

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: P843371

Luminaire Tested: **LD4C15DE010B2750 EU4C15B30 4LBLWWLI**

Issue Date: 5/7/2024



Test Information

Test Method: LM-79-08
Report Number: P843371
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2107-320-1)
Test Lab: INNOVATION CENTER
Issue Date: 5/7/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: PORTFOLIO
Catalog Number: LD4C15DE010B2750 EU4C15B30 4LBLWWLI
Description: 4in Downlight with BioUp LEDs
Light Source: -
Ballast/Driver:

Summary

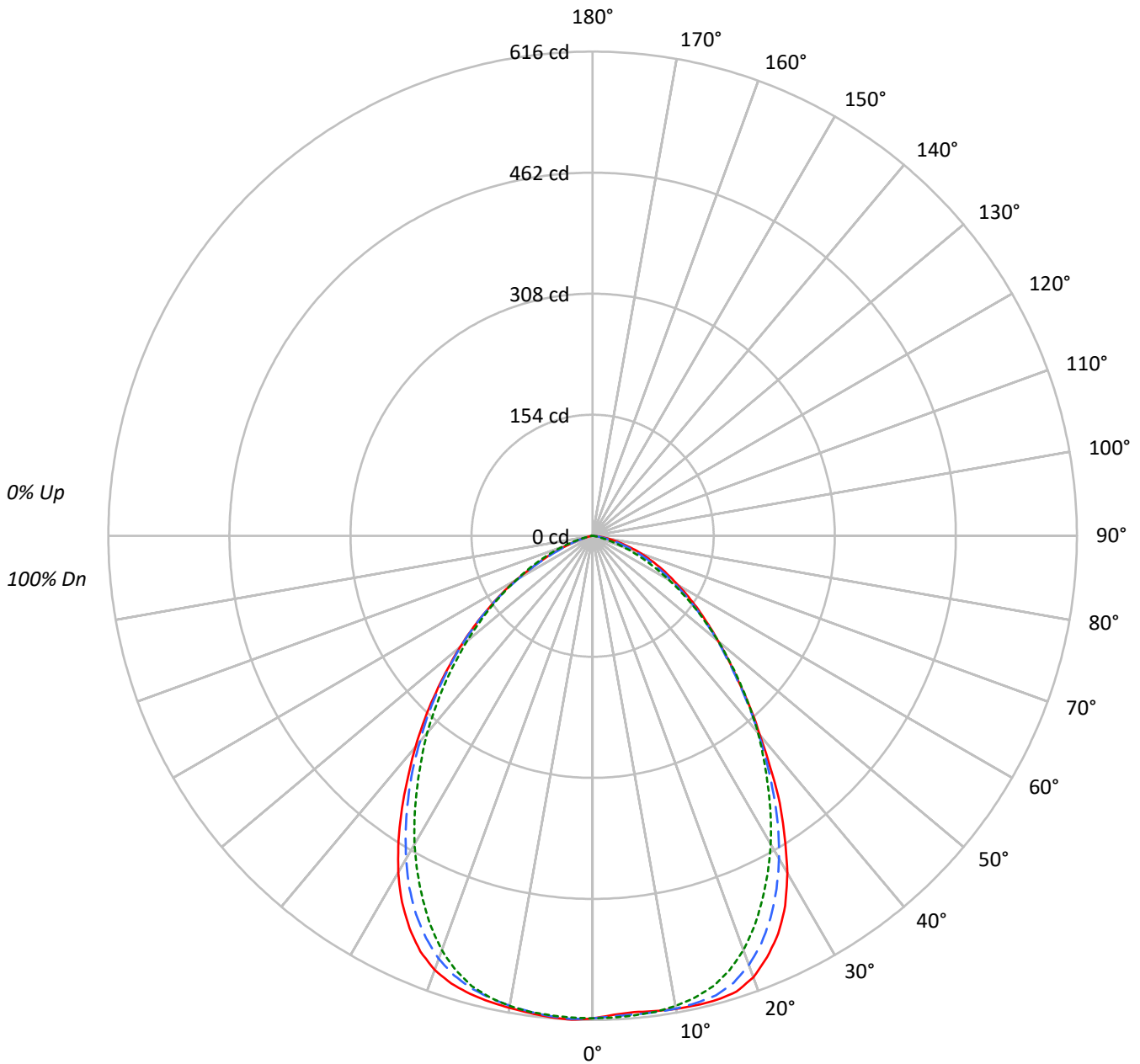
Lumens per Lamp: N/A
Luminaire Lumens: 1177.1 lumens
Efficiency: N/A
Efficacy: 69.2 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.12 / 1.18
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

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

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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	101	109	105	102	99	101	99	96	97	95	93	94	92	91	89				89
2	103	96	91	86	101	95	89	85	91	87	83	88	84	81	85	82	80	78				78
3	95	87	80	74	93	85	79	74	82	77	72	80	75	71	77	73	70	68				68
4	88	78	71	65	86	77	70	65	75	69	64	72	67	63	70	66	62	60				60
5	82	71	63	57	80	70	63	57	68	61	57	66	60	56	64	59	55	54				54
6	76	65	57	51	75	64	56	51	62	56	51	61	55	50	59	54	50	48				48
7	71	59	51	46	70	59	51	46	57	50	46	56	50	45	54	49	45	43				43
8	67	55	47	42	65	54	47	42	53	46	41	52	46	41	50	45	41	39				39
9	63	51	43	38	61	50	43	38	49	42	38	48	42	38	47	41	37	36				36
10	59	47	40	35	58	46	39	35	45	39	35	45	39	35	44	38	34	33				33

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	75432	75432	75432
5°	75005	75523	75806
10°	76246	75785	76072
15°	77737	75447	76719
20°	78142	73344	76835
25°	75720	69254	74690
30°	70291	64276	70149
35°	62240	58311	63410
40°	53052	52506	56243
45°	45590	46111	48995
50°	39792	39888	42010
55°	35148	33692	34827
60°	30812	27470	27372
65°	27267	21308	18982
70°	23276	14655	11243
75°	18844	7880	5126
80°	12876	1910	1273
85°	3806	564	564



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	58.4	5.0
10°-20°	168.9	14.4
20°-30°	244.1	20.7
30°-40°	252.3	21.4
40°-50°	208.5	17.7
50°-60°	143.9	12.2
60°-70°	75.3	6.4
70°-80°	23.7	2.0
80°-90°	2.0	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°	471.4	40.0
0°-40°	723.7	61.5
0°-60°	1076.1	91.4
0°-90°	1177.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1177.1	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	614	614	614	614	614	
5°	608	611	612	614	615	58
15°	611	606	593	596	603	172
25°	559	536	511	532	551	255
35°	415	401	389	409	423	258
45°	262	261	265	278	282	205
55°	164	159	157	162	163	147
65°	94	85	73	61	65	93
75°	40	31	17	11	11	43
85°	3	1	0	0	0	6
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°	614.0	614.0	614.0	614.0	614.0	614.0	614.0	614.0	614.0	614.0	614.0
2.5°	610.0	610.4	610.4	610.8	610.8	610.8	611.0	611.0	611.2	611.4	611.7
5°	608.2	608.2	608.7	608.9	609.4	609.6	610.0	610.4	610.8	611.0	611.2
7.5°	610.0	610.0	610.4	610.6	610.6	610.8	610.8	611.0	611.2	611.4	611.4
10°	611.2	611.2	611.2	611.2	611.4	611.4	611.4	611.2	611.2	611.2	611.0
12.5°	611.7	611.7	611.4	611.2	611.4	611.2	611.2	610.6	610.0	609.6	608.9
15°	611.2	611.2	611.0	610.8	610.6	610.0	609.8	608.7	607.8	606.3	605.5
17.5°	608.2	607.8	607.3	606.9	605.9	605.3	604.8	602.7	601.1	598.8	596.3
20°	597.7	597.1	596.5	595.3	594.2	593.2	591.9	588.9	587.3	583.8	581.3
22.5°	580.3	579.9	580.1	578.0	575.8	574.3	573.4	570.9	568.2	563.7	561.0
25°	558.6	557.3	557.3	554.1	552.9	552.0	550.8	547.9	543.6	539.7	536.1
27.5°	530.5	528.7	527.8	527.3	524.6	522.5	520.9	518.6	515.1	511.6	506.6
30°	495.5	495.3	494.1	492.0	490.0	489.0	487.1	483.2	480.1	477.5	474.2
32.5°	454.3	453.9	453.9	453.9	452.6	452.3	449.6	447.5	444.9	441.0	439.0
35°	415.0	414.8	415.0	411.5	410.7	409.9	409.7	408.4	404.9	403.1	401.2
37.5°	370.7	371.4	371.0	370.1	371.2	369.1	370.7	367.7	366.4	365.9	363.8
40°	330.8	332.7	330.8	331.1	332.2	330.2	330.2	329.7	328.8	328.3	327.9
42.5°	296.8	294.4	295.8	294.7	295.8	295.1	294.0	294.7	294.9	294.0	293.7
45°	262.4	262.8	263.4	262.6	262.6	262.0	263.8	262.6	262.6	262.8	261.2
47.5°	234.5	233.8	234.3	233.8	234.1	233.5	234.1	234.3	233.8	233.8	232.4
50°	208.2	207.7	209.3	207.9	207.9	207.7	207.9	207.5	206.8	206.8	207.3
52.5°	185.4	184.5	184.2	185.4	183.7	183.7	184.0	183.5	182.7	182.1	181.0
55°	164.1	163.9	164.1	163.2	162.8	162.8	161.6	161.2	161.0	159.8	159.1
57.5°	144.4	143.6	143.8	143.6	142.7	142.5	141.6	141.6	140.7	139.7	138.6
60°	125.4	125.4	126.1	125.2	124.5	124.1	123.5	123.1	121.5	119.9	118.6
62.5°	108.6	108.8	108.6	107.9	107.5	107.0	106.5	105.1	103.8	102.8	101.2
65°	93.8	93.6	93.0	92.4	91.3	91.3	90.4	89.7	88.1	86.7	85.0
67.5°	78.6	78.2	78.2	78.2	76.8	76.6	76.0	74.7	73.3	71.5	70.1
70°	64.8	65.3	64.5	63.9	63.1	62.9	62.3	60.9	59.2	57.4	56.3
72.5°	51.6	52.1	51.4	51.2	49.8	49.4	49.1	47.9	46.1	44.9	43.2
75°	39.7	39.9	39.4	38.9	38.1	37.9	36.7	35.7	34.6	32.8	31.1
77.5°	28.6	28.1	28.1	27.2	26.3	26.3	26.0	24.6	23.1	21.7	20.3
80°	18.2	18.0	17.3	16.8	16.2	15.9	15.7	14.5	13.3	12.5	11.5
82.5°	9.2	9.0	8.8	8.6	8.0	7.6	7.8	6.9	6.5	5.5	4.9
85°	2.7	3.0	3.0	2.7	2.5	2.5	2.5	2.3	1.8	1.6	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



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CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	614.0	614.0	614.0	614.0	614.0	614.0	614.0	614.0	614.0	614.0	614.0
2.5°	611.9	612.2	612.4	612.6	612.6	612.8	613.1	613.3	613.5	613.5	613.7
5°	611.4	611.9	611.9	612.2	612.2	612.2	612.4	612.4	612.4	612.4	612.6
7.5°	611.7	611.7	611.7	611.4	611.4	611.2	611.2	611.2	610.8	610.8	610.8
10°	610.6	610.4	610.0	609.6	609.4	609.2	608.7	608.2	607.8	607.5	607.1
12.5°	608.2	607.3	606.3	605.5	605.0	604.8	603.8	603.2	602.4	601.8	601.3
15°	603.6	602.2	600.6	598.8	598.3	597.9	596.3	594.8	594.0	593.2	592.1
17.5°	594.4	591.6	589.7	587.0	585.8	585.4	582.9	581.5	579.9	579.4	578.5
20°	578.0	575.5	572.1	569.5	568.2	566.7	564.7	562.8	561.0	561.0	559.8
22.5°	557.5	554.3	549.9	546.7	546.5	543.6	541.8	539.7	539.1	537.7	537.7
25°	531.7	528.9	524.1	521.3	519.9	519.2	516.2	513.5	512.1	510.9	511.9
27.5°	503.1	499.0	495.3	491.8	490.6	489.3	486.5	485.3	482.8	482.6	482.4
30°	470.3	466.2	462.5	460.9	458.6	457.4	455.4	453.9	453.1	453.1	452.6
32.5°	436.0	432.4	430.5	427.0	425.8	424.2	422.8	421.5	421.9	421.5	421.7
35°	398.8	398.0	394.5	392.4	392.4	392.2	389.8	389.0	388.5	388.8	389.8
37.5°	363.6	360.9	358.5	357.2	358.3	357.0	356.6	356.6	358.1	357.2	359.0
40°	326.1	325.8	324.9	325.3	325.5	324.0	324.4	324.6	325.5	327.4	327.7
42.5°	293.3	293.1	293.1	293.1	292.5	291.7	292.5	294.2	294.0	295.4	296.6
45°	261.7	261.2	262.2	261.4	262.8	263.4	262.6	263.0	264.4	265.4	267.3
47.5°	232.9	232.9	233.1	233.5	232.2	233.3	233.8	234.7	235.4	235.9	236.8
50°	206.1	206.1	205.7	205.7	205.7	206.3	205.4	206.6	206.8	208.7	209.8
52.5°	181.5	180.3	181.0	180.5	179.6	179.2	179.6	179.8	181.2	181.7	183.1
55°	157.9	157.9	156.1	155.7	156.3	156.1	155.9	155.9	156.5	157.3	158.4
57.5°	137.2	135.8	134.4	134.2	133.5	133.7	133.7	133.5	133.1	133.3	133.5
60°	117.6	116.7	114.5	114.5	114.3	114.1	113.0	112.7	111.6	111.8	110.9
62.5°	99.6	99.1	96.4	95.5	95.5	94.8	93.6	93.4	91.8	91.8	90.9
65°	83.4	82.1	80.5	78.9	78.9	77.9	77.2	75.2	74.0	73.3	71.9
67.5°	68.7	66.6	65.0	63.7	62.7	62.5	60.9	59.4	57.6	56.5	54.4
70°	54.4	52.8	51.2	49.8	48.9	47.9	46.3	44.3	42.8	40.8	39.4
72.5°	41.0	39.7	38.3	36.4	35.3	34.6	33.0	31.1	28.9	27.4	25.6
75°	29.5	27.9	26.0	24.4	23.8	23.1	21.3	19.8	18.2	16.6	14.8
77.5°	19.1	17.3	15.9	14.1	13.9	13.3	11.5	10.2	9.0	8.0	6.9
80°	10.2	9.2	8.0	6.9	6.5	5.8	4.9	4.1	3.5	2.7	2.3
82.5°	4.3	3.7	3.0	2.5	2.3	2.1	1.6	1.4	1.2	1.2	1.0
85°	1.2	1.0	1.0	0.7	0.4	0.4	0.4	0.4	0.4	0.4	0.4
87.5°	0.0	0.0	0.0	0.0	0.2	0.2	0.2	0.0	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



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CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	614.0	614.0	614.0	614.0	614.0	614.0	614.0	614.0	614.0	614.0	614.0
2.5°	614.0	614.3	614.5	614.5	614.7	614.9	614.9	615.1	615.3	615.6	615.6
5°	612.8	612.8	612.8	613.1	613.1	613.1	613.1	613.5	613.5	613.7	614.0
7.5°	610.6	610.6	610.6	610.6	610.4	610.6	610.4	610.4	610.8	611.0	611.2
10°	606.9	606.7	606.7	606.3	606.3	606.3	606.7	606.9	607.1	607.3	608.0
12.5°	601.1	600.8	600.8	600.6	600.6	600.8	601.1	601.6	602.4	603.0	603.8
15°	591.9	591.6	591.9	592.1	592.6	593.2	594.0	594.6	596.0	597.1	598.3
17.5°	578.5	578.7	578.9	579.4	580.1	581.1	582.9	584.8	586.4	588.2	590.1
20°	560.0	561.0	561.2	562.8	563.3	565.3	567.4	570.2	572.7	575.0	577.6
22.5°	537.9	538.7	539.5	541.4	542.6	545.3	547.9	551.0	553.8	556.8	560.5
25°	512.7	513.1	515.8	515.8	518.6	520.9	523.8	527.3	531.5	535.4	537.9
27.5°	484.2	485.3	487.5	488.3	490.4	494.1	496.7	500.8	504.9	508.4	511.2
30°	454.3	455.1	458.6	459.0	460.7	463.9	467.4	471.3	474.5	478.5	481.0
32.5°	422.6	425.2	427.3	428.9	429.3	434.2	436.0	438.8	442.4	446.4	448.9
35°	392.0	393.1	396.1	397.0	398.4	401.2	404.9	407.2	409.0	411.5	414.6
37.5°	359.5	362.9	363.6	366.4	366.8	369.3	371.2	374.0	376.3	378.6	379.1
40°	329.2	330.4	332.9	333.6	334.1	337.6	339.8	340.6	341.7	343.7	346.6
42.5°	298.6	299.7	302.5	301.8	303.9	305.6	306.6	309.5	310.5	311.3	311.3
45°	268.4	268.9	270.6	271.6	272.8	273.7	275.7	277.1	277.6	279.6	280.4
47.5°	239.6	240.0	241.4	243.0	242.5	243.7	246.0	246.7	247.0	248.3	249.0
50°	211.2	212.4	214.2	213.7	215.1	215.8	217.9	218.3	218.3	218.6	218.8
52.5°	184.7	185.6	186.0	186.6	187.2	188.4	189.3	188.8	189.7	190.7	190.0
55°	158.4	159.1	160.2	160.7	160.7	161.0	160.4	162.6	161.6	161.4	161.6
57.5°	134.4	133.5	133.3	134.4	134.8	134.6	134.0	134.8	134.8	134.4	133.7
60°	111.2	110.4	110.2	110.4	109.6	108.8	109.3	108.8	107.7	107.2	107.5
62.5°	89.9	89.3	87.4	87.4	86.9	86.7	84.8	85.0	84.2	82.8	83.2
65°	70.3	68.4	67.6	67.4	65.7	64.3	63.9	62.3	60.9	60.6	60.9
67.5°	52.8	50.8	49.1	48.4	47.5	46.3	44.7	43.4	43.8	43.6	44.5
70°	36.7	35.3	33.6	32.5	33.0	31.6	30.7	30.7	30.9	31.1	31.6
72.5°	24.4	22.6	21.9	21.3	20.7	19.8	20.3	20.3	20.1	20.3	19.8
75°	13.9	12.9	12.3	12.0	11.5	11.5	11.5	11.5	11.3	11.1	11.1
77.5°	6.2	5.8	5.5	5.3	5.3	5.3	5.1	4.9	4.9	4.9	4.7
80°	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
82.5°	1.0	1.0	1.2	1.2	1.2	1.0	1.2	1.2	1.0	1.0	1.2
85°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
87.5°	0.2	0.2	0.2	0.0	0.2	0.2	0.2	0.2	0.0	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



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CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	614.0	614.0	614.0	614.0	614.0	614.0	614.0	614.0
2.5°	615.9	616.1	616.1	616.1	616.3	616.3	616.3	616.3
5°	614.3	614.5	614.5	614.5	614.7	614.7	614.7	614.7
7.5°	611.4	611.7	611.7	611.9	611.9	612.2	612.2	612.4
10°	608.2	608.7	608.9	609.2	609.4	609.6	609.6	609.8
12.5°	604.8	605.3	605.5	605.9	606.3	606.7	606.9	607.1
15°	599.7	600.6	601.1	601.3	602.2	602.7	603.0	603.2
17.5°	591.6	593.4	594.2	594.6	595.6	596.5	597.1	597.4
20°	580.1	582.2	583.1	584.2	585.6	586.8	587.3	587.7
22.5°	563.9	566.3	567.6	569.0	570.2	571.3	573.2	572.5
25°	540.9	544.8	546.5	547.1	549.7	551.0	552.0	551.0
27.5°	515.1	517.4	518.8	520.4	522.3	523.6	524.1	525.4
30°	484.0	487.9	487.7	489.3	491.6	493.0	493.4	494.5
32.5°	451.7	453.5	454.9	454.7	455.6	458.2	457.2	459.3
35°	417.3	417.6	419.9	419.7	421.5	421.5	421.5	422.8
37.5°	380.6	383.4	382.2	385.1	384.1	384.8	384.8	385.3
40°	347.2	348.2	348.2	349.1	349.8	349.1	349.5	350.7
42.5°	312.6	313.6	313.8	313.4	314.0	316.1	314.5	315.9
45°	280.4	281.0	282.0	281.3	282.5	281.8	282.5	282.0
47.5°	249.9	249.7	249.5	251.3	249.7	249.9	250.9	249.3
50°	218.8	220.2	219.2	220.0	220.4	220.4	219.8	219.8
52.5°	191.1	190.9	190.3	190.9	190.5	190.7	191.1	190.7
55°	162.6	163.5	163.0	162.8	163.0	163.0	164.4	162.6
57.5°	134.4	134.0	134.6	136.2	134.6	135.8	136.5	136.8
60°	107.7	107.7	109.0	108.4	109.8	110.9	111.8	111.4
62.5°	82.1	83.2	83.7	84.0	85.4	86.2	86.2	86.0
65°	60.9	62.5	62.5	63.5	63.9	63.9	64.3	65.3
67.5°	44.9	44.9	45.2	45.7	45.4	45.4	45.9	46.1
70°	31.3	30.9	31.6	31.3	31.3	31.1	31.3	31.3
72.5°	19.8	19.8	20.1	19.8	19.4	19.6	19.6	20.1
75°	10.6	11.1	10.6	10.6	10.8	10.4	10.6	10.8
77.5°	4.3	4.3	4.3	4.3	4.3	4.1	4.1	4.1
80°	2.1	2.1	2.1	2.1	2.1	2.1	1.8	1.8
82.5°	1.0	1.2	1.0	1.2	1.0	1.0	1.0	1.0
85°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
87.5°	0.0	0.2	0.0	0.2	0.0	0.0	0.0	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)