	109.0	110.0	110.8	112.5	114.4	116.7	118.1	116.0
27.5°	99.0	100.2	101.9	103.6	104.4	105.4	107.5	109.5	111.7	112.9	111.4
30°	93.2	94.7	96.3	97.9	99.0	99.9	101.7	103.3	105.2	106.2	105.1
32.5°	87.4	88.8	90.2	92.0	92.6	93.4	95.0	96.4	97.8	98.8	97.4
35°	81.4	82.6	83.9	85.1	85.4	86.4	87.6	88.5	89.1	89.9	89.0
37.5°	74.8	75.7	76.4	77.7	78.2	78.3	79.3	79.9	80.6	80.8	80.7
40°	68.1	68.9	69.5	70.3	70.7	70.7	71.4	71.9	72.4	72.5	72.4
42.5°	61.8	62.2	62.7	63.2	63.1	63.7	64.0	64.2	64.6	64.6	64.7
45°	55.5	55.8	56.2	56.3	56.7	56.7	57.0	57.1	57.3	57.1	56.9
47.5°	49.6	49.8	49.8	50.3	50.4	50.0	50.3	50.4	50.3	50.3	50.2
50°	44.1	44.2	44.1	44.0	44.0	44.2	44.0	43.8	43.9	43.9	44.0
52.5°	38.6	38.4	38.3	38.3	38.1	38.1	37.9	37.8	37.7	37.5	37.8
55°	33.7	33.4	32.9	32.8	32.7	32.6	32.3	32.1	32.0	32.0	32.0
57.5°	28.9	28.4	28.1	28.0	27.9	27.6	27.3	27.0	27.0	26.9	26.9
60°	24.5	24.0	23.6	23.2	23.2	23.0	22.7	22.5	22.4	22.2	22.3
62.5°	20.6	20.1	19.6	19.1	18.8	18.7	18.4	18.2	18.0	17.9	18.1
65°	16.7	16.3	15.7	15.3	15.1	15.0	14.7	14.3	14.3	14.3	14.4
67.5°	13.2	12.7	12.2	11.9	11.7	11.5	11.4	11.2	11.1	11.0	11.0
70°	10.2	9.7	9.3	9.0	8.8	8.8	8.4	8.4	8.3	8.3	8.2
72.5°	7.4	7.0	6.7	6.5	6.3	6.1	6.0	5.9	5.8	5.8	5.8
75°	5.1	4.8	4.4	4.1	4.0	3.9	3.7	3.6	3.5	3.6	3.6
77.5°	3.1	2.8	2.5	2.3	2.3	2.1	2.0	1.9	1.7	1.7	1.8
80°	1.7	1.4	1.2	1.1	1.0	0.9	0.8	0.7	0.6	0.6	0.6
82.5°	0.7	0.6	0.5	0.4	0.4	0.3	0.3	0.2	0.2	0.2	0.2
85°	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
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):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	131.8	131.8	131.8	131.8	131.8	131.8	131.8	131.8	131.8	131.8	131.8
2.5°	131.7	131.7	131.6	131.6	131.6	131.5	131.5	131.5	131.4	131.4	131.3
5°	131.3	131.3	131.2	131.1	131.1	130.9	130.8	130.7	130.5	130.3	130.2
7.5°	130.8	130.7	130.5	130.4	130.2	129.9	129.6	129.4	129.2	128.8	128.4
10°	130.0	129.7	129.4	129.2	129.0	128.5	128.0	127.6	127.1	126.6	126.1
12.5°	128.8	128.5	127.9	127.6	127.3	126.6	126.0	125.2	124.4	123.7	123.1
15°	127.3	126.7	126.0	125.6	125.2	124.1	123.1	122.3	121.3	120.4	119.4
17.5°	125.2	124.2	123.2	122.8	122.2	121.0	119.8	118.6	117.5	116.4	115.2
20°	121.9	120.9	119.6	118.9	118.4	116.8	115.7	114.3	113.1	111.9	110.4
22.5°	118.1	116.7	115.3	114.3	113.7	112.2	110.6	109.4	108.1	106.6	105.6
25°	113.8	112.1	110.3	109.3	108.5	106.8	105.4	104.1	102.5	101.2	100.2
27.5°	109.0	107.0	105.0	104.0	103.2	101.4	99.8	98.5	96.9	95.8	94.7
30°	103.2	101.4	99.5	98.7	97.8	95.9	94.1	92.9	91.2	90.0	88.8
32.5°	96.0	94.9	93.3	92.2	91.8	90.0	88.5	87.1	85.6	84.7	83.5
35°	88.2	87.1	85.8	85.2	84.6	83.5	82.3	81.1	79.9	79.0	78.0
37.5°	80.2	79.1	78.4	77.7	77.3	76.3	75.6	74.7	73.9	73.0	72.4
40°	71.9	71.6	70.8	70.5	70.4	69.3	68.6	67.9	67.4	66.9	66.6
42.5°	64.6	64.1	63.4	63.5	63.2	62.6	62.1	61.6	61.3	61.1	60.7
45°	57.3	56.9	56.6	56.9	56.4	56.2	55.8	55.8	55.5	55.1	54.9
47.5°	50.4	50.4	50.4	50.3	50.2	50.1	50.1	49.9	49.6	49.5	49.3
50°	44.1	44.2	44.3	44.4	44.1	44.2	44.2	44.1	44.1	44.0	44.1
52.5°	38.0	38.0	38.1	38.3	38.3	38.3	38.5	38.6	38.8	39.0	39.0
55°	32.2	32.6	32.8	33.0	32.9	33.2	33.3	33.8	33.9	33.9	34.1
57.5°	27.1	27.4	27.6	27.9	28.0	28.2	28.6	28.9	29.2	29.5	29.8
60°	22.4	22.6	23.0	23.4	23.3	23.9	24.2	24.6	25.0	25.2	25.6
62.5°	18.2	18.4	18.7	18.9	19.2	19.5	20.2	20.6	21.0	21.5	21.9
65°	14.5	14.7	15.0	15.3	15.4	15.9	16.2	16.9	17.2	17.8	18.2
67.5°	11.1	11.4	11.6	11.8	11.9	12.4	12.9	13.2	13.8	14.4	14.7
70°	8.3	8.5	8.8	8.8	9.0	9.3	9.7	10.2	10.6	11.1	11.5
72.5°	5.8	6.0	6.2	6.3	6.5	6.7	7.0	7.3	7.7	8.2	8.8
75°	3.6	3.7	3.9	4.0	4.1	4.4	4.6	5.0	5.3	5.7	6.1
77.5°	1.8	2.0	2.1	2.2	2.2	2.5	2.7	3.0	3.3	3.7	4.0
80°	0.7	0.7	0.9	0.9	1.0	1.2	1.4	1.5	1.8	2.1	2.3
82.5°	0.2	0.3	0.3	0.3	0.4	0.5	0.5	0.7	0.8	0.9	1.0
85°	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	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°	131.8	131.8	131.8	131.8	131.8	131.8	131.8	131.8
2.5°	131.2	131.2	131.2	131.1	131.1	131.1	131.1	131.1
5°	130.0	129.9	129.8	129.7	129.7	129.6	129.5	129.5
7.5°	128.1	127.9	127.8	127.6	127.4	127.3	127.3	127.1
10°	125.6	125.2	125.0	124.8	124.5	124.2	124.1	124.0
12.5°	122.5	121.7	121.5	121.1	120.7	120.5	120.2	120.2
15°	118.6	117.8	117.3	117.1	116.6	116.3	116.1	115.8
17.5°	114.1	113.5	112.8	112.5	112.0	111.5	111.3	111.3
20°	109.6	108.6	108.1	107.7	107.0	106.6	106.3	105.9
22.5°	104.4	103.4	102.8	102.5	102.0	101.3	100.8	100.8
25°	98.9	98.0	97.7	97.0	96.4	96.1	95.5	95.5
27.5°	93.6	92.7	92.1	91.7	91.0	90.6	90.1	89.9
30°	88.1	87.1	86.6	86.6	85.7	85.3	85.0	84.8
32.5°	82.6	81.8	81.3	81.0	80.6	80.0	79.7	79.5
35°	77.2	76.7	76.2	75.9	75.2	75.0	74.7	74.4
37.5°	71.6	71.1	70.9	70.6	70.3	69.7	69.6	69.4
40°	66.1	65.4	65.4	65.2	64.9	64.9	64.8	64.8
42.5°	60.4	60.1	60.0	60.1	59.9	59.8	59.6	60.0
45°	54.7	54.8	54.6	54.6	54.5	54.7	54.7	54.9
47.5°	49.5	49.3	49.4	49.5	49.6	49.6	49.6	49.5
50°	43.9	44.1	44.3	44.1	44.2	44.2	44.0	44.0
52.5°	39.1	39.2	39.3	39.2	39.3	39.3	39.4	39.2
55°	34.5	34.5	34.7	34.7	34.8	34.9	35.0	35.1
57.5°	30.0	30.3	30.5	30.5	30.7	30.8	30.7	30.8
60°	26.1	26.3	26.6	26.7	26.8	26.9	26.9	27.0
62.5°	22.2	22.6	22.8	23.0	23.0	23.2	23.4	23.4
65°	18.6	19.1	19.2	19.4	19.5	19.7	19.9	19.9
67.5°	15.3	15.6	15.8	15.9	16.2	16.3	16.5	16.7
70°	12.0	12.4	12.5	12.7	13.0	13.2	13.4	13.5
72.5°	9.2	9.5	9.6	9.8	10.0	10.2	10.3	10.4
75°	6.4	6.9	6.9	7.1	7.3	7.5	7.7	7.6
77.5°	4.2	4.6	4.6	4.8	5.0	5.2	5.3	5.3
80°	2.5	2.7	2.8	2.9	3.0	3.1	3.2	3.3
82.5°	1.2	1.3	1.4	1.4	1.5	1.6	1.6	1.6
85°	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5
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)