

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: P880548

Luminaire Tested: **LD4C15D010 EU4159030 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: P880548
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 EU4159030 4LBDWNH
Description: 4 INCH 1500 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 3000K, 90CRI LEDS
AND 4LBDWN TRIM WITH H FINISH
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

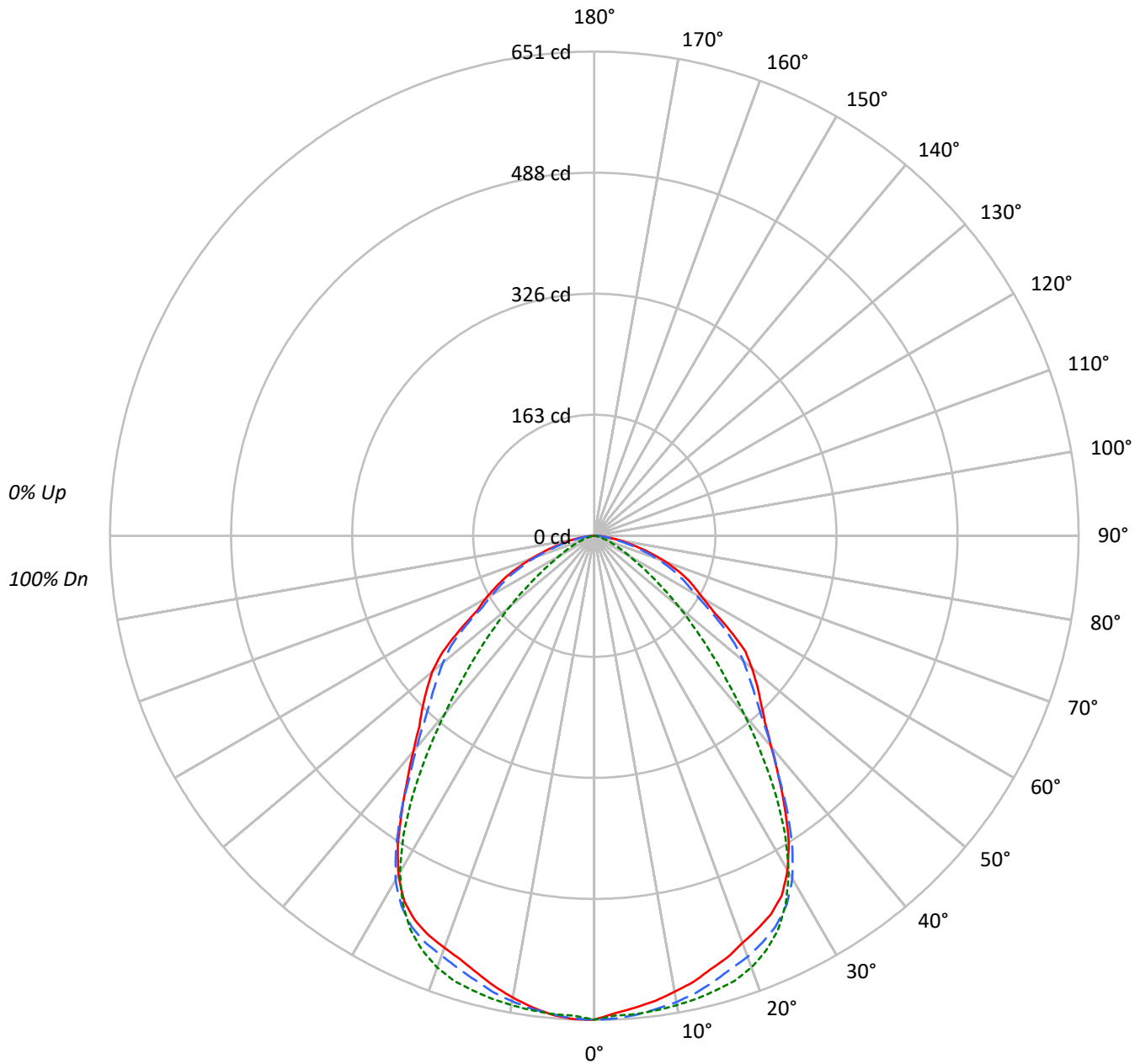
Lumens per Lamp: N/A
Luminaire Lumens: 1324.0 lumens
Efficiency: N/A
Efficacy: 83.8 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.18 / 1.19
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

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

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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	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°	79928	79928	79928
5°	78507	79617	79740
10°	77656	79914	78654
15°	76758	80446	77393
20°	76155	80744	77070
25°	76113	79231	77333
30°	73682	74121	74689
35°	66949	63800	67549
40°	59226	50229	60669
45°	54954	38258	56692
50°	52789	28325	54337
55°	47807	19513	47164
60°	41549	13268	41328
65°	40145	9622	38110
70°	36315	6466	32364
75°	29904	4272	25632
80°	24054	2830	19102
85°	19734	1410	12686



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	61.4	4.6
10°-20°	175.6	13.3
20°-30°	265.3	20.0
30°-40°	277.6	21.0
40°-50°	224.8	17.0
50°-60°	163.5	12.4
60°-70°	100.9	7.6
70°-80°	45.6	3.4
80°-90°	9.3	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°	502.3	37.9
0°-40°	779.9	58.9
0°-60°	1168.3	88.2
0°-90°	1324.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1324.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	651	651	651	651	651	
5°	637	647	646	646	647	60
15°	604	620	632	618	608	171
25°	562	578	584	580	570	257
35°	446	452	425	452	450	278
45°	316	306	220	310	326	246
55°	223	209	91	211	220	199
65°	138	124	33	122	131	135
75°	63	54	9	47	54	68
85°	14	11	1	8	9	16
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°	650.6	650.6	650.6	650.6	650.6	650.6	650.6	650.6	650.6	650.6	650.6
2.5°	642.5	642.5	648.6	655.5	649.6	643.5	647.5	645.6	652.6	652.6	649.6
5°	636.6	638.5	643.5	649.6	644.6	638.5	643.5	641.6	648.6	648.6	646.6
7.5°	630.5	631.5	637.6	644.6	639.5	633.6	637.6	636.6	642.5	643.5	641.6
10°	622.5	623.5	629.6	636.6	631.5	626.5	630.5	629.6	637.6	637.6	636.6
12.5°	614.5	615.5	621.6	627.5	622.5	617.6	621.6	621.6	629.6	630.5	629.6
15°	603.5	605.5	610.5	616.5	613.6	607.5	611.5	611.5	618.5	620.5	620.5
17.5°	594.5	595.5	600.5	606.5	602.5	597.5	601.5	601.5	608.5	610.5	610.5
20°	582.5	584.5	589.5	595.5	592.5	588.5	591.5	591.5	599.5	601.5	602.5
22.5°	572.5	574.5	578.5	586.5	581.5	578.5	582.5	581.5	590.5	591.5	591.5
25°	561.5	563.5	568.5	573.5	570.5	567.5	570.5	570.5	577.5	578.5	578.5
27.5°	545.5	546.5	551.5	556.5	553.5	549.5	553.5	552.5	559.5	560.5	559.5
30°	519.4	521.5	523.4	530.5	527.4	524.4	528.4	526.5	533.5	533.5	532.4
32.5°	486.4	486.4	490.5	495.4	491.4	489.4	492.4	493.4	498.5	498.5	495.4
35°	446.4	448.4	451.4	454.4	451.4	449.4	452.4	451.4	457.4	455.4	452.4
37.5°	406.4	407.4	410.4	414.4	410.4	407.4	408.3	407.4	412.3	412.3	407.4
40°	369.3	371.3	373.3	377.3	373.3	371.3	372.3	369.3	375.3	373.3	370.3
42.5°	339.3	340.3	343.3	345.3	341.3	340.3	341.3	339.3	342.3	340.3	334.3
45°	316.3	316.3	317.3	320.3	316.3	315.3	315.3	313.2	316.3	312.3	306.3
47.5°	296.3	297.2	298.3	300.3	297.2	294.3	295.3	291.3	293.2	290.2	282.2
50°	276.2	278.2	279.3	281.2	278.2	276.2	277.2	273.2	273.2	268.2	261.2
52.5°	256.2	257.2	256.2	258.2	256.2	253.2	254.2	250.2	250.2	244.2	237.2
55°	223.2	224.2	225.2	227.2	225.2	222.2	224.2	221.2	221.2	217.2	209.2
57.5°	190.1	191.2	192.2	193.2	193.2	191.2	192.2	190.1	189.2	186.1	180.2
60°	169.1	169.1	169.1	170.1	169.1	168.2	168.2	166.1	166.1	162.1	156.2
62.5°	153.1	154.1	154.1	155.1	154.1	153.1	152.2	150.1	149.1	145.1	140.1
65°	138.1	138.1	137.1	139.1	138.1	137.1	137.1	135.1	133.1	129.1	124.1
67.5°	120.1	121.1	120.1	121.1	121.1	120.1	119.1	117.1	116.1	113.1	107.1
70°	101.1	101.1	101.1	102.1	101.1	101.1	102.1	99.1	98.1	94.1	89.1
72.5°	82.0	83.1	83.1	82.0	83.1	81.1	81.1	81.1	80.1	76.1	71.0
75°	63.0	64.1	64.1	65.1	64.1	63.0	63.0	62.0	61.1	58.0	54.0
77.5°	47.0	47.0	48.0	48.0	48.0	47.0	47.0	45.1	45.1	43.0	39.0
80°	34.0	34.0	33.1	34.0	34.0	33.1	33.1	32.0	32.0	30.0	27.0
82.5°	22.0	23.0	23.0	23.0	23.0	22.0	22.0	22.0	21.0	20.0	18.0
85°	14.0	14.0	14.0	14.0	15.0	14.0	15.0	14.0	14.0	12.0	11.0
87.5°	6.0	6.0	6.0	7.0	7.0	6.0	6.0	6.0	6.0	6.0	5.0
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°	650.6	650.6	650.6	650.6	650.6	650.6	650.6	650.6	650.6	650.6	650.6
2.5°	649.6	650.6	647.5	651.5	648.6	649.6	650.6	649.6	645.6	645.6	656.6
5°	645.6	647.5	644.6	649.6	647.5	647.5	649.6	648.6	644.6	645.6	655.5
7.5°	641.6	644.6	642.5	647.5	644.6	644.6	646.6	646.6	642.5	643.5	652.6
10°	635.5	639.5	638.5	643.5	640.6	640.6	643.5	643.5	639.5	640.6	649.6
12.5°	630.5	634.5	633.6	638.5	636.6	637.6	638.5	640.6	635.5	637.6	645.6
15°	622.5	626.5	626.5	631.5	629.6	631.5	633.6	636.6	632.5	632.5	640.6
17.5°	613.6	618.5	618.5	622.5	622.5	623.5	627.5	630.5	626.5	627.5	634.5
20°	603.5	609.6	609.6	614.5	613.6	615.5	618.5	621.6	617.6	617.6	625.6
22.5°	593.5	598.5	599.5	602.5	602.5	603.5	606.5	608.5	603.5	603.5	611.5
25°	579.5	584.5	585.5	587.5	585.5	585.5	587.5	589.5	584.5	584.5	591.5
27.5°	560.5	565.5	565.5	564.5	562.5	563.5	562.5	563.5	558.5	557.5	564.5
30°	532.4	535.4	535.4	534.5	531.4	531.4	528.4	529.5	522.5	522.5	528.4
32.5°	494.5	497.4	495.4	493.4	489.4	487.4	485.4	484.4	477.4	477.4	484.4
35°	449.4	451.4	448.4	444.4	439.4	436.3	433.4	429.4	424.3	425.4	429.4
37.5°	403.4	403.4	399.4	391.4	387.4	382.3	377.3	377.3	369.3	368.3	371.3
40°	364.3	360.3	353.3	342.3	335.3	330.3	323.3	319.3	313.2	313.2	318.3
42.5°	329.3	321.3	312.3	297.2	290.2	284.3	275.3	271.3	264.2	263.2	266.2
45°	298.3	290.2	277.2	261.2	252.2	245.2	232.2	227.2	221.2	220.2	222.2
47.5°	273.2	264.2	248.2	227.2	218.2	209.2	196.2	189.2	184.2	181.1	184.2
50°	251.2	239.2	222.2	200.2	188.2	180.2	164.2	157.1	150.1	148.2	149.1
52.5°	227.2	215.2	197.2	174.1	163.1	151.1	136.1	126.1	120.1	117.1	120.1
55°	201.2	189.2	171.2	148.2	136.1	125.1	109.1	101.1	94.1	91.1	94.1
57.5°	173.1	162.1	146.1	123.1	112.1	102.1	87.1	79.1	72.1	70.0	72.1
60°	149.1	140.1	124.1	102.1	93.1	82.0	69.1	61.1	55.0	54.0	55.0
62.5°	133.1	123.1	108.1	87.1	78.0	69.1	57.1	49.1	44.0	43.0	44.0
65°	117.1	106.1	92.1	74.0	65.1	58.0	46.0	39.0	34.0	33.1	34.0
67.5°	99.1	89.1	77.1	61.1	54.0	47.0	37.1	30.0	26.0	25.1	26.0
70°	82.0	73.1	61.1	49.1	42.0	37.1	28.0	23.0	19.0	18.0	19.0
72.5°	65.1	57.1	47.0	37.1	33.1	28.0	22.0	17.0	14.0	13.0	14.0
75°	50.0	44.0	36.0	27.0	24.0	21.0	15.0	12.0	10.0	9.0	10.0
77.5°	35.0	31.0	25.1	20.0	17.0	15.0	11.0	8.0	7.0	6.0	7.0
80°	24.0	21.0	17.0	13.0	11.0	9.0	7.0	5.0	4.0	4.0	4.0
82.5°	16.0	13.0	10.0	8.0	7.0	6.0	4.0	3.0	3.0	2.0	2.0
85°	9.0	8.0	6.0	5.0	4.0	3.0	2.0	2.0	1.0	1.0	1.0
87.5°	4.0	3.0	2.0	2.0	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



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CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	650.6	650.6	650.6	650.6	650.6	650.6	650.6	650.6	650.6	650.6	650.6
2.5°	653.6	650.6	654.6	650.6	648.6	650.6	648.6	654.6	649.6	645.6	649.6
5°	652.6	648.6	652.6	649.6	646.6	647.5	645.6	651.5	645.6	642.5	644.6
7.5°	650.6	647.5	649.6	646.6	643.5	644.6	642.5	647.5	641.6	638.5	640.6
10°	647.5	644.6	645.6	643.5	640.6	640.6	638.5	642.5	635.5	631.5	633.6
12.5°	643.5	639.5	641.6	638.5	634.5	634.5	632.5	635.5	628.5	624.5	625.6
15°	638.5	634.5	634.5	631.5	627.5	627.5	623.5	626.5	618.5	614.5	614.5
17.5°	632.5	627.5	627.5	624.5	619.5	618.5	615.5	618.5	609.6	605.5	605.5
20°	623.5	619.5	618.5	616.5	611.5	610.5	606.5	607.5	600.5	597.5	596.5
22.5°	611.5	607.5	608.5	605.5	601.5	600.5	596.5	599.5	592.5	589.5	590.5
25°	590.5	588.5	590.5	589.5	586.5	586.5	584.5	586.5	580.5	578.5	579.5
27.5°	566.5	565.5	566.5	566.5	564.5	564.5	564.5	567.5	561.5	560.5	560.5
30°	531.4	531.4	532.4	533.5	533.5	535.4	534.5	538.5	534.5	532.4	534.5
32.5°	485.4	489.4	492.4	492.4	492.4	494.5	496.4	499.4	495.4	496.4	496.4
35°	433.4	436.3	438.4	443.4	440.4	447.4	449.4	453.4	452.4	454.4	453.4
37.5°	375.3	379.3	383.4	390.4	389.3	397.3	401.3	409.3	407.4	411.4	413.3
40°	321.3	327.3	333.3	338.3	342.3	350.3	358.3	368.3	371.3	374.3	375.3
42.5°	269.2	275.3	285.2	292.3	298.3	311.3	322.3	334.3	337.3	343.3	345.3
45°	227.2	232.2	244.2	253.2	258.2	277.2	290.2	305.2	310.3	317.3	320.3
47.5°	188.2	197.2	209.2	220.2	227.2	247.2	264.2	280.2	287.3	295.3	299.3
50°	154.1	164.2	180.2	190.1	200.2	222.2	241.2	258.2	265.2	274.2	278.2
52.5°	126.1	137.1	152.2	163.1	174.1	197.2	217.2	233.2	242.2	248.2	254.2
55°	99.1	111.1	126.1	138.1	147.1	172.2	189.2	205.2	211.2	216.2	219.2
57.5°	77.1	86.1	101.1	111.1	122.1	144.1	161.1	173.1	178.1	184.2	186.1
60°	60.1	69.1	83.1	93.1	103.1	124.1	141.1	153.1	158.1	163.1	166.1
62.5°	48.0	57.1	70.0	79.1	88.1	107.1	122.1	134.1	140.1	145.1	148.2
65°	38.0	46.0	57.1	66.0	73.1	90.1	105.1	116.1	122.1	127.1	130.1
67.5°	30.0	37.1	47.0	53.1	60.1	74.0	87.1	97.1	102.1	108.1	111.1
70°	23.0	28.0	37.1	42.0	47.0	59.0	69.1	79.1	84.1	88.1	90.1
72.5°	17.0	21.0	28.0	32.0	35.0	45.1	53.1	60.1	64.1	68.1	70.0
75°	12.0	15.0	20.0	23.0	25.1	32.0	39.0	44.0	47.0	50.0	53.1
77.5°	8.0	10.0	13.0	15.0	17.0	22.0	26.0	30.0	33.1	36.0	37.1
80°	5.0	7.0	9.0	10.0	11.0	14.0	18.0	20.0	22.0	24.0	25.1
82.5°	3.0	4.0	5.0	6.0	7.0	9.0	11.0	13.0	14.0	16.0	17.0
85°	1.0	2.0	2.0	3.0	3.0	5.0	6.0	7.0	8.0	9.0	10.0
87.5°	0.0	0.0	1.0	1.0	1.0	1.0	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°	650.6	650.6	650.6	650.6	650.6	650.6	650.6	650.6
2.5°	653.6	650.6	648.6	647.5	654.6	645.6	649.6	650.6
5°	649.6	646.6	644.6	643.5	649.6	641.6	644.6	646.6
7.5°	643.5	641.6	638.5	637.6	643.5	634.5	638.5	639.5
10°	636.6	633.6	631.5	630.5	635.5	626.5	630.5	630.5
12.5°	627.5	625.6	621.6	621.6	625.6	617.6	620.5	620.5
15°	615.5	613.6	609.6	609.6	613.6	605.5	608.5	608.5
17.5°	605.5	603.5	600.5	599.5	603.5	595.5	598.5	597.5
20°	597.5	595.5	591.5	591.5	594.5	586.5	589.5	589.5
22.5°	590.5	589.5	585.5	585.5	589.5	581.5	583.5	581.5
25°	579.5	578.5	574.5	575.5	577.5	569.5	572.5	570.5
27.5°	561.5	561.5	557.5	556.5	559.5	552.5	554.5	553.5
30°	533.5	534.5	529.5	529.5	530.5	524.4	527.4	526.5
32.5°	495.4	496.4	492.4	491.4	494.5	489.4	491.4	491.4
35°	453.4	454.4	451.4	451.4	454.4	451.4	451.4	450.4
37.5°	411.4	413.3	411.4	412.3	414.4	411.4	413.3	412.3
40°	377.3	379.3	376.3	378.3	380.3	377.3	380.3	378.3
42.5°	346.3	349.3	347.3	349.3	351.3	349.3	351.3	348.3
45°	323.3	325.3	324.3	325.3	327.3	326.3	327.3	326.3
47.5°	301.2	305.2	303.3	305.2	308.3	306.3	308.3	305.2
50°	281.2	284.3	283.3	285.2	286.2	285.2	287.3	284.3
52.5°	255.2	258.2	257.2	257.2	259.2	257.2	259.2	257.2
55°	221.2	222.2	222.2	223.2	222.2	221.2	222.2	220.2
57.5°	188.2	190.1	187.2	190.1	189.2	188.2	188.2	186.1
60°	167.1	170.1	168.2	170.1	169.1	169.1	169.1	168.2
62.5°	150.1	152.2	150.1	151.1	151.1	151.1	150.1	149.1
65°	131.1	134.1	132.1	133.1	132.1	131.1	132.1	131.1
67.5°	112.1	113.1	113.1	112.1	112.1	112.1	112.1	110.1
70°	91.1	92.1	91.1	93.1	92.1	91.1	92.1	90.1
72.5°	71.0	72.1	71.0	72.1	71.0	71.0	71.0	71.0
75°	53.1	54.0	54.0	54.0	54.0	54.0	52.1	54.0
77.5°	38.0	38.0	38.0	39.0	38.0	38.0	38.0	38.0
80°	26.0	26.0	26.0	27.0	26.0	27.0	26.0	27.0
82.5°	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0
85°	9.0	10.0	10.0	9.0	9.0	9.0	9.0	9.0
87.5°	2.0	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



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— 0°-180° - - 45°-225° - - - 90°-270°













(END OF REPORT)