

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: P843356

Luminaire Tested: **LD4C15DE010B2750 EU4C15B27 4LBLWWH**

Issue Date: 5/7/2024



**Test Information**

Test Method: LM-79-08  
Report Number: P843356  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2107-320-2)  
Test Lab: INNOVATION CENTER  
Issue Date: 5/7/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: PORTFOLIO  
Catalog Number: LD4C15DE010B2750 EU4C15B27 4LBLWWH  
Description: 4in Downlight with BioUp LEDs  
Light Source: -  
Ballast/Driver:

**Summary**

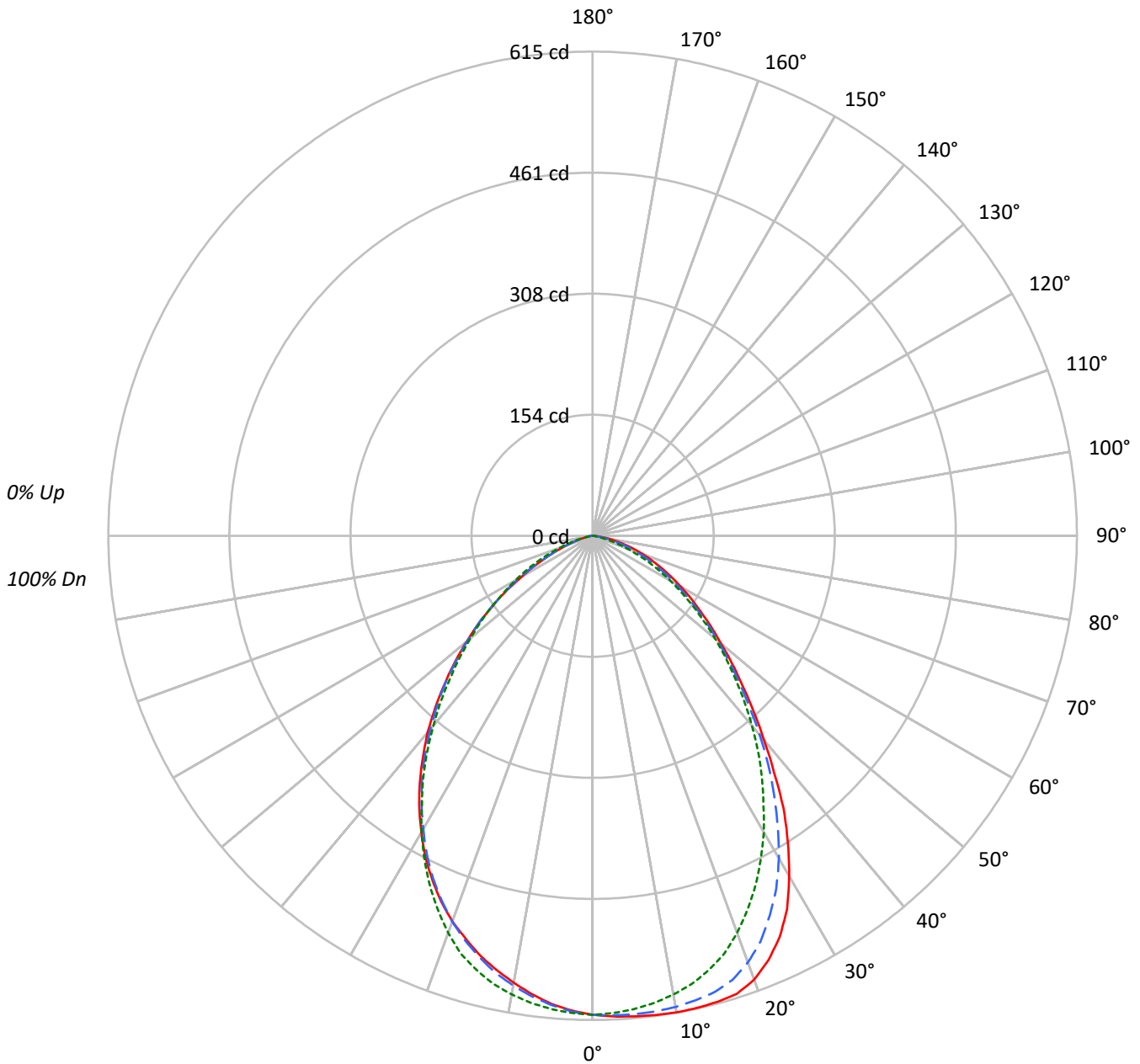
Lumens per Lamp: N/A  
Luminaire Lumens: 1146.5 lumens  
Efficiency: N/A  
Efficacy: 67.4 lumens/watt  
Spacing Criteria (0/90/45): 1.15 / 1.09 / 1.17  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

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									
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	94	92	90	88																			
2	103	96	90	86	100	94	89	85	91	86	83	88	84	81	85	82	79	77																			
3	95	86	79	74	93	85	78	73	82	76	72	79	75	71	77	73	70	68																			
4	88	78	70	64	86	77	69	64	74	68	63	72	67	62	70	65	62	60																			
5	82	71	63	57	80	69	62	57	67	61	56	66	60	55	64	59	55	53																			
6	76	64	56	51	74	63	56	50	62	55	50	60	54	50	59	53	49	47																			
7	71	59	51	46	69	58	51	45	57	50	45	55	49	45	54	49	44	43																			
8	67	54	47	41	65	54	46	41	52	46	41	51	45	41	50	45	40	39																			
9	62	50	43	38	61	50	42	37	49	42	37	47	41	37	47	41	37	35																			
10	59	47	39	34	58	46	39	34	45	39	34	44	38	34	43	38	34	32																			

**AVERAGE LUMINANCE (cd/sqm):**

	0°	90°	180°
0°	74744	74744	74744
5°	75572	74425	73611
10°	76683	73789	71918
15°	77940	72611	70207
20°	78430	70141	68128
25°	76181	66354	65337
30°	70802	61666	61709
35°	63365	56211	57411
40°	54254	50389	52250
45°	46719	44426	46111
50°	40614	38684	39850
55°	35727	33285	32985
60°	31770	27789	25578
65°	27878	22238	18517
70°	23959	15733	12536
75°	19414	9066	7310
80°	13937	3962	3679
85°	5215	1692	1692



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	57.3	5.0
10°-20°	162.3	14.2
20°-30°	231.7	20.2
30°-40°	242.4	21.1
40°-50°	203.1	17.7
50°-60°	142.2	12.4
60°-70°	77.4	6.8
70°-80°	26.9	2.3
80°-90°	3.1	0.3
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°	451.4	39.4
0°-40°	693.8	60.5
0°-60°	1039.1	90.6
0°-90°	1146.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1146.5	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	608	608	608	608	608	
5°	613	610	604	598	597	59
15°	613	600	571	554	552	173
25°	562	532	490	480	482	257
35°	422	402	375	378	383	262
45°	269	263	256	264	265	209
55°	167	161	155	155	154	151
65°	96	88	76	64	64	95
75°	41	33	19	15	15	44
85°	4	2	1	1	1	7
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°	608.4	608.4	608.4	608.4	608.4	608.4	608.4	608.4	608.4	608.4	608.4
2.5°	611.2	610.5	610.7	610.7	610.7	610.5	610.7	610.5	610.5	610.3	609.7
5°	612.8	612.4	612.4	612.4	612.1	611.8	611.8	611.6	611.2	610.9	609.9
7.5°	614.0	613.5	613.5	613.2	613.0	612.8	612.6	611.8	611.2	610.7	609.5
10°	614.7	614.0	614.0	613.5	613.0	612.8	612.4	611.4	610.5	609.3	607.6
12.5°	614.2	613.5	613.2	612.8	611.8	611.4	610.9	609.7	608.1	606.4	604.3
15°	612.8	612.4	611.8	611.2	609.9	609.3	608.8	607.0	604.9	602.5	599.9
17.5°	609.9	609.3	608.4	607.4	605.8	605.1	603.9	601.6	598.5	595.2	591.2
20°	599.9	599.5	598.5	596.9	594.3	593.3	591.7	588.7	584.8	580.7	576.5
22.5°	583.3	582.7	581.2	579.8	577.5	575.8	574.4	570.2	565.7	561.6	557.6
25°	562.0	561.3	559.5	557.6	555.3	552.4	551.0	547.7	543.3	537.9	532.1
27.5°	534.6	532.3	531.6	529.5	526.0	525.0	522.9	518.8	514.5	509.9	504.9
30°	499.1	499.1	497.7	496.8	493.5	492.5	490.2	485.8	483.4	476.9	473.1
32.5°	461.4	460.9	459.8	459.1	457.2	455.5	453.2	450.9	445.7	442.4	437.3
35°	422.5	419.8	420.2	418.8	417.7	415.8	415.5	413.0	408.2	406.4	401.8
37.5°	378.3	377.2	378.8	376.7	375.6	375.8	373.9	372.3	370.4	367.1	366.2
40°	338.3	339.3	339.1	337.2	338.1	337.0	335.1	333.5	332.5	330.4	329.7
42.5°	302.5	301.1	300.7	300.7	300.9	300.9	299.9	298.8	298.8	296.7	294.6
45°	268.9	268.9	268.4	269.8	267.7	267.7	266.9	266.7	265.8	265.4	262.7
47.5°	239.9	239.6	239.3	239.1	238.9	238.9	237.4	236.3	236.1	234.7	233.3
50°	212.5	213.9	213.4	212.3	211.7	211.9	211.0	210.4	210.2	207.8	208.0
52.5°	189.5	189.3	189.7	189.1	187.8	188.2	187.2	186.2	185.3	184.1	183.2
55°	166.8	168.0	167.5	166.8	166.6	166.2	165.4	164.3	164.0	161.4	161.2
57.5°	147.9	147.6	147.2	146.0	145.7	145.1	145.1	144.2	142.8	141.3	140.1
60°	129.3	129.3	128.7	128.5	127.6	127.2	127.0	126.1	124.5	123.3	121.4
62.5°	111.6	112.1	111.6	110.9	110.2	109.3	108.8	108.1	106.7	105.6	103.9
65°	95.9	95.7	95.5	94.6	94.3	93.4	93.1	91.7	90.3	89.4	87.5
67.5°	80.9	80.3	80.3	79.7	79.3	78.6	78.2	76.8	75.1	74.1	72.3
70°	66.7	66.2	66.2	66.2	65.0	64.3	64.1	63.5	61.0	60.2	58.3
72.5°	53.6	53.3	53.1	52.5	51.7	51.7	50.8	49.4	48.2	47.1	45.6
75°	40.9	41.5	40.9	40.0	39.8	39.3	38.6	37.4	36.3	34.9	33.2
77.5°	29.9	29.5	29.0	29.0	28.6	27.6	27.4	26.4	25.1	24.1	22.4
80°	19.7	19.5	18.9	18.5	18.3	18.0	17.8	16.8	15.4	14.7	13.3
82.5°	10.8	10.6	10.6	10.3	9.6	9.6	9.3	8.5	7.7	7.3	6.6
85°	3.7	3.7	3.7	3.5	3.5	3.5	3.3	3.1	2.9	2.5	2.1
87.5°	0.4	0.2	0.4	0.2	0.4	0.2	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	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°	608.4	608.4	608.4	608.4	608.4	608.4	608.4	608.4	608.4	608.4	608.4
2.5°	609.3	608.8	608.6	608.4	608.1	607.9	607.6	607.2	607.0	606.7	606.2
5°	609.3	608.4	607.9	607.2	606.7	606.2	605.5	604.9	604.1	603.5	602.7
7.5°	608.4	607.0	606.0	604.6	604.1	603.5	602.0	601.1	599.9	598.5	596.9
10°	606.0	604.3	602.5	600.6	599.9	598.7	596.9	595.2	593.3	591.5	589.8
12.5°	602.2	599.7	597.4	594.8	593.3	592.2	589.6	587.3	585.0	582.9	580.0
15°	596.6	593.6	590.6	587.1	585.4	584.0	580.2	577.5	573.8	570.9	568.1
17.5°	587.5	582.9	579.1	574.6	572.3	570.7	567.4	563.0	559.5	556.4	553.1
20°	571.9	567.4	562.2	557.4	554.7	552.6	548.0	543.3	539.8	536.5	533.0
22.5°	551.2	545.6	541.9	535.8	533.7	531.1	525.5	521.3	517.3	514.0	510.7
25°	526.2	521.3	516.1	510.5	508.0	504.9	500.3	495.8	493.3	489.5	485.6
27.5°	497.4	493.5	487.1	482.3	479.6	477.3	472.9	468.8	465.1	462.6	458.8
30°	467.1	462.3	456.7	451.6	450.1	447.4	443.4	440.4	436.4	434.7	433.1
32.5°	433.5	428.2	424.0	420.7	417.9	415.5	413.4	408.6	407.8	403.6	403.2
35°	397.0	394.7	390.8	387.9	385.6	383.9	380.4	378.1	375.6	374.8	373.2
37.5°	362.7	359.9	356.1	353.6	351.9	351.7	349.1	347.6	345.8	344.9	343.0
40°	326.6	325.4	322.2	321.7	319.2	318.9	317.5	315.9	314.2	314.2	314.4
42.5°	293.4	292.0	290.6	288.9	287.6	287.6	286.8	286.4	285.9	285.2	286.4
45°	262.3	260.4	259.4	257.9	258.6	257.1	256.7	256.7	255.9	255.7	257.4
47.5°	233.3	231.2	230.2	229.7	229.7	230.0	227.9	228.6	228.3	228.9	229.5
50°	206.9	205.0	203.6	203.6	203.8	202.9	201.9	202.6	201.9	202.4	204.0
52.5°	182.2	180.4	179.7	179.7	178.3	178.1	178.5	177.6	177.8	178.1	179.0
55°	159.6	158.4	157.3	156.1	156.3	155.8	154.9	154.6	155.2	155.4	156.5
57.5°	139.2	137.6	135.9	135.5	135.0	135.0	133.8	133.6	134.1	132.9	132.9
60°	119.8	118.9	116.8	116.0	116.0	114.9	113.9	114.4	113.3	113.1	113.3
62.5°	101.7	101.1	99.6	98.3	97.8	97.3	96.1	95.7	95.2	94.3	92.9
65°	86.1	84.5	82.8	81.9	81.2	80.1	79.3	78.4	77.0	76.5	75.1
67.5°	70.4	68.7	67.2	66.4	65.8	65.0	63.9	62.7	61.0	59.2	57.5
70°	56.6	54.5	53.6	51.7	51.2	50.3	48.7	47.5	45.9	43.8	42.1
72.5°	43.3	41.9	40.5	38.8	37.7	37.0	35.5	33.7	31.8	30.7	29.0
75°	31.1	30.5	28.6	26.7	26.2	25.3	23.6	22.4	21.0	19.1	17.8
77.5°	21.0	19.7	18.5	16.8	16.4	15.4	14.5	13.3	12.4	11.2	10.3
80°	12.4	11.2	10.6	9.3	8.9	8.5	7.7	6.8	6.1	5.6	5.4
82.5°	6.1	5.2	4.9	4.2	4.0	3.7	3.3	3.1	2.5	2.5	2.5
85°	2.1	1.6	1.6	1.4	1.2	1.2	1.2	1.2	1.2	1.2	1.2
87.5°	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.4	0.2
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°	608.4	608.4	608.4	608.4	608.4	608.4	608.4	608.4	608.4	608.4	608.4
2.5°	606.0	605.8	605.5	605.3	605.3	605.1	605.1	604.9	604.9	604.6	604.6
5°	601.8	601.1	600.6	600.2	600.2	599.5	598.9	598.5	598.3	598.3	597.8
7.5°	596.0	595.0	594.1	593.3	593.1	592.0	591.0	591.0	590.1	589.6	589.2
10°	588.3	586.6	585.2	584.4	583.5	582.9	581.7	581.0	580.2	579.1	578.8
12.5°	577.7	576.5	574.4	573.4	573.0	571.7	569.7	568.8	568.6	567.6	566.9
15°	565.7	563.2	561.3	560.1	560.1	557.8	556.8	555.5	554.5	553.9	553.6
17.5°	550.3	547.7	545.8	544.3	543.7	541.9	540.5	540.0	538.9	539.3	538.1
20°	530.4	528.3	526.9	524.8	524.8	523.6	523.2	522.0	521.5	521.1	521.5
22.5°	509.1	506.6	504.2	504.0	504.0	502.4	502.2	501.8	501.0	501.6	501.4
25°	484.1	482.3	480.8	480.6	480.6	479.6	478.7	479.2	479.8	479.6	480.4
27.5°	458.2	456.3	455.8	455.5	455.1	454.9	455.3	455.3	456.1	457.0	457.8
30°	430.0	429.6	428.9	428.7	428.2	429.4	429.8	430.6	430.2	431.7	432.7
32.5°	402.0	401.1	400.8	401.3	402.0	401.8	403.2	403.6	404.1	405.7	406.4
35°	373.7	373.5	372.9	372.9	373.2	375.0	375.0	376.7	377.7	378.1	380.0
37.5°	343.2	344.2	344.7	345.3	345.6	346.3	346.8	348.4	349.3	350.3	351.2
40°	315.4	315.0	317.1	315.6	316.1	318.2	319.2	318.9	320.4	321.7	322.7
42.5°	285.7	286.4	286.8	287.4	288.5	288.7	289.9	291.6	292.0	293.6	294.1
45°	256.9	257.1	258.1	259.0	259.8	261.6	262.1	262.7	264.2	264.2	264.8
47.5°	229.7	230.7	230.7	232.2	233.3	233.0	234.7	235.1	234.9	236.1	236.6
50°	203.8	205.2	205.0	205.9	206.3	206.6	208.0	208.5	207.5	208.7	209.0
52.5°	179.0	179.7	180.6	180.9	180.4	181.6	181.1	182.0	181.8	182.8	181.8
55°	156.3	156.1	156.1	156.5	156.1	156.5	157.0	156.1	155.4	156.3	156.1
57.5°	133.6	133.6	133.2	133.8	133.2	132.4	132.2	131.5	130.8	130.8	130.5
60°	112.3	111.8	110.9	110.6	110.6	109.5	109.0	108.1	108.1	107.1	106.2
62.5°	92.4	91.3	90.5	90.5	90.1	88.9	86.8	85.4	84.9	83.6	83.3
65°	73.7	72.6	71.8	70.4	69.3	68.7	66.7	65.0	64.3	62.9	63.1
67.5°	56.6	54.8	52.7	51.7	51.0	49.4	48.7	47.5	46.7	46.7	46.7
70°	40.7	39.0	37.0	36.3	35.7	34.4	33.7	33.4	34.2	34.0	34.2
72.5°	27.4	25.7	24.9	24.3	23.9	23.2	23.6	23.9	23.4	23.6	23.9
75°	16.6	16.2	15.4	15.2	15.2	15.4	15.2	15.2	15.4	15.4	15.7
77.5°	9.6	9.1	9.1	8.9	9.3	9.1	9.1	9.1	9.3	9.3	9.3
80°	5.2	5.2	5.2	5.2	5.4	5.2	5.4	5.4	5.4	5.4	5.4
82.5°	2.5	2.5	2.5	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.5
85°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
87.5°	0.2	0.4	0.4	0.4	0.4	0.4	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	0.0	0.0	0.0





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**CANDELA DISTRIBUTION (continued):**

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	608.4	608.4	608.4	608.4	608.4	608.4	608.4	608.4
2.5°	604.1	604.1	604.1	603.7	603.9	603.9	603.7	603.7
5°	597.6	597.4	596.9	596.9	596.4	596.9	596.6	596.9
7.5°	588.7	588.7	587.9	587.9	587.7	587.5	587.3	587.5
10°	578.2	578.2	577.7	577.5	577.7	576.7	576.7	576.5
12.5°	566.5	566.0	565.5	565.7	565.5	564.8	564.6	564.8
15°	552.9	552.2	552.4	551.8	551.8	551.5	552.0	552.0
17.5°	537.9	537.5	537.0	537.2	536.7	537.0	536.7	536.5
20°	521.3	521.1	521.1	520.1	520.4	520.1	520.4	521.1
22.5°	502.2	501.8	502.2	501.4	501.8	501.8	502.6	502.6
25°	481.0	480.8	481.3	481.5	481.8	482.5	481.8	482.0
27.5°	457.6	458.4	459.1	459.3	460.3	459.5	459.1	459.8
30°	434.1	434.1	433.8	434.7	435.4	436.2	435.0	435.0
32.5°	406.9	408.0	408.0	408.2	409.0	409.0	409.0	409.9
35°	381.0	381.6	381.8	381.0	381.4	381.2	382.8	382.8
37.5°	351.9	351.9	352.2	353.8	353.8	353.0	353.6	353.6
40°	324.3	324.5	323.6	324.1	325.2	324.8	325.2	325.8
42.5°	294.1	295.7	294.8	295.3	295.1	295.3	295.5	295.5
45°	265.4	265.8	265.8	266.0	266.5	266.9	265.6	265.4
47.5°	237.2	237.4	238.2	237.0	238.4	237.0	238.4	236.8
50°	209.0	209.8	209.2	209.6	209.0	209.0	208.7	208.5
52.5°	182.0	181.8	181.8	181.6	181.6	182.0	181.6	182.2
55°	155.2	155.4	154.9	154.6	154.4	155.2	154.4	154.0
57.5°	129.7	130.1	129.1	129.7	128.0	128.7	128.9	129.1
60°	106.0	105.3	105.3	104.4	104.4	105.0	104.1	104.1
62.5°	82.2	82.6	81.9	82.8	82.8	83.8	83.3	83.8
65°	62.9	63.1	63.5	63.5	63.5	64.8	64.3	63.7
67.5°	47.5	47.7	48.0	47.7	48.4	48.0	48.0	48.2
70°	34.4	34.6	34.9	34.9	34.6	34.9	34.9	34.9
72.5°	23.9	24.1	23.9	24.1	24.3	24.1	24.1	24.3
75°	15.7	15.7	15.4	15.4	15.4	15.4	15.7	15.4
77.5°	9.1	9.3	9.1	9.3	9.3	9.3	9.3	9.3
80°	5.4	5.4	5.4	5.2	5.4	5.4	5.4	5.2
82.5°	2.9	2.9	2.5	2.5	2.9	2.9	2.9	2.9
85°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
87.5°	0.2	0.2	0.2	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)