

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: P880547

Luminaire Tested: **LD4C15D010 EU4159027 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: P880547
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 EU4159027 4LBDWNH
Description: 4 INCH 1500 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 2700K, 90CRI LEDS
AND 4LBDWN TRIM WITH H FINISH
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

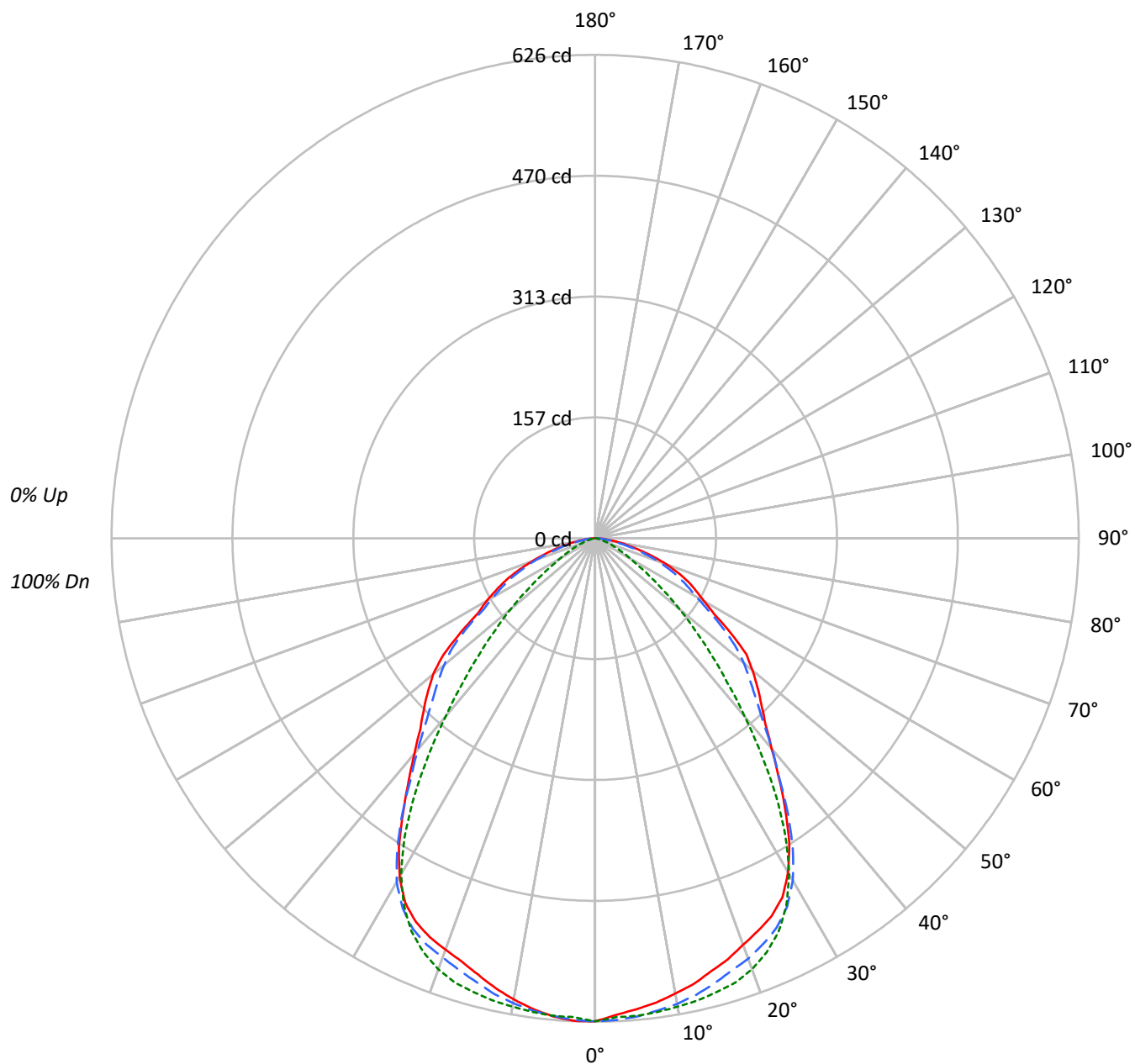
Lumens per Lamp: N/A
Luminaire Lumens: 1273.0 lumens
Efficiency: N/A
Efficacy: 80.6 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.18 / 1.19
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

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

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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
RW	70	50	30	10	70	50	30	10		50	30	10			50	30	10			50
RCR																				
0	119	119	119	119	116	116	116	116		111	111	111			106	106	106			102
1	111	107	103	100	108	104	101	98		100	98	95			96	94	92			93
2	102	95	89	84	100	93	88	83		90	85	81			87	83	80			84
3	94	85	78	72	92	84	77	72		81	75	70			78	73	69			76
4	87	77	69	63	85	75	68	62		73	67	62			71	65	61			69
5	81	69	61	55	79	68	61	55		66	60	54			64	58	54			63
6	75	63	55	49	73	62	55	49		60	54	49			59	53	48			57
7	70	58	50	44	68	57	49	44		56	49	44			54	48	43			53
8	66	53	45	40	64	52	45	40		51	44	40			50	44	39			49
9	62	49	41	36	60	49	41	36		47	41	36			46	40	36			45
10	58	46	38	33	57	45	38	33		44	38	33			43	37	33			42

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	76845	76845	76845
5°	75486	76546	76657
10°	74675	76833	75635
15°	73807	77355	74417
20°	73213	77632	74102
25°	73186	76181	74351
30°	70844	71256	71809
35°	64370	61340	64940
40°	56949	48305	58328
45°	52835	36781	54503
50°	50763	27235	52235
55°	45965	18763	45344
60°	39952	12777	39731
65°	38604	9244	36657
70°	34914	6214	31107
75°	28765	4082	24683
80°	23135	2688	18395
85°	19029	1269	12122



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	59.0	4.6
10°-20°	168.8	13.3
20°-30°	255.1	20.0
30°-40°	266.9	21.0
40°-50°	216.2	17.0
50°-60°	157.2	12.4
60°-70°	97.0	7.6
70°-80°	43.8	3.4
80°-90°	8.9	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°	482.9	37.9
0°-40°	749.9	58.9
0°-60°	1123.3	88.2
0°-90°	1273.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1273.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	626	626	626	626	626	
5°	612	622	621	621	622	58
15°	580	597	608	595	585	164
25°	540	556	562	558	548	247
35°	429	435	409	435	433	268
45°	304	294	212	298	314	236
55°	215	201	88	203	212	191
65°	133	119	32	117	126	130
75°	61	52	9	45	52	66
85°	14	11	1	8	9	15
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°	625.5	625.5	625.5	625.5	625.5	625.5	625.5	625.5	625.5	625.5	625.5
2.5°	617.8	617.8	623.6	630.3	624.5	618.7	622.6	620.7	627.4	627.4	624.5
5°	612.1	614.0	618.7	624.5	619.8	614.0	618.7	616.9	623.6	623.6	621.6
7.5°	606.3	607.2	613.0	619.8	614.9	609.2	613.0	612.1	617.8	618.7	616.9
10°	598.6	599.5	605.3	612.1	607.2	602.4	606.3	605.3	613.0	613.0	612.1
12.5°	590.9	591.8	597.6	603.4	598.6	593.8	597.6	597.6	605.3	606.3	605.3
15°	580.3	582.2	587.0	592.8	589.9	584.1	588.0	588.0	594.7	596.6	596.6
17.5°	571.6	572.6	577.4	583.2	579.3	574.5	578.3	578.3	585.1	587.0	587.0
20°	560.0	562.0	566.8	572.6	569.7	565.8	568.7	568.7	576.4	578.3	579.3
22.5°	550.4	552.3	556.2	563.9	559.1	556.2	560.0	559.1	567.8	568.7	568.7
25°	539.9	541.8	546.6	551.4	548.5	545.7	548.5	548.5	555.2	556.2	556.2
27.5°	524.5	525.4	530.2	535.1	532.2	528.3	532.2	531.2	537.9	538.9	537.9
30°	499.4	501.4	503.3	510.0	507.1	504.2	508.1	506.2	512.9	512.9	511.9
32.5°	467.7	467.7	471.6	476.4	472.5	470.6	473.5	474.4	479.3	479.3	476.4
35°	429.2	431.1	434.0	436.9	434.0	432.1	435.0	434.0	439.8	437.8	435.0
37.5°	390.7	391.7	394.6	398.4	394.6	391.7	392.6	391.7	396.5	396.5	391.7
40°	355.1	357.0	358.9	362.8	358.9	357.0	358.0	355.1	360.9	358.9	356.0
42.5°	326.2	327.2	330.1	332.0	328.2	327.2	328.2	326.2	329.1	327.2	321.4
45°	304.1	304.1	305.1	307.9	304.1	303.1	303.1	301.2	304.1	300.2	294.5
47.5°	284.8	285.8	286.8	288.7	285.8	282.9	283.9	280.0	281.9	279.0	271.3
50°	265.6	267.5	268.5	270.4	267.5	265.6	266.6	262.7	262.7	257.9	251.2
52.5°	246.4	247.3	246.4	248.3	246.4	243.5	244.4	240.6	240.6	234.8	228.1
55°	214.6	215.5	216.5	218.4	216.5	213.6	215.5	212.7	212.7	208.8	201.1
57.5°	182.8	183.8	184.8	185.7	185.7	183.8	184.8	182.8	181.9	179.0	173.2
60°	162.6	162.6	162.6	163.6	162.6	161.7	161.7	159.7	159.7	155.9	150.1
62.5°	147.2	148.2	148.2	149.1	148.2	147.2	146.3	144.3	143.4	139.6	134.7
65°	132.8	132.8	131.9	133.8	132.8	131.9	131.9	129.9	128.0	124.2	119.3
67.5°	115.5	116.4	115.5	116.4	116.4	115.5	114.5	112.6	111.6	108.7	103.0
70°	97.2	97.2	97.2	98.2	97.2	97.2	98.2	95.3	94.3	90.4	85.6
72.5°	78.9	79.9	79.9	78.9	79.9	77.9	77.9	77.9	77.0	73.1	68.3
75°	60.6	61.6	61.6	62.6	61.6	60.6	60.6	59.7	58.7	55.8	52.0
77.5°	45.2	45.2	46.2	46.2	46.2	45.2	45.2	43.3	43.3	41.4	37.5
80°	32.7	32.7	31.8	32.7	32.7	31.8	31.8	30.8	30.8	28.9	26.0
82.5°	21.2	22.1	22.1	22.1	22.1	21.2	21.2	21.2	20.2	19.2	17.3
85°	13.5	13.5	13.5	13.5	14.4	13.5	14.4	13.5	13.5	11.5	10.6
87.5°	5.8	5.8	5.8	6.7	6.7	5.8	5.8	5.8	5.8	5.8	4.8
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°	625.5	625.5	625.5	625.5	625.5	625.5	625.5	625.5	625.5	625.5	625.5
2.5°	624.5	625.5	622.6	626.4	623.6	624.5	625.5	624.5	620.7	620.7	631.3
5°	620.7	622.6	619.8	624.5	622.6	622.6	624.5	623.6	619.8	620.7	630.3
7.5°	616.9	619.8	617.8	622.6	619.8	619.8	621.6	621.6	617.8	618.7	627.4
10°	611.1	614.9	614.0	618.7	615.9	615.9	618.7	618.7	614.9	615.9	624.5
12.5°	606.3	610.1	609.2	614.0	612.1	613.0	614.0	615.9	611.1	613.0	620.7
15°	598.6	602.4	602.4	607.2	605.3	607.2	609.2	612.1	608.2	608.2	615.9
17.5°	589.9	594.7	594.7	598.6	598.6	599.5	603.4	606.3	602.4	603.4	610.1
20°	580.3	586.1	586.1	590.9	589.9	591.8	594.7	597.6	593.8	593.8	601.5
22.5°	570.6	575.5	576.4	579.3	579.3	580.3	583.2	585.1	580.3	580.3	588.0
25°	557.2	562.0	562.9	564.9	562.9	562.9	564.9	566.8	562.0	562.0	568.7
27.5°	538.9	543.7	543.7	542.8	540.8	541.8	540.8	541.8	537.0	536.0	542.8
30°	511.9	514.8	514.8	513.9	511.0	511.0	508.1	509.1	502.3	502.3	508.1
32.5°	475.4	478.2	476.4	474.4	470.6	468.7	466.7	465.8	459.0	459.0	465.8
35°	432.1	434.0	431.1	427.3	422.4	419.5	416.7	412.9	408.0	409.0	412.9
37.5°	387.8	387.8	384.0	376.3	372.4	367.6	362.8	362.8	355.1	354.1	357.0
40°	350.3	346.4	339.7	329.1	322.4	317.6	310.8	307.0	301.2	301.2	306.0
42.5°	316.6	308.9	300.2	285.8	279.0	273.3	264.7	260.8	254.1	253.1	256.0
45°	286.8	279.0	266.6	251.2	242.5	235.8	223.2	218.4	212.7	211.7	213.6
47.5°	262.7	254.1	238.7	218.4	209.8	201.1	188.6	181.9	177.1	174.2	177.1
50°	241.5	230.0	213.6	192.5	180.9	173.2	157.8	151.1	144.3	142.5	143.4
52.5°	218.4	206.9	189.6	167.4	156.8	145.3	130.9	121.3	115.5	112.6	115.5
55°	193.4	181.9	164.6	142.5	130.9	120.3	104.9	97.2	90.4	87.6	90.4
57.5°	166.5	155.9	140.5	118.4	107.8	98.2	83.7	76.0	69.3	67.3	69.3
60°	143.4	134.7	119.3	98.2	89.5	78.9	66.4	58.7	52.9	52.0	52.9
62.5°	128.0	118.4	103.9	83.7	75.0	66.4	54.9	47.2	42.3	41.4	42.3
65°	112.6	102.0	88.5	71.2	62.6	55.8	44.3	37.5	32.7	31.8	32.7
67.5°	95.3	85.6	74.1	58.7	52.0	45.2	35.6	28.9	25.0	24.1	25.0
70°	78.9	70.2	58.7	47.2	40.4	35.6	26.9	22.1	18.3	17.3	18.3
72.5°	62.6	54.9	45.2	35.6	31.8	26.9	21.2	16.3	13.5	12.5	13.5
75°	48.1	42.3	34.6	26.0	23.1	20.2	14.4	11.5	9.6	8.6	9.6
77.5°	33.7	29.8	24.1	19.2	16.3	14.4	10.6	7.7	6.7	5.8	6.7
80°	23.1	20.2	16.3	12.5	10.6	8.6	6.7	4.8	3.8	3.8	3.8
82.5°	15.4	12.5	9.6	7.7	6.7	5.8	3.8	2.9	2.9	2.0	2.0
85°	8.6	7.7	5.8	4.8	3.8	2.9	2.0	2.0	0.9	0.9	0.9
87.5°	3.8	2.9	2.0	2.0	0.9	0.9	0.9	0.9	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°	625.5	625.5	625.5	625.5	625.5	625.5	625.5	625.5	625.5	625.5	625.5
2.5°	628.4	625.5	629.3	625.5	623.6	625.5	623.6	629.3	624.5	620.7	624.5
5°	627.4	623.6	627.4	624.5	621.6	622.6	620.7	626.4	620.7	617.8	619.8
7.5°	625.5	622.6	624.5	621.6	618.7	619.8	617.8	622.6	616.9	614.0	615.9
10°	622.6	619.8	620.7	618.7	615.9	615.9	614.0	617.8	611.1	607.2	609.2
12.5°	618.7	614.9	616.9	614.0	610.1	610.1	608.2	611.1	604.3	600.5	601.5
15°	614.0	610.1	610.1	607.2	603.4	603.4	599.5	602.4	594.7	590.9	590.9
17.5°	608.2	603.4	603.4	600.5	595.7	594.7	591.8	594.7	586.1	582.2	582.2
20°	599.5	595.7	594.7	592.8	588.0	587.0	583.2	584.1	577.4	574.5	573.5
22.5°	588.0	584.1	585.1	582.2	578.3	577.4	573.5	576.4	569.7	566.8	567.8
25°	567.8	565.8	567.8	566.8	563.9	563.9	562.0	563.9	558.1	556.2	557.2
27.5°	544.6	543.7	544.6	544.6	542.8	542.8	542.8	545.7	539.9	538.9	538.9
30°	511.0	511.0	511.9	512.9	512.9	514.8	513.9	517.7	513.9	511.9	513.9
32.5°	466.7	470.6	473.5	473.5	473.5	475.4	477.3	480.2	476.4	477.3	477.3
35°	416.7	419.5	421.5	426.3	423.4	430.1	432.1	435.9	435.0	436.9	435.9
37.5°	360.9	364.7	368.6	375.3	374.3	382.0	385.9	393.6	391.7	395.5	397.4
40°	308.9	314.7	320.5	325.3	329.1	336.8	344.5	354.1	357.0	359.9	360.9
42.5°	258.9	264.7	274.2	281.0	286.8	299.3	309.9	321.4	324.3	330.1	332.0
45°	218.4	223.2	234.8	243.5	248.3	266.6	279.0	293.5	298.3	305.1	307.9
47.5°	180.9	189.6	201.1	211.7	218.4	237.7	254.1	269.5	276.2	283.9	287.7
50°	148.2	157.8	173.2	182.8	192.5	213.6	231.9	248.3	255.0	263.7	267.5
52.5°	121.3	131.9	146.3	156.8	167.4	189.6	208.8	224.2	232.9	238.7	244.4
55°	95.3	106.8	121.3	132.8	141.4	165.5	181.9	197.3	203.1	207.8	210.7
57.5°	74.1	82.7	97.2	106.8	117.4	138.5	154.9	166.5	171.3	177.1	179.0
60°	57.8	66.4	79.9	89.5	99.1	119.3	135.7	147.2	152.0	156.8	159.7
62.5°	46.2	54.9	67.3	76.0	84.7	103.0	117.4	129.0	134.7	139.6	142.5
65°	36.6	44.3	54.9	63.5	70.2	86.6	101.0	111.6	117.4	122.2	125.1
67.5°	28.9	35.6	45.2	51.0	57.8	71.2	83.7	93.3	98.2	103.9	106.8
70°	22.1	26.9	35.6	40.4	45.2	56.8	66.4	76.0	80.8	84.7	86.6
72.5°	16.3	20.2	26.9	30.8	33.7	43.3	51.0	57.8	61.6	65.5	67.3
75°	11.5	14.4	19.2	22.1	24.1	30.8	37.5	42.3	45.2	48.1	51.0
77.5°	7.7	9.6	12.5	14.4	16.3	21.2	25.0	28.9	31.8	34.6	35.6
80°	4.8	6.7	8.6	9.6	10.6	13.5	17.3	19.2	21.2	23.1	24.1
82.5°	2.9	3.8	4.8	5.8	6.7	8.6	10.6	12.5	13.5	15.4	16.3
85°	0.9	2.0	2.0	2.9	2.9	4.8	5.8	6.7	7.7	8.6	9.6
87.5°	0.0	0.0	0.9	0.9	0.9	0.9	2.0	2.0	2.0	2.0	2.0
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°	625.5	625.5	625.5	625.5	625.5	625.5	625.5	625.5
2.5°	628.4	625.5	623.6	622.6	629.3	620.7	624.5	625.5
5°	624.5	621.6	619.8	618.7	624.5	616.9	619.8	621.6
7.5°	618.7	616.9	614.0	613.0	618.7	610.1	614.0	614.9
10°	612.1	609.2	607.2	606.3	611.1	602.4	606.3	606.3
12.5°	603.4	601.5	597.6	597.6	601.5	593.8	596.6	596.6
15°	591.8	589.9	586.1	586.1	589.9	582.2	585.1	585.1
17.5°	582.2	580.3	577.4	576.4	580.3	572.6	575.5	574.5
20°	574.5	572.6	568.7	568.7	571.6	563.9	566.8	566.8
22.5°	567.8	566.8	562.9	562.9	566.8	559.1	561.0	559.1
25°	557.2	556.2	552.3	553.3	555.2	547.5	550.4	548.5
27.5°	539.9	539.9	536.0	535.1	537.9	531.2	533.1	532.2
30°	512.9	513.9	509.1	509.1	510.0	504.2	507.1	506.2
32.5°	476.4	477.3	473.5	472.5	475.4	470.6	472.5	472.5
35°	435.9	436.9	434.0	434.0	436.9	434.0	434.0	433.0
37.5°	395.5	397.4	395.5	396.5	398.4	395.5	397.4	396.5
40°	362.8	364.7	361.8	363.7	365.7	362.8	365.7	363.7
42.5°	333.0	335.9	333.9	335.9	337.8	335.9	337.8	334.9
45°	310.8	312.8	311.8	312.8	314.7	313.7	314.7	313.7
47.5°	289.6	293.5	291.6	293.5	296.4	294.5	296.4	293.5
50°	270.4	273.3	272.4	274.2	275.2	274.2	276.2	273.3
52.5°	245.4	248.3	247.3	247.3	249.2	247.3	249.2	247.3
55°	212.7	213.6	213.6	214.6	213.6	212.7	213.6	211.7
57.5°	180.9	182.8	180.0	182.8	181.9	180.9	180.9	179.0
60°	160.7	163.6	161.7	163.6	162.6	162.6	162.6	161.7
62.5°	144.3	146.3	144.3	145.3	145.3	145.3	144.3	143.4
65°	126.1	129.0	127.0	128.0	127.0	126.1	127.0	126.1
67.5°	107.8	108.7	108.7	107.8	107.8	107.8	107.8	105.9
70°	87.6	88.5	87.6	89.5	88.5	87.6	88.5	86.6
72.5°	68.3	69.3	68.3	69.3	68.3	68.3	68.3	68.3
75°	51.0	52.0	52.0	52.0	52.0	52.0	50.1	52.0
77.5°	36.6	36.6	36.6	37.5	36.6	36.6	36.6	36.6
80°	25.0	25.0	25.0	26.0	25.0	26.0	25.0	26.0
82.5°	16.3	16.3	16.3	16.3	16.3	16.3	16.3	16.3
85°	8.6	9.6	9.6	8.6	8.6	8.6	8.6	8.6
87.5°	2.0	0.9	0.9	0.9	0.9	0.9	0.9	0.9
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)