

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: P879362

Luminaire Tested: **LD4C10D010 EU4109035 4LBDWWH**

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: P879362
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2107-320-6)
Test Lab: INNOVATION CENTER
Issue Date: 10/1/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: PORTFOLIO
Catalog Number: LD4C10D010 EU4109035 4LBLDWWH
Description: 4 INCH 1000 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 3500K, 90CRI LEDS
AND 4LBLDWW TRIM WITH H FINISH
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

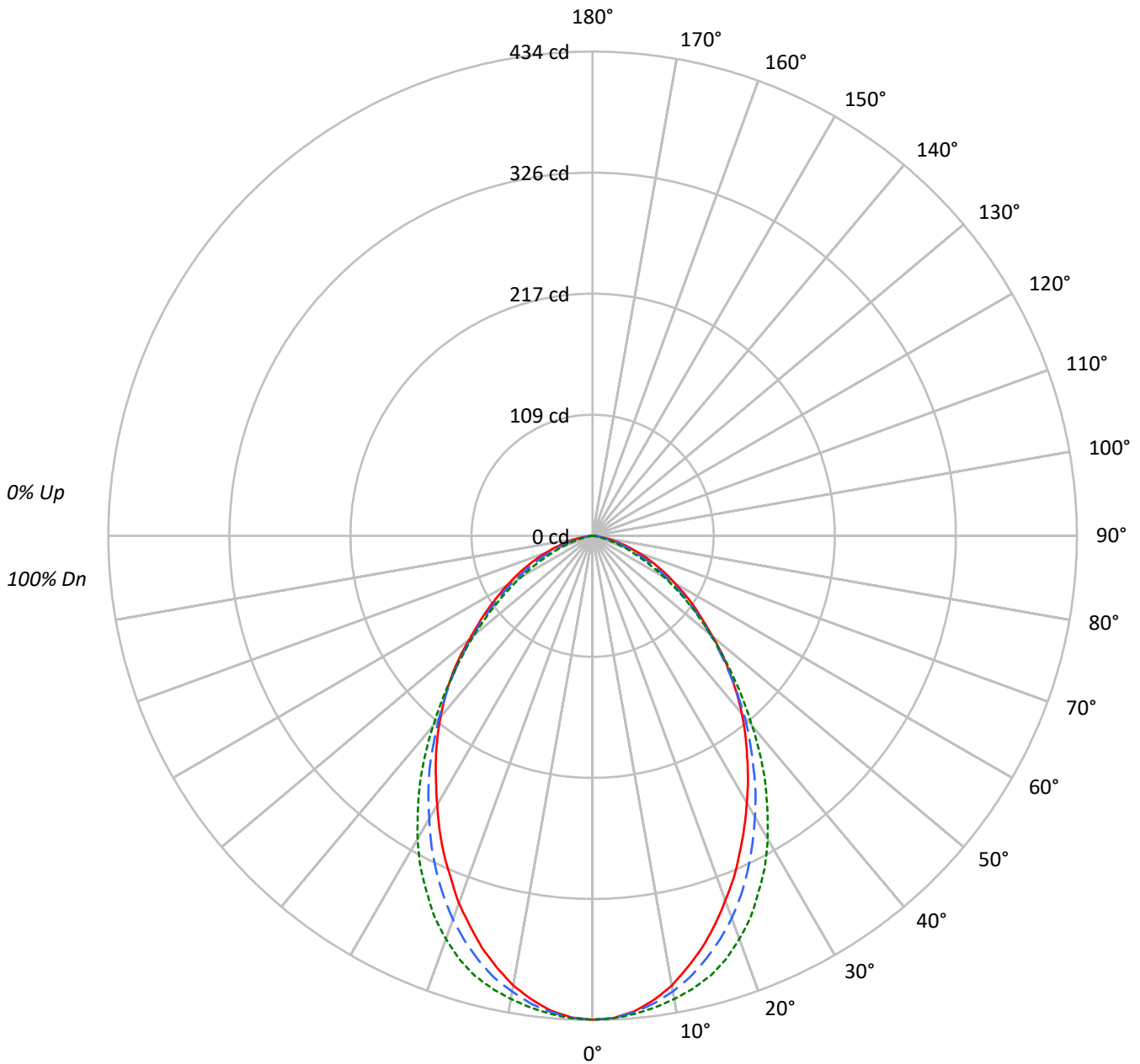
Lumens per Lamp: N/A
Luminaire Lumens: 776.0 lumens
Efficiency: N/A
Efficacy: 79.6 lumens/watt
Spacing Criteria (0/90/45): 1 / 1.1 / 1.12
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 9.75
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				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	100	108	105	102	99	101	98	96	97	95	93	93	92	90	88				88
2	103	96	90	85	100	94	89	84	90	86	82	87	84	80	84	81	79	77				77
3	95	86	79	73	92	84	78	73	81	76	71	79	74	70	76	72	69	67				67
4	88	77	70	64	86	76	69	63	74	68	63	71	66	62	69	65	61	59				59
5	81	70	62	56	80	69	62	56	67	61	56	65	59	55	63	58	54	52				52
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	44	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°	53294	53294	53294
5°	52757	53053	52696
10°	51047	52594	51060
15°	48497	51918	48649
20°	45458	50282	45824
25°	42333	47715	42713
30°	39210	44501	39508
35°	36174	40449	36729
40°	33374	35651	33983
45°	30231	30891	31134
50°	26796	26471	27465
55°	23882	22276	24439
60°	20910	18084	21696
65°	18285	13982	18953
70°	15410	10237	16200
75°	12009	6645	12721
80°	7924	3467	8702
85°	2678	1551	3524



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	40.5	5.2
10°-20°	110.7	14.3
20°-30°	152.2	19.6
30°-40°	158.8	20.5
40°-50°	135.8	17.5
50°-60°	97.2	12.5
60°-70°	56.4	7.3
70°-80°	21.7	2.8
80°-90°	2.8	0.4
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°	303.4	39.1
0°-40°	462.1	59.6
0°-60°	695.1	89.6
0°-90°	776.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	776.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	434	434	434	434	434	
5°	428	429	430	429	427	40
15°	381	393	408	394	382	107
25°	312	330	352	332	315	144
35°	241	251	270	255	245	151
45°	174	173	178	177	179	134
55°	112	106	104	109	114	100
65°	63	56	48	58	65	63
75°	25	19	14	20	27	27
85°	2	1	1	2	2	4
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°	433.8	433.8	433.8	433.8	433.8	433.8	433.8	433.8	433.8	433.8	433.8
2.5°	432.7	432.4	432.6	432.6	432.6	432.4	432.7	432.7	432.6	432.6	432.6
5°	427.8	427.5	427.6	427.8	427.8	427.8	428.0	428.1	428.3	428.4	428.6
7.5°	419.8	419.3	419.8	420.5	420.5	420.6	420.8	420.9	421.4	422.2	422.7
10°	409.2	409.2	409.3	409.8	410.6	410.4	410.9	411.7	412.7	413.8	414.6
12.5°	395.6	395.9	396.4	396.9	397.7	398.2	399.0	399.9	401.5	403.1	404.9
15°	381.3	381.4	381.6	382.7	383.5	384.6	385.3	387.2	388.6	390.8	392.7
17.5°	365.2	365.0	365.5	366.5	368.4	368.8	369.6	371.7	373.8	376.8	379.4
20°	347.7	348.6	349.2	350.5	351.6	352.9	353.5	356.1	358.5	361.4	364.7
22.5°	331.1	330.3	331.4	332.8	333.8	334.7	335.9	338.6	341.1	344.6	348.0
25°	312.3	312.8	313.6	314.7	315.9	317.2	318.5	321.4	322.8	326.5	329.5
27.5°	294.4	295.2	295.6	297.0	298.1	299.1	299.7	303.0	304.3	307.5	310.5
30°	276.4	277.2	277.2	278.8	279.6	280.6	282.2	284.4	286.3	288.5	290.8
32.5°	259.1	259.1	259.7	261.1	261.9	263.0	263.5	265.1	267.0	269.3	271.7
35°	241.2	241.7	242.3	242.3	243.8	244.4	245.0	246.6	247.9	248.9	250.8
37.5°	224.8	224.8	224.3	225.1	226.1	225.9	226.9	227.7	228.5	229.6	231.2
40°	208.1	208.1	207.4	207.9	208.6	208.4	208.1	208.9	209.5	210.3	211.9
42.5°	191.0	190.7	190.6	190.6	190.9	190.6	190.9	191.0	191.0	191.0	192.0
45°	174.0	174.8	173.8	173.5	173.0	172.6	172.4	172.6	173.2	172.4	172.6
47.5°	157.3	157.6	156.9	156.5	156.0	155.7	156.0	155.0	155.3	155.5	154.9
50°	140.2	139.6	139.6	139.1	139.3	139.1	138.8	138.5	138.5	137.7	137.2
52.5°	124.4	124.8	125.1	124.0	124.1	123.3	123.5	122.7	122.7	121.7	122.0
55°	111.5	111.1	111.1	110.6	110.4	109.6	109.5	109.0	107.9	107.2	106.0
57.5°	98.1	98.0	97.3	97.5	96.6	96.4	96.1	95.3	94.5	93.7	92.3
60°	85.1	85.2	85.2	84.9	84.4	83.6	83.8	82.7	81.6	80.1	78.9
62.5°	74.2	73.8	73.6	73.3	72.3	72.3	71.5	70.7	69.6	68.2	67.1
65°	62.9	63.1	62.6	62.1	61.2	61.0	60.4	59.7	58.6	57.2	55.6
67.5°	52.7	52.4	52.3	51.8	50.8	50.7	50.2	48.8	47.8	46.4	45.1
70°	42.9	42.5	42.7	41.9	40.9	40.5	40.3	39.2	37.8	36.6	35.4
72.5°	33.6	33.6	33.5	32.7	32.2	31.9	31.2	30.0	29.2	27.9	26.9
75°	25.3	25.2	24.9	24.4	23.7	23.4	23.1	22.3	21.2	19.8	19.0
77.5°	17.5	17.7	17.4	17.2	16.4	15.9	15.8	15.3	14.3	13.4	12.6
80°	11.2	11.0	10.8	10.5	10.4	10.2	9.7	9.4	8.4	8.0	7.5
82.5°	6.1	5.7	5.7	5.6	5.3	5.1	4.9	4.6	4.5	4.1	3.8
85°	1.9	2.1	1.9	1.9	1.9	1.8	1.8	1.8	1.6	1.6	1.4
87.5°	0.2	0.3	0.2	0.2	0.3	0.2	0.2	0.3	0.2	0.2	0.3
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°	433.8	433.8	433.8	433.8	433.8	433.8	433.8	433.8	433.8	433.8	433.8
2.5°	432.6	432.7	432.7	432.9	432.9	432.9	432.9	432.9	432.9	432.9	432.9
5°	429.1	429.1	429.4	429.7	429.7	429.7	429.9	430.2	430.2	430.2	430.0
7.5°	423.3	424.0	424.6	425.2	425.4	425.6	425.9	426.5	426.5	426.5	426.5
10°	415.8	417.3	418.1	419.0	419.5	419.8	420.8	420.9	421.4	421.6	421.4
12.5°	406.3	408.2	409.9	411.5	412.2	412.8	413.8	414.7	415.2	415.7	415.5
15°	395.6	397.7	400.4	402.1	403.4	404.4	405.8	407.1	407.9	408.2	408.2
17.5°	382.7	385.3	388.1	391.0	391.8	393.4	395.0	396.7	397.7	397.8	397.7
20°	368.4	371.2	373.6	376.5	378.2	379.0	381.3	383.5	384.5	384.6	384.5
22.5°	351.3	354.0	357.2	360.2	361.7	363.1	365.5	367.7	369.0	370.0	369.0
25°	332.4	336.2	339.2	341.8	343.8	345.3	348.3	350.0	352.1	352.0	352.1
27.5°	313.7	316.9	320.2	323.3	324.5	326.1	328.5	331.4	333.2	334.3	334.1
30°	294.6	297.1	300.0	302.7	304.8	306.1	309.6	310.8	313.1	313.7	313.2
32.5°	274.4	276.1	279.0	282.6	283.4	284.7	286.9	290.1	290.9	291.3	291.4
35°	252.9	256.2	258.6	260.8	261.5	262.6	265.1	267.5	268.3	269.7	269.1
37.5°	232.9	234.8	236.0	238.2	240.1	241.1	242.3	243.9	245.5	246.2	246.0
40°	213.0	214.0	214.9	217.3	217.5	217.5	219.4	221.6	221.6	222.3	222.3
42.5°	192.6	192.8	194.1	195.3	195.7	196.0	197.9	198.2	199.2	199.6	200.3
45°	172.9	173.8	174.6	174.8	175.6	175.7	176.2	176.7	178.1	177.8	178.1
47.5°	154.9	155.3	155.8	155.8	156.3	156.1	156.9	156.5	157.4	157.7	158.2
50°	137.2	138.0	137.5	137.8	137.7	138.1	137.8	137.8	137.8	138.5	138.9
52.5°	120.9	121.1	120.6	120.8	120.8	120.5	120.8	120.6	120.5	120.5	120.6
55°	106.0	105.3	105.0	104.4	103.6	104.5	104.0	103.7	104.4	104.0	104.4
57.5°	91.5	90.7	90.0	89.7	88.6	89.2	88.6	88.3	88.3	88.3	89.1
60°	77.8	77.0	76.2	75.2	75.0	74.7	74.4	73.6	73.8	73.6	73.9
62.5°	65.8	64.2	63.1	62.3	62.1	61.7	61.2	60.4	60.5	60.5	60.7
65°	54.8	53.1	51.5	50.3	50.3	49.6	48.8	48.8	47.8	48.1	48.3
67.5°	43.8	42.4	40.8	40.0	39.5	38.9	38.4	38.1	37.6	37.6	37.9
70°	33.9	32.5	31.7	30.4	30.3	29.8	29.2	28.7	28.5	28.5	28.4
72.5°	25.7	24.4	23.4	22.6	22.1	21.7	21.0	20.9	20.6	20.6	20.9
75°	17.8	17.0	16.3	15.5	15.1	15.0	14.5	14.2	14.2	14.0	14.2
77.5°	11.9	11.2	10.4	10.0	9.7	9.4	9.2	9.1	8.6	8.6	8.6
80°	6.9	6.5	6.2	5.7	5.7	5.6	5.3	5.1	4.9	4.9	4.9
82.5°	3.5	3.3	3.0	2.9	2.9	2.9	2.7	2.7	2.5	2.5	2.5
85°	1.4	1.3	1.1	1.1	1.1	1.1	1.1	1.1	1.3	1.1	1.3
87.5°	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
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°	433.8	433.8	433.8	433.8	433.8	433.8	433.8	433.8	433.8	433.8	433.8
2.5°	432.9	432.7	432.7	432.7	432.7	432.7	432.6	432.6	432.4	432.4	432.4
5°	430.2	430.0	429.9	429.7	429.5	429.4	429.2	429.1	428.6	428.4	428.1
7.5°	426.4	426.0	425.6	425.4	425.1	424.6	424.0	423.7	423.0	422.2	421.9
10°	421.3	420.6	420.1	419.3	419.2	418.6	417.0	416.2	415.0	414.1	413.0
12.5°	415.0	414.4	413.3	412.2	411.5	410.1	408.7	407.4	406.0	403.9	402.3
15°	407.4	406.4	404.2	403.9	402.9	400.7	398.8	396.4	394.2	391.9	390.0
17.5°	397.2	395.1	394.0	392.6	391.5	388.6	386.5	383.8	380.8	378.2	375.5
20°	383.8	381.6	379.7	378.9	377.4	374.9	372.3	369.0	366.0	362.8	360.4
22.5°	367.9	366.5	363.6	362.6	360.9	358.3	355.3	352.1	349.2	345.7	342.6
25°	350.8	348.8	346.5	344.6	343.4	341.0	337.1	334.7	331.6	327.7	325.3
27.5°	332.7	330.3	327.1	325.8	324.7	321.5	318.3	315.3	312.8	309.4	307.3
30°	311.6	309.9	307.8	306.2	304.6	302.1	299.2	295.7	293.0	291.4	288.5
32.5°	290.3	288.9	286.2	285.4	283.6	281.5	279.5	276.9	274.0	271.7	269.4
35°	267.5	266.1	264.2	262.7	262.1	260.7	258.4	256.2	254.8	252.1	250.9
37.5°	244.7	244.2	242.3	240.9	240.4	238.7	237.6	236.0	233.9	233.3	232.0
40°	221.3	221.0	219.9	219.7	218.8	218.3	216.7	215.4	214.5	214.0	213.2
42.5°	199.8	199.5	198.5	198.7	197.7	197.4	197.2	196.1	195.3	194.4	194.5
45°	178.6	178.3	177.6	177.3	177.8	177.6	177.3	176.9	176.9	177.0	176.5
47.5°	158.2	158.5	157.9	158.2	158.2	157.7	157.7	158.4	158.5	158.8	159.2
50°	138.9	139.9	139.6	140.0	140.2	140.4	139.9	140.7	140.5	142.0	141.6
52.5°	121.4	121.6	122.2	122.4	122.5	122.7	123.5	124.1	124.3	124.9	126.0
55°	104.5	104.7	106.0	106.0	106.7	106.9	108.0	108.3	108.8	110.6	110.9
57.5°	88.6	89.5	90.2	90.5	91.0	91.8	92.4	93.8	94.6	95.8	96.9
60°	74.2	75.4	76.2	76.5	77.1	78.1	78.9	80.5	81.9	83.2	84.0
62.5°	61.0	62.0	62.6	63.7	63.7	64.5	66.4	67.4	69.0	70.1	71.5
65°	49.2	49.9	51.0	51.0	51.6	52.9	54.5	55.9	57.5	59.1	60.5
67.5°	38.6	39.0	39.7	40.3	40.6	42.2	43.5	45.6	47.0	48.1	49.9
70°	29.2	29.5	30.3	30.9	31.4	32.5	33.9	35.4	36.8	38.1	39.8
72.5°	20.9	21.5	22.3	22.8	23.1	23.9	25.3	26.8	28.0	29.3	30.3
75°	14.3	14.8	15.1	15.6	16.1	16.7	17.7	18.6	20.1	21.3	22.5
77.5°	8.9	9.4	9.9	10.0	10.2	10.8	11.5	12.4	13.4	14.3	15.1
80°	5.3	5.4	5.6	5.7	6.1	6.5	6.9	7.5	8.1	8.8	9.6
82.5°	2.7	2.9	3.0	3.0	3.0	3.2	3.7	4.0	4.1	4.5	4.9
85°	1.1	1.1	1.1	1.3	1.3	1.4	1.4	1.6	1.6	1.8	1.9
87.5°	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
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°	433.8	433.8	433.8	433.8	433.8	433.8	433.8	433.8
2.5°	432.3	432.3	432.3	432.1	432.3	432.3	432.3	432.1
5°	428.1	427.8	427.8	427.6	427.5	427.5	427.6	427.3
7.5°	421.3	420.8	420.5	420.5	420.3	420.1	420.1	419.3
10°	412.3	411.4	411.4	411.1	409.8	409.6	409.3	409.3
12.5°	401.2	400.1	399.4	398.6	397.8	397.2	397.0	396.4
15°	388.0	386.5	385.4	385.1	383.8	382.9	382.9	382.5
17.5°	373.6	371.4	370.6	369.8	368.0	367.9	367.6	366.1
20°	357.4	355.3	354.2	353.4	352.3	350.7	350.4	350.5
22.5°	340.3	337.5	336.5	335.7	334.6	333.2	333.2	332.0
25°	322.6	320.1	319.1	318.2	316.4	315.8	315.0	315.1
27.5°	304.6	302.2	301.4	299.7	298.6	297.8	297.0	297.0
30°	285.8	284.6	283.3	283.1	280.9	279.9	279.1	278.5
32.5°	267.7	266.1	265.4	264.8	263.7	262.4	262.3	261.1
35°	249.8	248.2	247.4	246.8	245.5	245.0	244.6	244.9
37.5°	231.0	230.7	230.2	229.4	228.6	228.5	227.8	228.6
40°	212.5	212.4	211.7	211.9	211.9	211.6	211.9	211.9
42.5°	194.7	194.7	194.1	194.4	194.5	194.9	195.3	195.7
45°	177.3	177.2	177.3	177.6	177.3	178.1	178.8	179.2
47.5°	159.5	159.6	160.3	160.4	160.8	161.9	161.9	161.9
50°	142.4	143.2	142.9	143.9	143.7	144.4	143.7	143.7
52.5°	126.2	127.0	127.1	127.3	128.3	128.4	128.4	128.3
55°	111.7	112.8	112.3	113.1	113.6	113.9	114.4	114.1
57.5°	98.3	98.8	99.3	99.4	100.1	100.4	100.7	100.4
60°	85.1	86.0	86.8	87.0	87.3	87.6	87.8	88.3
62.5°	72.7	74.2	74.6	74.7	75.5	76.0	76.3	76.6
65°	61.7	62.8	63.6	64.0	64.7	64.7	65.2	65.2
67.5°	51.0	52.1	52.6	52.9	53.9	54.0	54.8	54.8
70°	41.3	42.1	42.4	42.9	43.8	44.5	44.8	45.1
72.5°	31.9	32.8	33.3	33.9	34.6	35.1	35.2	35.7
75°	23.3	24.7	24.9	25.5	26.0	26.6	26.9	26.8
77.5°	16.3	16.7	17.4	17.7	18.2	18.6	19.1	19.1
80°	10.0	10.7	10.8	11.0	11.6	11.9	12.3	12.3
82.5°	5.3	5.6	5.9	6.1	6.4	6.4	6.5	6.7
85°	2.1	2.2	2.2	2.2	2.4	2.5	2.5	2.5
87.5°	0.3	0.5	0.3	0.3	0.5	0.5	0.5	0.5
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)