

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: P843369

Luminaire Tested: **LD4C15DE010B2750 EU4C15B30 4LBDWWLI**

Issue Date: 5/7/2024



Test Information

Test Method: LM-79-08
Report Number: P843369
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 EU4C15B30 4LBLDWWLI
Description: 4in Downlight with BioUp LEDs
Light Source: -
Ballast/Driver:

Summary

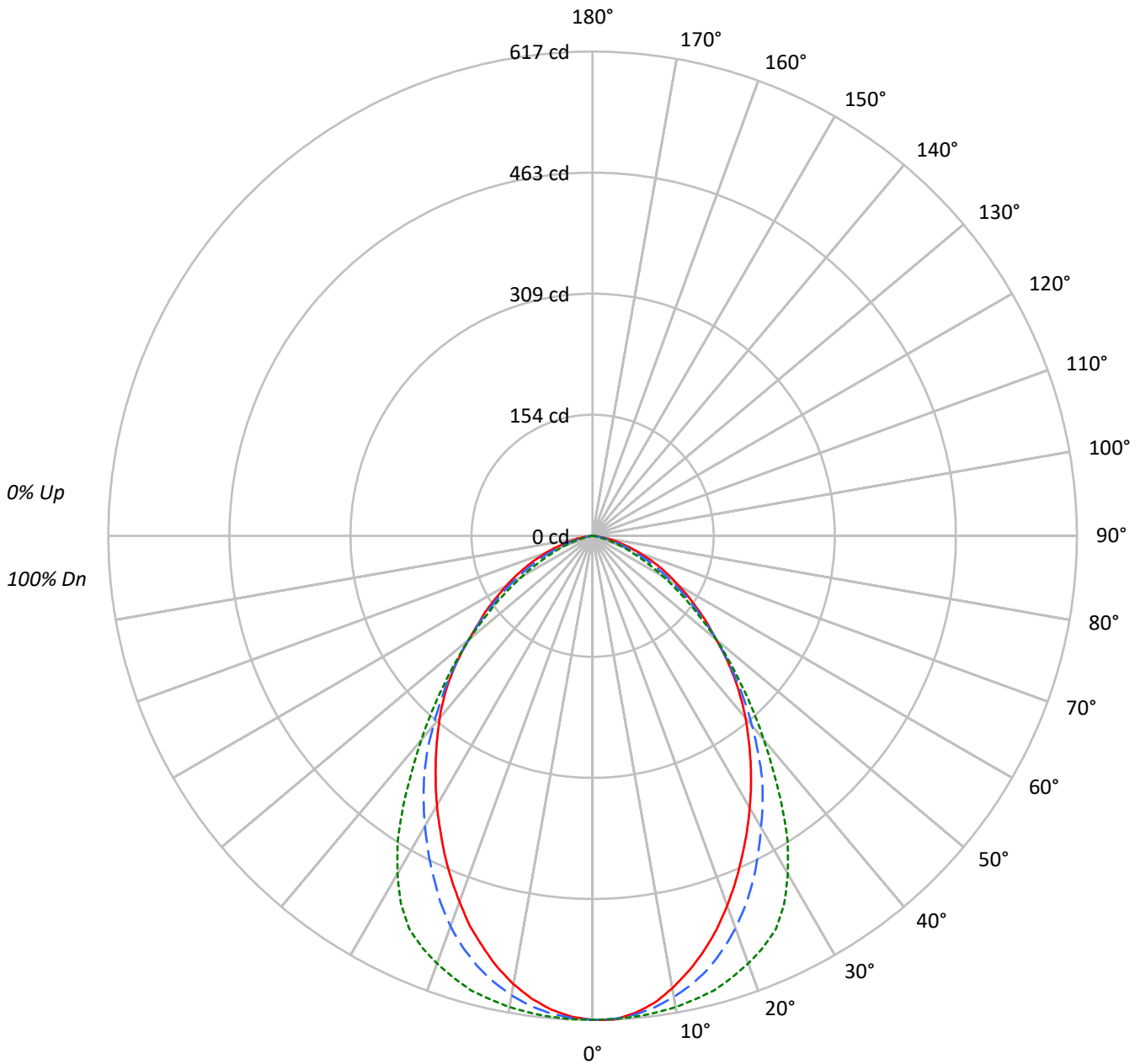
Lumens per Lamp: N/A
Luminaire Lumens: 1132.7 lumens
Efficiency: N/A
Efficacy: 66.6 lumens/watt
Spacing Criteria (0/90/45): 1 / 1.19 / 1.15
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

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

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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			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°	75776	75776	75776
5°	75326	75880	74746
10°	73028	76072	72392
15°	69660	76249	68910
20°	65552	75815	64833
25°	61053	74907	60552
30°	56744	70546	56275
35°	52612	63095	52237
40°	48641	54415	48609
45°	44321	46458	44686
50°	39162	39276	39353
55°	35063	32128	35234
60°	31008	25504	31057
65°	27296	19418	27035
70°	22594	13901	22594
75°	17610	7974	16946
80°	11461	1910	10895
85°	4229	564	3242



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	57.9	5.1
10°-20°	160.2	14.1
20°-30°	223.9	19.8
30°-40°	236.2	20.9
40°-50°	200.9	17.7
50°-60°	141.8	12.5
60°-70°	80.4	7.1
70°-80°	28.7	2.5
80°-90°	2.7	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°	442.0	39.0
0°-40°	678.2	59.9
0°-60°	1020.9	90.1
0°-90°	1132.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1132.7	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	617	617	617	617	617	
5°	611	613	615	611	606	58
15°	548	571	600	568	542	154
25°	450	484	553	480	447	207
35°	351	376	421	374	348	219
45°	255	259	267	260	257	196
55°	164	158	150	159	164	147
65°	94	80	67	81	93	93
75°	37	25	17	25	36	40
85°	3	1	0	1	2	5
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°	616.8	616.8	616.8	616.8	616.8	616.8	616.8	616.8	616.8	616.8	616.8
2.5°	617.2	616.1	616.1	616.1	616.1	616.1	616.1	616.1	616.1	616.3	616.3
5°	610.8	610.3	610.0	610.0	610.0	610.0	610.3	611.2	611.7	612.4	612.8
7.5°	600.6	599.7	600.2	600.2	600.6	601.1	601.8	602.7	604.1	605.0	606.1
10°	585.4	584.4	585.6	586.0	587.5	588.2	589.3	590.7	593.4	594.8	596.7
12.5°	567.6	567.2	567.6	569.4	570.9	571.8	573.1	576.2	578.9	581.9	585.2
15°	547.7	546.7	547.3	549.7	552.0	553.6	554.7	558.6	562.3	566.9	570.9
17.5°	525.6	524.1	525.9	527.8	530.7	532.1	533.7	538.1	543.2	548.3	552.6
20°	501.4	501.0	502.2	504.7	507.7	509.5	510.9	515.7	520.1	527.0	532.1
22.5°	476.3	476.8	477.6	480.5	482.5	485.0	487.1	491.5	496.6	503.0	509.5
25°	450.4	451.2	452.8	454.6	458.1	459.4	462.0	466.6	471.0	477.0	484.2
27.5°	425.6	425.8	427.6	428.6	431.8	434.8	436.0	440.8	445.9	450.4	456.7
30°	400.0	400.6	401.8	404.3	407.6	408.7	410.2	414.5	418.4	424.2	429.0
32.5°	375.5	375.0	376.4	377.8	381.5	383.6	384.2	389.3	392.8	398.5	403.2
35°	350.8	349.7	351.8	353.1	356.3	358.2	359.2	363.1	366.3	371.1	376.2
37.5°	326.2	327.0	328.0	329.1	330.7	331.3	334.0	335.0	339.1	342.8	345.5
40°	303.3	302.8	302.4	303.5	305.7	306.5	306.7	309.3	310.2	313.9	316.0
42.5°	278.9	279.1	278.9	279.1	280.3	280.3	280.9	282.6	283.2	284.4	286.9
45°	255.1	255.1	254.4	254.7	254.9	254.7	254.9	255.5	256.9	256.9	258.8
47.5°	230.5	229.9	230.9	230.1	229.7	229.5	230.1	229.5	230.9	230.9	231.3
50°	204.9	204.9	205.9	205.7	206.2	205.3	205.5	205.5	205.7	205.5	206.5
52.5°	185.0	184.6	184.0	182.9	183.4	182.4	182.4	182.7	182.0	181.7	180.6
55°	163.7	164.3	163.5	163.1	163.1	162.1	161.9	160.5	159.6	159.0	158.2
57.5°	144.6	145.1	144.9	143.7	142.4	142.6	142.0	140.7	138.7	137.3	136.1
60°	126.2	126.6	126.2	125.0	124.6	123.6	123.4	121.5	119.9	118.1	116.7
62.5°	109.6	109.6	109.4	107.7	106.6	106.8	105.7	104.3	102.2	99.6	97.5
65°	93.9	93.6	92.5	91.8	90.9	89.7	89.1	86.9	85.4	83.2	80.5
67.5°	78.2	77.5	77.0	76.4	74.2	74.0	73.1	71.3	69.0	67.4	65.0
70°	62.9	62.7	61.8	61.8	60.2	59.5	58.2	56.5	54.5	52.1	50.2
72.5°	49.8	49.4	48.4	47.5	46.1	45.7	44.5	42.9	41.0	38.7	36.5
75°	37.1	36.7	36.5	35.3	34.2	33.0	32.5	30.9	29.1	27.5	25.4
77.5°	26.0	25.6	25.0	24.2	23.5	22.8	22.1	20.7	19.1	17.8	15.9
80°	16.2	15.7	15.2	15.0	14.3	14.1	13.1	12.5	11.1	10.2	9.0
82.5°	8.4	8.4	7.8	7.6	7.2	6.9	6.7	6.0	5.3	4.7	3.9
85°	3.0	3.0	2.7	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



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CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	616.8	616.8	616.8	616.8	616.8	616.8	616.8	616.8	616.8	616.8	616.8
2.5°	616.5	616.3	616.5	616.5	616.8	616.8	616.8	616.5	616.8	616.5	616.5
5°	612.8	613.5	614.0	614.5	614.7	614.9	614.9	615.1	615.3	615.3	615.1
7.5°	607.1	608.5	609.8	610.8	611.2	611.7	612.4	612.8	613.3	613.1	612.8
10°	599.5	601.8	603.6	605.5	606.3	607.1	608.2	609.2	609.6	609.8	609.2
12.5°	588.6	591.9	594.8	597.9	599.3	600.2	602.4	604.1	605.0	605.0	604.3
15°	575.0	579.6	584.0	587.9	590.3	591.6	595.1	597.4	598.7	599.5	598.3
17.5°	558.6	563.9	569.2	574.3	576.6	578.7	583.5	586.8	589.7	590.3	588.9
20°	537.7	544.4	550.3	556.5	559.1	562.3	567.8	573.1	577.8	579.9	576.0
22.5°	514.1	521.5	527.0	534.6	538.1	541.6	548.7	555.4	563.5	567.8	561.0
25°	489.7	495.9	502.6	510.0	514.9	518.5	526.8	535.4	546.2	552.6	543.0
27.5°	463.3	469.0	477.0	485.0	488.7	493.4	503.3	512.5	522.9	528.6	521.5
30°	436.2	443.0	450.7	458.1	463.3	467.8	475.8	483.7	492.4	497.3	492.0
32.5°	409.2	415.9	422.3	430.4	433.4	437.3	444.4	451.2	457.8	462.2	455.9
35°	380.9	386.8	392.8	398.3	399.7	404.3	410.2	414.1	417.2	420.7	416.6
37.5°	349.9	354.5	357.5	363.5	365.8	366.5	371.1	373.9	377.4	378.0	377.8
40°	318.6	322.7	325.2	328.9	330.7	330.7	334.0	336.5	339.1	339.3	339.1
42.5°	289.3	291.3	293.4	295.7	295.2	298.0	299.4	300.6	302.4	302.4	302.8
45°	259.8	261.3	263.1	263.7	265.5	265.5	266.6	267.1	268.0	267.4	266.4
47.5°	232.3	233.0	233.2	235.2	235.7	234.2	235.5	235.7	235.5	235.5	235.0
50°	206.2	206.7	206.5	205.7	205.9	206.7	205.9	205.1	205.5	205.5	205.9
52.5°	180.9	179.9	179.5	179.5	178.5	178.5	177.4	176.9	176.7	175.8	176.9
55°	157.6	156.1	154.1	153.6	152.9	152.7	151.3	150.2	149.7	150.0	149.7
57.5°	135.2	133.1	131.7	131.3	130.5	129.1	127.6	126.4	126.2	125.8	125.8
60°	114.9	112.5	110.5	108.4	108.6	107.7	106.1	105.4	104.7	103.8	104.5
62.5°	96.5	93.9	91.6	89.5	88.1	87.5	86.3	85.1	84.4	83.8	84.6
65°	78.2	76.1	73.6	71.5	70.9	70.1	69.0	67.2	66.8	66.8	67.4
67.5°	61.8	59.5	57.2	55.8	54.9	53.9	53.5	52.6	51.9	51.4	51.7
70°	47.5	45.2	43.4	42.0	41.2	41.0	39.4	39.2	39.0	38.7	38.5
72.5°	34.6	32.8	31.1	30.2	29.3	28.6	28.1	27.5	27.2	27.2	27.2
75°	23.8	22.4	20.5	19.4	18.9	18.2	17.6	17.0	16.6	16.8	16.8
77.5°	14.3	12.9	11.7	10.8	10.6	9.9	9.2	8.8	8.0	8.0	8.4
80°	7.8	6.7	5.8	5.1	4.7	4.3	3.7	3.5	3.0	2.7	2.7
82.5°	3.5	2.7	2.3	2.1	1.8	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



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CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	616.8	616.8	616.8	616.8	616.8	616.8	616.8	616.8	616.8	616.8	616.8
2.5°	616.3	616.3	616.1	616.1	616.1	615.6	615.6	615.3	615.1	614.9	614.5
5°	614.7	614.5	614.0	613.7	613.5	612.8	612.2	611.7	611.0	610.0	609.6
7.5°	612.4	611.7	610.8	610.3	609.6	608.0	606.9	605.7	604.5	603.0	601.1
10°	608.5	607.1	605.7	604.8	603.6	601.6	599.3	597.4	594.8	592.6	590.1
12.5°	603.0	601.3	598.5	597.1	595.8	592.8	589.7	585.8	582.4	579.2	576.2
15°	596.0	593.0	589.7	587.9	585.8	581.1	576.4	572.3	567.6	563.7	558.9
17.5°	585.8	581.5	576.8	574.8	572.0	566.5	561.0	555.2	549.9	545.0	539.1
20°	570.6	565.8	559.8	556.5	554.3	546.9	541.6	535.2	529.6	523.5	516.9
22.5°	552.8	546.2	539.5	534.8	532.3	525.0	517.8	512.0	506.1	499.1	494.3
25°	532.8	524.5	516.4	511.8	507.9	500.0	493.2	487.1	479.7	473.7	469.0
27.5°	510.2	500.8	491.3	486.7	483.0	474.5	467.1	460.8	453.7	448.4	443.4
30°	483.2	474.7	465.7	462.0	457.6	448.9	440.3	434.8	427.0	421.4	415.9
32.5°	449.5	444.0	436.8	431.8	429.5	421.4	414.3	407.6	400.8	396.5	391.0
35°	412.6	407.8	401.8	399.0	396.0	391.0	385.2	379.4	374.1	370.0	364.9
37.5°	375.2	370.4	366.8	363.7	361.9	357.3	353.8	349.4	345.7	341.8	339.1
40°	336.5	335.2	331.3	329.9	329.3	324.3	321.3	317.8	315.5	313.3	311.6
42.5°	302.2	299.8	296.9	297.1	295.7	293.0	290.8	288.5	286.9	285.8	284.2
45°	268.2	266.4	265.0	266.2	263.9	262.9	261.3	261.1	260.0	257.9	257.2
47.5°	236.0	235.7	236.0	235.2	234.8	234.4	234.6	233.4	232.3	231.6	230.7
50°	206.5	206.7	207.1	207.8	206.2	206.9	206.7	206.5	206.5	205.7	206.2
52.5°	177.8	178.1	178.5	179.3	179.5	179.5	180.1	180.6	181.5	182.7	182.7
55°	150.8	152.5	153.4	154.5	153.9	155.3	155.9	158.0	158.6	158.6	159.6
57.5°	126.8	128.5	129.1	130.5	131.0	132.2	134.0	135.2	136.8	138.1	139.5
60°	104.9	105.7	107.5	109.6	109.1	111.9	113.3	115.1	117.2	118.1	119.9
62.5°	85.4	86.3	87.7	88.3	90.0	91.4	94.6	96.5	98.3	100.6	102.4
65°	67.8	68.7	70.1	71.5	72.2	74.2	75.8	79.1	80.7	83.2	85.4
67.5°	51.9	53.3	54.5	55.3	55.8	57.9	60.4	61.8	64.8	67.4	69.0
70°	38.7	39.9	41.2	41.0	42.0	43.6	45.5	47.5	49.8	52.1	53.9
72.5°	27.0	28.1	29.1	29.3	30.2	31.4	32.8	34.4	36.2	38.5	41.0
75°	17.0	17.3	18.2	18.7	19.1	20.5	21.7	23.3	25.0	26.8	28.3
77.5°	8.6	9.2	9.7	10.2	10.4	11.5	12.7	14.1	15.4	17.3	18.9
80°	3.3	3.5	4.1	4.3	4.9	5.5	6.5	7.2	8.4	9.7	10.6
82.5°	1.2	1.4	1.6	1.6	1.8	2.3	2.5	3.3	3.9	4.3	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



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CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	616.8	616.8	616.8	616.8	616.8	616.8	616.8	616.8
2.5°	614.3	614.3	614.0	613.7	613.7	613.7	613.5	613.5
5°	608.7	608.0	607.7	607.3	607.1	606.9	606.1	606.1
7.5°	599.7	598.7	598.1	597.4	596.5	595.8	595.8	594.8
10°	587.7	585.8	585.0	584.0	582.9	581.5	581.1	580.3
12.5°	573.1	569.4	568.6	566.9	565.1	564.1	562.6	562.6
15°	555.2	551.2	549.2	548.3	546.0	544.4	543.6	541.8
17.5°	534.2	531.1	528.0	526.6	524.1	521.9	521.0	520.8
20°	513.0	508.1	506.1	504.0	501.0	499.1	497.7	495.9
22.5°	488.5	484.2	481.1	479.7	477.2	474.0	471.7	471.7
25°	462.7	458.8	457.1	454.1	451.2	450.0	447.3	446.7
27.5°	438.0	434.1	430.9	429.3	425.8	424.2	421.9	420.9
30°	412.4	407.8	405.5	405.3	401.1	399.5	397.7	396.7
32.5°	386.8	382.9	380.5	379.2	377.4	374.6	372.9	372.1
35°	361.4	358.9	356.8	355.2	352.2	350.8	349.4	348.3
37.5°	335.0	332.6	331.7	330.3	328.9	326.4	326.0	325.0
40°	309.3	306.3	306.3	305.3	304.0	303.8	303.1	303.1
42.5°	282.6	281.1	280.9	281.1	280.3	279.7	279.1	280.7
45°	256.1	256.7	255.5	255.8	255.3	256.3	256.3	257.2
47.5°	231.6	230.7	231.1	231.6	232.3	232.3	232.0	231.8
50°	205.5	206.5	207.4	206.2	206.7	206.9	205.7	205.9
52.5°	183.2	183.4	184.0	183.4	184.0	183.8	184.2	183.4
55°	161.5	161.5	162.3	162.6	162.9	163.5	163.7	164.5
57.5°	140.5	141.6	142.8	142.6	143.4	144.4	143.7	144.4
60°	122.3	123.2	124.3	124.8	125.4	126.0	126.0	126.4
62.5°	103.8	105.7	106.6	107.5	107.5	108.4	109.4	109.6
65°	87.1	89.3	90.0	90.6	91.1	92.0	93.2	93.0
67.5°	71.5	72.9	73.8	74.2	75.6	76.1	77.0	77.9
70°	56.1	57.9	58.6	59.5	60.7	61.6	62.5	62.9
72.5°	42.9	44.3	44.7	45.7	46.9	47.7	48.2	48.9
75°	30.0	32.3	32.5	33.2	34.2	35.3	36.0	35.7
77.5°	19.9	21.5	21.7	22.6	23.5	24.4	24.6	25.0
80°	11.7	12.7	12.9	13.3	14.1	14.5	15.0	15.4
82.5°	5.5	6.0	6.5	6.5	6.9	7.4	7.4	7.6
85°	1.8	1.8	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)