

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: P843355

Luminaire Tested: **LD4C15DE010B2750 EU4C15B27 4LBDWWLI**

Issue Date: 5/7/2024



Test Information

Test Method: LM-79-08
Report Number: P843355
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2107-320-5)
Test Lab: INNOVATION CENTER
Issue Date: 5/7/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: PORTFOLIO
Catalog Number: LD4C15DE010B2750 EU4C15B27 4LBLDWWLI
Description: 4in Downlight with BioUp LEDs
Light Source: -
Ballast/Driver:

Summary

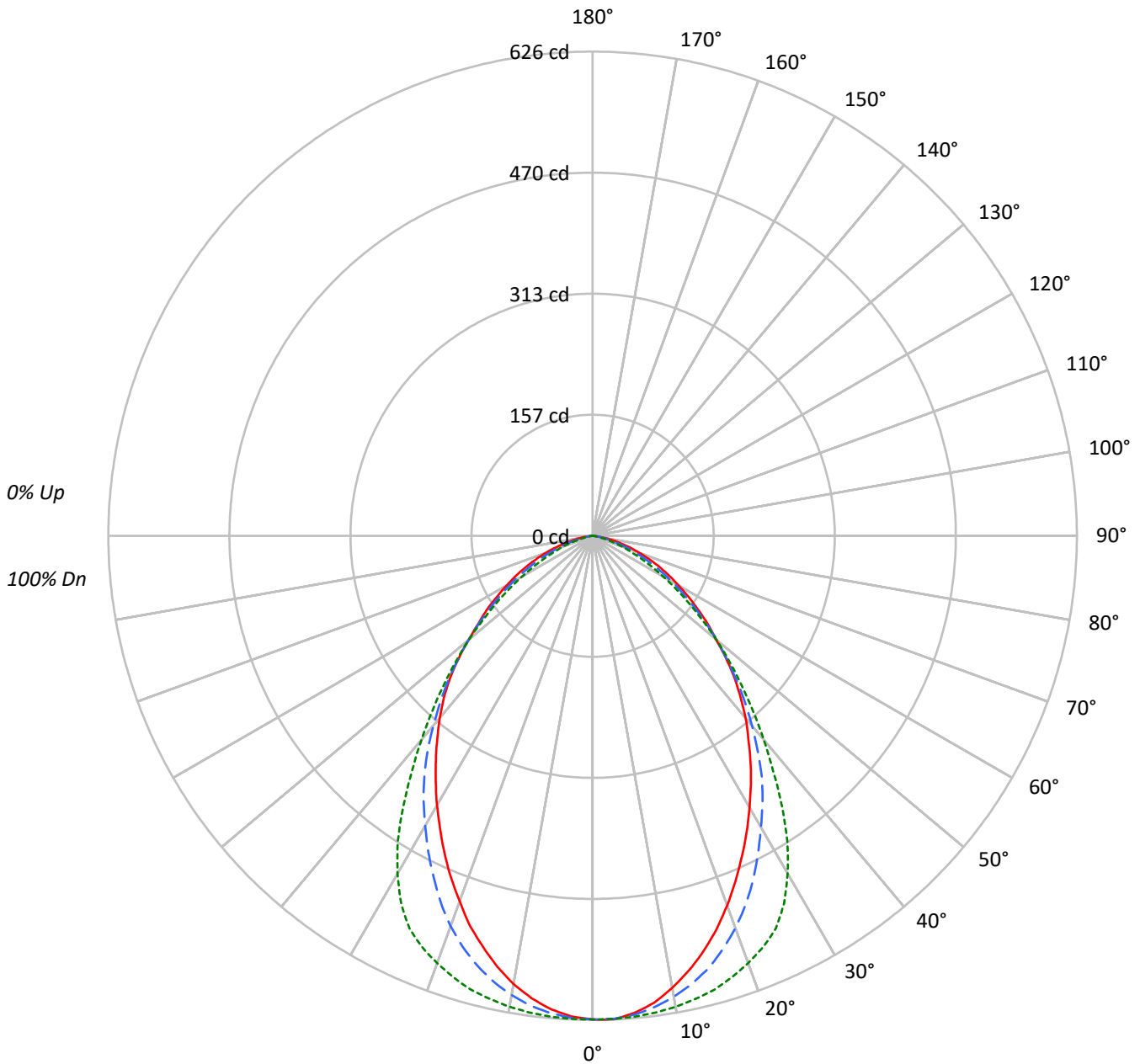
Lumens per Lamp: N/A
Luminaire Lumens: 1148.6 lumens
Efficiency: N/A
Efficacy: 67.6 lumens/watt
Spacing Criteria (0/90/45): 1 / 1.19 / 1.15
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 17
Input Voltage (V):
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

TEST NUMBER: P843355

CATALOG NUMBER: LD4C15DE010B2750 EU4C15B27 4LBLDWWLI

Luminous Intensity Polar Plot





TEST NUMBER: P843355

CATALOG NUMBER: LD4C15DE010B2750 EU4C15B27 4LBLDWWLI

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°	76833	76833	76833
5°	76386	76953	75794
10°	74038	77145	73415
15°	70653	77304	69877
20°	66480	76861	65735
25°	61921	75951	61406
30°	57538	71539	57070
35°	53347	63980	52957
40°	49331	55169	49283
45°	44947	47101	45312
50°	39697	39831	39926
55°	35555	32557	35727
60°	31450	25848	31500
65°	27674	19709	27384
70°	22953	14117	22953
75°	17895	8069	17230
80°	11603	2052	11108
85°	4370	564	3242



TEST NUMBER: P843355

CATALOG NUMBER: LD4C15DE010B2750 EU4C15B27 4LBLDWWLI

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	58.7	5.1
10°-20°	162.4	14.1
20°-30°	227.1	19.8
30°-40°	239.5	20.9
40°-50°	203.8	17.7
50°-60°	143.8	12.5
60°-70°	81.5	7.1
70°-80°	29.1	2.5
80°-90°	2.8	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°	448.2	39.0
0°-40°	687.7	59.9
0°-60°	1035.2	90.1
0°-90°	1148.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1148.6	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	625	625	625	625	625	
5°	619	622	624	620	615	58
15°	556	579	608	576	549	156
25°	457	491	560	486	453	210
35°	356	382	427	379	353	222
45°	259	262	271	264	261	199
55°	166	160	152	161	167	149
65°	95	82	68	82	94	94
75°	38	26	17	25	36	41
85°	3	1	0	1	2	5
90°	0	0	0	0	0	



TEST NUMBER: P843355

CATALOG NUMBER: LD4C15DE010B2750 EU4C15B27 4LBLDWWLI

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	625.4	625.4	625.4	625.4	625.4	625.4	625.4	625.4	625.4	625.4	625.4
2.5°	625.9	624.7	624.7	624.7	624.7	624.7	624.7	624.7	624.7	625.0	625.0
5°	619.4	618.8	618.6	618.6	618.6	618.6	618.8	619.8	620.3	620.9	621.5
7.5°	609.0	608.1	608.6	608.6	609.0	609.5	610.1	611.1	612.6	613.4	614.6
10°	593.5	592.7	593.9	594.3	595.7	596.4	597.6	598.9	601.8	603.2	605.1
12.5°	575.6	575.1	575.6	577.5	578.8	579.8	581.2	584.2	587.1	590.1	593.3
15°	555.5	554.3	555.0	557.4	559.7	561.3	562.4	566.5	570.2	574.9	578.8
17.5°	533.0	531.4	533.3	535.2	538.1	539.6	541.2	545.6	550.8	555.9	560.3
20°	508.5	508.0	509.1	511.7	514.8	516.7	518.0	523.0	527.4	534.4	539.6
22.5°	482.9	483.4	484.4	487.1	489.3	491.9	493.9	498.4	503.5	510.1	516.7
25°	456.8	457.4	459.1	461.0	464.5	465.9	468.4	473.2	477.6	483.7	491.0
27.5°	431.5	431.7	433.6	434.6	437.9	440.8	442.0	447.0	452.1	456.8	463.1
30°	405.6	406.2	407.4	410.0	413.2	414.5	415.9	420.3	424.2	430.1	435.0
32.5°	380.7	380.3	381.7	383.1	386.9	389.0	389.6	394.8	398.3	404.1	408.8
35°	355.7	354.5	356.6	358.1	361.4	363.2	364.1	368.2	371.4	376.3	381.5
37.5°	330.7	331.7	332.6	333.8	335.4	335.9	338.7	339.6	343.8	347.5	350.4
40°	307.6	307.1	306.6	307.8	309.9	310.8	311.1	313.6	314.5	318.3	320.5
42.5°	282.8	283.0	282.8	283.0	284.2	284.2	284.8	286.5	287.3	288.4	291.0
45°	258.7	258.7	258.0	258.2	258.5	258.2	258.5	259.1	260.5	260.5	262.4
47.5°	233.6	233.2	234.2	233.4	233.0	232.7	233.4	232.7	234.2	234.2	234.6
50°	207.7	207.7	208.9	208.7	209.1	208.1	208.4	208.4	208.7	208.4	209.3
52.5°	187.6	187.1	186.7	185.5	185.9	185.0	185.0	185.2	184.6	184.3	183.2
55°	166.0	166.5	165.8	165.3	165.3	164.5	164.1	162.8	161.8	161.2	160.4
57.5°	146.7	147.1	146.9	145.7	144.3	144.6	144.0	142.7	140.6	139.2	138.0
60°	128.0	128.4	128.0	126.8	126.3	125.3	125.1	123.2	121.6	119.7	118.3
62.5°	111.1	111.1	110.8	109.3	108.1	108.3	107.1	105.8	103.6	101.0	98.9
65°	95.2	95.0	93.8	93.1	92.1	91.0	90.3	88.2	86.5	84.4	81.6
67.5°	79.3	78.6	78.2	77.4	75.3	75.1	74.1	72.2	69.9	68.3	66.0
70°	63.9	63.6	62.7	62.7	61.0	60.4	58.9	57.3	55.2	52.9	51.0
72.5°	50.6	50.0	49.1	48.2	46.7	46.3	45.2	43.5	41.7	39.3	36.9
75°	37.7	37.2	36.9	35.7	34.6	33.4	33.0	31.3	29.5	27.8	25.7
77.5°	26.4	25.9	25.3	24.5	23.9	23.2	22.4	21.0	19.5	18.0	16.2
80°	16.4	15.9	15.4	15.2	14.5	14.3	13.3	12.6	11.2	10.3	9.1
82.5°	8.5	8.5	7.9	7.7	7.3	7.0	6.8	6.0	5.4	4.7	4.0
85°	3.1	3.1	2.9	2.5	2.5	2.3	2.3	2.1	1.6	1.6	1.2
87.5°	0.2	0.2	0.4	0.2	0.2	0.2	0.2	0.2	0.2	0.2	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



TEST NUMBER: P843355

CATALOG NUMBER: LD4C15DE010B2750 EU4C15B27 4LBLDWWLI

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	625.4	625.4	625.4	625.4	625.4	625.4	625.4	625.4	625.4	625.4	625.4
2.5°	625.2	625.0	625.2	625.2	625.4	625.4	625.4	625.2	625.4	625.2	625.2
5°	621.5	622.1	622.6	623.1	623.3	623.6	623.6	623.8	624.0	624.0	623.8
7.5°	615.5	617.0	618.4	619.4	619.8	620.3	620.9	621.5	621.9	621.7	621.5
10°	607.8	610.1	612.1	614.0	614.9	615.5	616.7	617.7	618.2	618.4	617.7
12.5°	596.8	600.1	603.2	606.2	607.6	608.6	610.9	612.6	613.4	613.4	612.8
15°	583.1	587.7	592.2	596.2	598.5	599.9	603.4	605.7	607.2	607.8	606.7
17.5°	566.5	571.9	577.3	582.3	584.7	586.8	591.7	595.0	598.0	598.5	597.1
20°	545.2	552.0	558.0	564.4	566.9	570.2	575.8	581.2	585.8	587.9	584.0
22.5°	521.3	528.8	534.4	542.1	545.6	549.1	556.4	563.2	571.3	575.8	568.8
25°	496.6	502.8	509.7	517.1	522.0	525.7	534.2	542.9	553.9	560.3	550.6
27.5°	469.9	475.5	483.7	491.9	495.6	500.3	510.3	519.7	530.2	536.0	528.8
30°	442.3	449.3	457.0	464.5	469.9	474.3	482.5	490.4	499.3	504.3	498.9
32.5°	414.9	421.7	428.2	436.4	439.4	443.5	450.7	457.4	464.3	468.7	462.4
35°	386.1	392.2	398.3	403.9	405.3	410.0	415.9	419.8	423.1	426.6	422.4
37.5°	354.8	359.5	362.6	368.6	370.9	371.7	376.3	379.2	382.7	383.3	383.1
40°	323.0	327.2	329.8	333.5	335.4	335.4	338.7	341.2	343.8	344.0	343.8
42.5°	293.3	295.4	297.5	299.8	299.4	302.2	303.5	304.7	306.6	306.6	307.1
45°	263.4	264.9	266.8	267.4	269.2	269.2	270.3	270.9	271.8	271.1	270.1
47.5°	235.5	236.2	236.5	238.6	239.0	237.4	238.8	239.0	238.8	238.8	238.3
50°	209.1	209.5	209.3	208.7	208.9	209.5	208.9	207.9	208.4	208.4	208.9
52.5°	183.4	182.4	181.9	181.9	181.1	181.1	179.9	179.4	179.2	178.2	179.4
55°	159.7	158.3	156.2	155.8	155.0	154.8	153.5	152.3	151.8	152.0	151.8
57.5°	137.1	135.0	133.6	133.1	132.4	130.9	129.3	128.2	128.0	127.4	127.4
60°	116.4	114.1	112.0	109.9	110.2	109.3	107.6	106.9	106.2	105.2	106.0
62.5°	97.7	95.2	92.9	90.7	89.4	88.6	87.5	86.3	85.6	84.9	85.9
65°	79.3	77.2	74.6	72.6	71.8	71.1	69.9	68.1	67.8	67.8	68.3
67.5°	62.7	60.4	58.0	56.6	55.6	54.7	54.3	53.3	52.7	52.1	52.4
70°	48.2	45.8	44.0	42.5	41.9	41.7	40.0	39.8	39.6	39.3	39.0
72.5°	35.1	33.2	31.6	30.7	29.7	29.0	28.6	27.8	27.6	27.6	27.6
75°	24.1	22.7	20.8	19.7	19.1	18.5	17.8	17.3	16.8	17.0	17.0
77.5°	14.5	13.1	12.0	11.0	10.8	10.0	9.3	8.9	8.1	8.1	8.5
80°	7.9	6.8	5.8	5.2	4.7	4.4	3.7	3.5	3.1	2.9	2.9
82.5°	3.5	2.9	2.3	2.1	1.9	1.6	1.4	1.2	1.2	1.0	1.2
85°	1.2	1.0	0.7	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
87.5°	0.2	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



TEST NUMBER: P843355

CATALOG NUMBER: LD4C15DE010B2750 EU4C15B27 4LBLDWWLI

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	625.4	625.4	625.4	625.4	625.4	625.4	625.4	625.4	625.4	625.4	625.4
2.5°	625.0	625.0	624.7	624.7	624.7	624.2	624.2	624.0	623.8	623.6	623.1
5°	623.3	623.1	622.6	622.3	622.1	621.5	620.7	620.3	619.6	618.6	618.2
7.5°	620.9	620.3	619.4	618.8	618.2	616.5	615.3	614.2	613.0	611.4	609.5
10°	617.0	615.5	614.2	613.2	612.1	609.9	607.6	605.7	603.2	600.8	598.3
12.5°	611.4	609.7	607.0	605.5	604.1	601.1	598.0	594.1	590.6	587.3	584.2
15°	604.3	601.3	598.0	596.2	594.1	589.1	584.4	580.2	575.6	571.7	566.7
17.5°	594.1	589.6	585.0	582.9	580.0	574.4	568.8	563.0	557.6	552.6	546.6
20°	578.6	573.7	567.6	564.4	562.0	554.5	549.1	542.6	537.0	530.9	524.2
22.5°	560.7	553.9	547.0	542.4	539.8	532.3	525.1	519.2	513.2	506.1	501.2
25°	540.2	531.9	523.6	519.0	515.0	507.0	500.0	493.9	486.5	480.4	475.5
27.5°	517.4	507.8	498.1	493.5	489.8	481.1	473.6	467.3	460.1	454.7	449.5
30°	490.0	481.3	472.2	468.4	464.0	455.1	446.5	440.8	432.9	427.3	421.7
32.5°	455.8	450.2	442.9	437.9	435.5	427.3	420.1	413.2	406.4	402.0	396.4
35°	418.4	413.5	407.4	404.7	401.6	396.4	390.6	384.8	379.4	375.1	370.0
37.5°	380.5	375.6	371.9	368.8	367.0	362.2	358.7	354.3	350.6	346.6	343.8
40°	341.2	339.8	335.9	334.4	334.0	328.8	325.8	322.3	319.9	317.6	316.0
42.5°	306.4	304.1	301.0	301.2	299.8	297.0	295.0	292.5	291.0	289.8	288.1
45°	272.0	270.1	268.7	269.9	267.6	266.6	264.9	264.7	263.6	261.4	260.8
47.5°	239.2	239.0	239.2	238.6	238.1	237.7	237.9	236.7	235.5	234.8	233.8
50°	209.3	209.5	210.0	210.7	209.1	209.8	209.5	209.3	209.3	208.7	209.1
52.5°	180.3	180.5	181.1	181.7	181.9	181.9	182.7	183.2	184.0	185.2	185.2
55°	152.9	154.6	155.6	156.7	156.0	157.4	158.1	160.2	160.9	160.9	161.8
57.5°	128.6	130.3	130.9	132.4	132.8	134.0	135.9	137.1	138.7	140.1	141.5
60°	106.4	107.1	108.9	111.1	110.6	113.5	114.9	116.7	118.8	119.7	121.6
62.5°	86.5	87.5	88.8	89.6	91.2	92.6	95.9	97.7	99.6	102.0	103.9
65°	68.7	69.7	71.1	72.6	73.2	75.3	77.0	80.3	81.9	84.4	86.5
67.5°	52.7	54.0	55.2	56.2	56.6	58.7	61.2	62.7	65.7	68.3	69.9
70°	39.3	40.5	41.9	41.7	42.5	44.2	46.1	48.2	50.6	52.9	54.7
72.5°	27.4	28.6	29.5	29.7	30.7	31.8	33.2	34.8	36.7	39.0	41.7
75°	17.3	17.6	18.5	18.9	19.5	20.8	22.0	23.6	25.3	27.2	28.8
77.5°	8.7	9.3	9.8	10.3	10.6	11.7	12.9	14.3	15.7	17.6	19.1
80°	3.3	3.5	4.2	4.4	4.9	5.6	6.6	7.3	8.5	9.8	10.8
82.5°	1.2	1.4	1.6	1.6	1.9	2.3	2.5	3.3	4.0	4.4	4.9
85°	0.4	0.4	0.4	0.4	0.4	0.7	0.7	1.0	1.2	1.4	1.4
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



TEST NUMBER: P843355

CATALOG NUMBER: LD4C15DE010B2750 EU4C15B27 4LBLDWWLI

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	625.4	625.4	625.4	625.4	625.4	625.4	625.4	625.4
2.5°	622.8	622.8	622.6	622.3	622.3	622.3	622.1	622.1
5°	617.2	616.5	616.3	615.9	615.5	615.3	614.6	614.6
7.5°	608.1	607.2	606.4	605.7	604.9	604.1	604.1	603.2
10°	596.0	594.1	593.1	592.2	591.0	589.6	589.1	588.5
12.5°	581.2	577.5	576.5	574.9	573.0	572.1	570.5	570.5
15°	563.0	559.0	556.8	555.9	553.6	552.0	551.2	549.4
17.5°	541.7	538.7	535.4	534.0	531.4	529.2	528.3	528.1
20°	520.1	515.3	513.2	511.0	508.0	506.1	504.7	502.8
22.5°	495.4	491.0	487.9	486.5	483.9	480.6	478.3	478.3
25°	469.2	465.1	463.6	460.5	457.4	456.3	453.5	453.0
27.5°	444.1	440.2	436.9	435.2	431.7	430.1	427.8	426.9
30°	418.2	413.5	411.2	410.9	406.8	405.1	403.2	402.3
32.5°	392.2	388.3	385.9	384.4	382.7	379.8	378.2	377.3
35°	366.5	363.9	361.8	360.2	357.2	355.7	354.3	353.1
37.5°	339.6	337.3	336.3	335.0	333.5	330.9	330.5	329.6
40°	313.6	310.6	310.6	309.7	308.3	308.0	307.3	307.3
42.5°	286.5	285.1	284.8	285.1	284.2	283.7	283.0	284.6
45°	259.6	260.3	259.1	259.3	258.9	259.9	259.9	260.8
47.5°	234.8	233.8	234.4	234.8	235.5	235.5	235.3	235.0
50°	208.4	209.3	210.3	209.1	209.5	209.8	208.7	208.9
52.5°	185.7	185.9	186.7	185.9	186.7	186.4	186.9	185.9
55°	163.7	163.7	164.7	164.9	165.1	165.8	166.0	166.8
57.5°	142.5	143.6	144.8	144.6	145.4	146.4	145.7	146.4
60°	124.0	124.9	126.1	126.5	127.2	127.7	127.7	128.2
62.5°	105.2	107.1	108.1	108.9	108.9	109.9	110.8	111.1
65°	88.4	90.5	91.2	91.9	92.3	93.3	94.4	94.2
67.5°	72.6	73.9	74.9	75.3	76.7	77.2	78.2	79.0
70°	56.8	58.7	59.4	60.4	61.6	62.4	63.4	63.9
72.5°	43.5	44.9	45.4	46.3	47.5	48.4	48.9	49.6
75°	30.4	32.8	33.0	33.6	34.6	35.7	36.5	36.3
77.5°	20.1	21.8	22.0	23.0	23.9	24.7	25.1	25.3
80°	12.0	12.9	13.1	13.5	14.3	14.7	15.2	15.7
82.5°	5.6	6.0	6.6	6.6	7.0	7.5	7.5	7.7
85°	1.9	1.9	2.1	2.1	2.3	2.3	2.5	2.3
87.5°	0.2	0.2	0.0	0.2	0.2	0.2	0.2	0.2
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)