

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: P843343

Luminaire Tested: **LD4C10DE010B50 EU4C10B50 4LBLWWLI**

Issue Date: 5/7/2024



Test Information

Test Method: LM-79-08
Report Number: P843343
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: LD4C10DE010B50 EU4C10B50 4LBLWWLI
Description: 4in Downlight with BioUp LEDs
Light Source: -
Ballast/Driver:

Summary

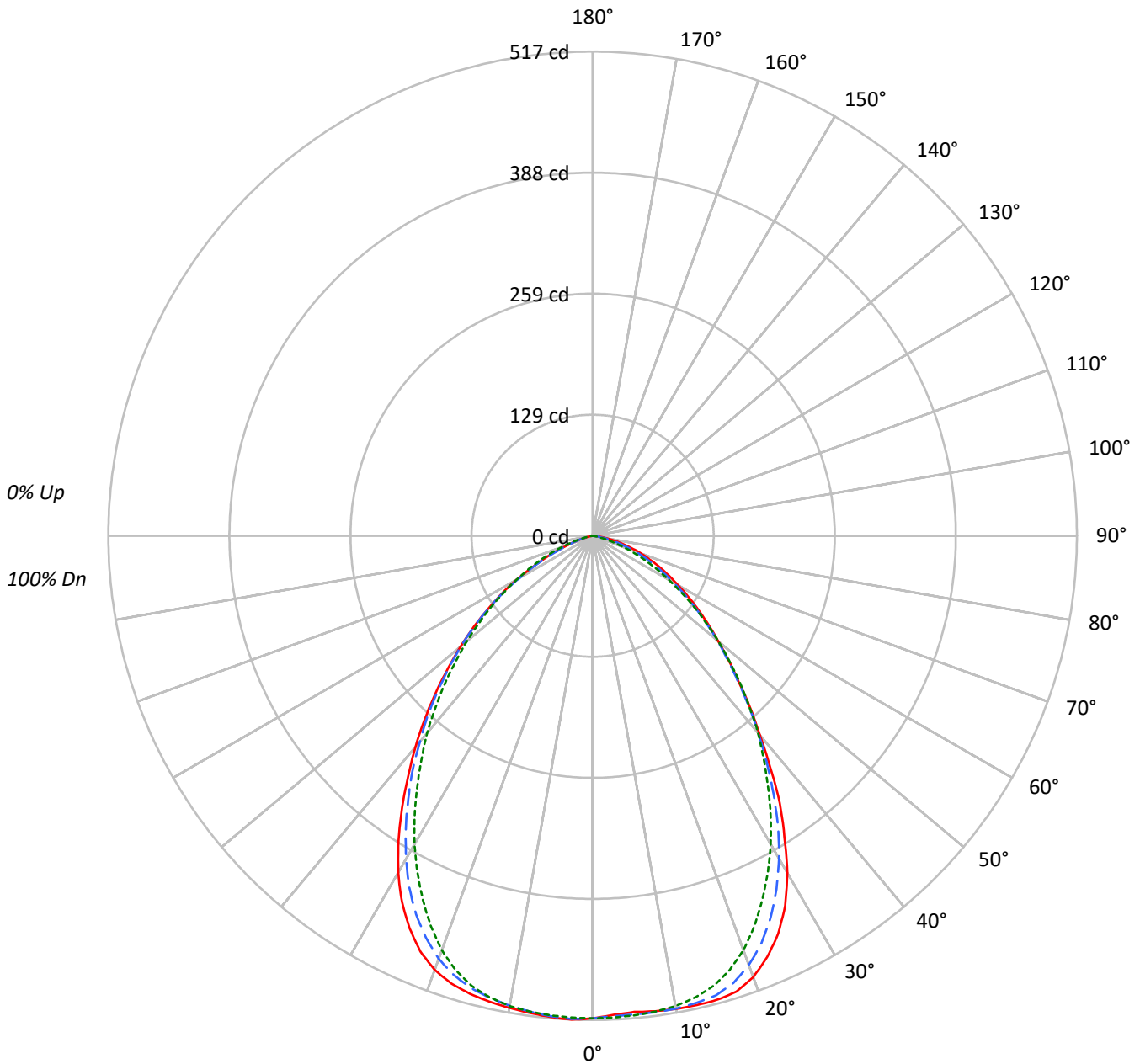
Lumens per Lamp: N/A
Luminaire Lumens: 987.8 lumens
Efficiency: N/A
Efficacy: 74.3 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.12 / 1.18
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 13.3
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	109	105	102	99	101	99	96	97	95	93	94	92	91	89			
2	103	96	91	86	101	95	89	85	91	87	83	88	84	81	85	82	80	78			
3	95	87	80	74	93	85	79	74	82	77	72	80	75	71	77	73	70	68			
4	88	78	71	65	86	77	70	65	75	69	64	72	67	63	70	66	62	60			
5	82	71	63	57	80	70	63	57	68	61	57	66	60	56	64	59	55	54			
6	76	65	57	51	75	64	56	51	62	56	51	61	55	50	59	54	50	48			
7	71	59	51	46	70	59	51	46	57	50	46	56	50	45	54	49	45	43			
8	67	55	47	42	65	54	47	42	53	46	41	52	46	41	50	45	41	39			
9	63	51	43	38	61	50	43	38	49	42	38	48	42	38	47	41	37	36			
10	59	47	40	35	58	46	39	35	45	39	35	45	39	35	44	38	34	33			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	63306	63306	63306
5°	62944	63376	63610
10°	63996	63609	63846
15°	65247	63314	64382
20°	65565	61551	64480
25°	63548	58125	62680
30°	58985	53935	58871
35°	52237	48922	53212
40°	44520	44071	47198
45°	38258	38692	41107
50°	33390	33466	35225
55°	29515	28273	29215
60°	25848	23047	22974
65°	22907	17907	15930
70°	19540	12321	9447
75°	15806	6645	4319
80°	10825	1627	1132
85°	3242	564	564



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	49.0	5.0
10°-20°	141.8	14.4
20°-30°	204.8	20.7
30°-40°	211.8	21.4
40°-50°	175.0	17.7
50°-60°	120.7	12.2
60°-70°	63.2	6.4
70°-80°	19.9	2.0
80°-90°	1.7	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°	395.6	40.0
0°-40°	607.3	61.5
0°-60°	903.0	91.4
0°-90°	987.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	987.8	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	515	515	515	515	515	
5°	510	513	514	515	516	49
15°	513	508	498	500	506	145
25°	469	450	429	446	462	214
35°	348	337	326	343	355	216
45°	220	219	223	233	237	172
55°	138	134	132	136	136	124
65°	79	71	62	51	55	78
75°	33	26	14	10	9	36
85°	2	1	0	0	0	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°	515.3	515.3	515.3	515.3	515.3	515.3	515.3	515.3	515.3	515.3	515.3
2.5°	512.0	512.1	512.1	512.5	512.5	512.5	512.7	512.7	513.0	513.2	513.3
5°	510.4	510.4	510.8	510.9	511.4	511.6	512.0	512.1	512.5	512.7	513.0
7.5°	512.0	512.0	512.1	512.3	512.3	512.5	512.5	512.7	513.0	513.2	513.2
10°	513.0	513.0	513.0	513.0	513.2	513.2	513.2	513.0	513.0	513.0	512.7
12.5°	513.3	513.3	513.2	513.0	513.2	513.0	513.0	512.3	512.0	511.6	510.9
15°	513.0	513.0	512.7	512.5	512.3	512.0	511.8	510.8	510.0	508.8	508.1
17.5°	510.4	510.0	509.7	509.3	508.5	507.9	507.6	505.8	504.4	502.5	500.4
20°	501.5	501.1	500.6	499.6	498.6	497.8	496.7	494.1	492.9	489.9	487.8
22.5°	487.0	486.6	486.8	485.0	483.1	482.0	481.2	479.1	476.8	473.1	470.8
25°	468.8	467.7	467.7	464.9	464.0	463.2	462.2	459.8	456.3	453.0	449.8
27.5°	445.2	443.7	442.9	442.5	440.2	438.4	437.1	435.1	432.3	429.3	425.1
30°	415.8	415.7	414.6	412.9	411.2	410.4	408.9	405.5	402.9	400.7	398.0
32.5°	381.2	381.0	381.0	381.0	379.8	379.6	377.3	375.6	373.5	370.2	368.4
35°	348.3	348.1	348.3	345.4	344.6	344.0	343.8	342.7	339.7	338.2	336.6
37.5°	311.2	311.7	311.4	310.5	311.5	309.8	311.2	308.6	307.5	307.0	305.3
40°	277.6	279.2	277.6	277.8	278.8	277.1	277.1	276.7	275.9	275.5	275.1
42.5°	249.0	247.1	248.2	247.3	248.2	247.7	246.7	247.3	247.5	246.7	246.5
45°	220.2	220.6	220.9	220.4	220.4	219.8	221.4	220.4	220.4	220.6	219.2
47.5°	196.8	196.2	196.6	196.2	196.4	196.0	196.4	196.6	196.2	196.2	195.0
50°	174.7	174.3	175.7	174.5	174.5	174.3	174.5	174.1	173.6	173.6	174.0
52.5°	155.6	154.8	154.6	155.6	154.2	154.2	154.4	154.0	153.3	152.8	151.9
55°	137.8	137.6	137.8	137.0	136.6	136.6	135.6	135.3	135.1	134.1	133.5
57.5°	121.1	120.6	120.8	120.6	119.7	119.6	118.8	118.8	118.0	117.3	116.2
60°	105.2	105.2	105.9	105.0	104.5	104.1	103.8	103.3	102.0	100.6	99.4
62.5°	91.2	91.3	91.2	90.5	90.2	89.8	89.4	88.2	87.0	86.3	84.9
65°	78.8	78.6	77.9	77.6	76.6	76.6	75.8	75.3	73.9	72.8	71.4
67.5°	66.0	65.6	65.6	65.6	64.4	64.2	63.9	62.7	61.6	60.0	58.8
70°	54.4	54.8	54.2	53.6	53.0	52.8	52.2	51.1	49.7	48.2	47.2
72.5°	43.4	43.7	43.2	42.9	41.8	41.4	41.2	40.3	38.7	37.8	36.2
75°	33.3	33.4	33.1	32.7	31.9	31.7	30.8	30.0	29.0	27.5	26.1
77.5°	24.0	23.6	23.6	22.8	22.1	22.1	21.9	20.7	19.4	18.2	17.0
80°	15.3	15.1	14.5	14.2	13.5	13.3	13.1	12.2	11.2	10.5	9.6
82.5°	7.7	7.5	7.4	7.2	6.8	6.3	6.6	5.8	5.4	4.7	4.0
85°	2.3	2.5	2.5	2.3	2.1	2.1	2.1	1.9	1.6	1.4	1.2
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°	515.3	515.3	515.3	515.3	515.3	515.3	515.3	515.3	515.3	515.3	515.3
2.5°	513.5	513.7	513.9	514.1	514.1	514.3	514.4	514.6	514.9	514.9	515.1
5°	513.2	513.5	513.5	513.7	513.7	513.7	513.9	513.9	513.9	513.9	514.1
7.5°	513.3	513.3	513.3	513.2	513.2	513.0	513.0	513.0	512.5	512.5	512.5
10°	512.3	512.1	512.0	511.6	511.4	511.2	510.8	510.4	510.0	509.9	509.5
12.5°	510.4	509.7	508.8	508.1	507.7	507.6	506.7	506.2	505.5	505.0	504.6
15°	506.5	505.3	504.1	502.5	502.1	501.7	500.4	499.2	498.5	497.8	496.9
17.5°	498.8	496.5	495.0	492.6	491.7	491.3	489.2	488.0	486.6	486.2	485.5
20°	485.0	482.9	480.1	477.9	476.8	475.6	473.8	472.3	470.8	470.8	469.8
22.5°	467.9	465.1	461.4	458.8	458.6	456.3	454.7	453.0	452.3	451.2	451.2
25°	446.2	443.9	439.8	437.4	436.3	435.7	433.2	430.9	429.7	428.8	429.5
27.5°	422.2	418.7	415.7	412.7	411.7	410.6	408.2	407.3	405.2	405.0	404.8
30°	394.7	391.2	388.2	386.8	384.9	383.9	382.1	381.0	380.2	380.2	379.8
32.5°	365.8	362.8	361.3	358.3	357.4	356.0	354.8	353.7	354.1	353.7	353.9
35°	334.7	334.0	331.0	329.3	329.3	329.1	327.2	326.4	326.1	326.2	327.2
37.5°	305.1	302.8	300.9	299.7	300.7	299.5	299.3	299.3	300.5	299.7	301.2
40°	273.6	273.4	272.7	273.0	273.2	271.8	272.2	272.4	273.2	274.8	275.0
42.5°	246.1	245.9	245.9	245.9	245.6	244.7	245.6	246.9	246.7	247.8	248.9
45°	219.6	219.2	220.0	219.5	220.6	220.9	220.4	220.7	221.9	222.7	224.2
47.5°	195.5	195.5	195.7	196.0	194.8	195.8	196.2	196.9	197.6	197.9	198.7
50°	172.9	172.9	172.6	172.6	172.6	173.1	172.4	173.3	173.6	175.1	176.1
52.5°	152.3	151.3	151.9	151.5	150.7	150.3	150.7	150.9	152.1	152.5	153.7
55°	132.5	132.5	131.0	130.6	131.1	131.0	130.8	130.8	131.4	132.0	132.9
57.5°	115.2	114.0	112.8	112.6	112.0	112.2	112.2	112.0	111.7	111.8	112.0
60°	98.7	97.9	96.1	96.1	95.9	95.8	94.8	94.7	93.6	93.8	93.1
62.5°	83.6	83.2	80.9	80.1	80.1	79.5	78.6	78.4	77.0	77.0	76.3
65°	70.0	68.9	67.5	66.2	66.2	65.4	64.8	63.0	62.1	61.6	60.4
67.5°	57.6	55.9	54.6	53.4	52.7	52.5	51.1	49.9	48.3	47.4	45.7
70°	45.7	44.3	42.9	41.8	41.0	40.3	38.9	37.1	36.0	34.3	33.1
72.5°	34.5	33.3	32.2	30.6	29.6	29.0	27.7	26.1	24.2	23.1	21.5
75°	24.7	23.4	21.9	20.5	19.9	19.4	17.8	16.6	15.3	14.0	12.4
77.5°	16.1	14.5	13.3	11.8	11.6	11.2	9.6	8.5	7.5	6.8	5.8
80°	8.5	7.7	6.8	5.8	5.4	4.9	4.0	3.5	2.9	2.3	1.9
82.5°	3.7	3.1	2.5	2.1	1.9	1.7	1.4	1.2	1.0	1.0	0.7
85°	1.0	0.7	0.7	0.5	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°	515.3	515.3	515.3	515.3	515.3	515.3	515.3	515.3	515.3	515.3	515.3
2.5°	515.3	515.5	515.6	515.6	515.8	516.0	516.0	516.2	516.4	516.7	516.7
5°	514.3	514.3	514.3	514.4	514.4	514.4	514.4	514.9	514.9	515.1	515.3
7.5°	512.3	512.3	512.3	512.3	512.1	512.3	512.1	512.1	512.5	512.7	513.0
10°	509.3	509.0	509.0	508.8	508.8	508.8	509.0	509.3	509.5	509.7	510.2
12.5°	504.4	504.2	504.2	504.1	504.1	504.2	504.4	504.8	505.5	506.0	506.7
15°	496.7	496.5	496.7	496.9	497.3	497.8	498.5	499.0	500.2	501.1	502.1
17.5°	485.5	485.7	485.9	486.2	486.8	487.6	489.2	490.6	492.0	493.6	495.1
20°	470.0	470.8	471.0	472.3	472.7	474.5	476.1	478.5	480.6	482.6	484.7
22.5°	451.4	452.0	452.8	454.3	455.3	457.6	459.8	462.4	464.7	467.3	470.3
25°	430.4	430.5	432.8	432.8	435.1	437.1	439.6	442.5	446.0	449.3	451.4
27.5°	406.3	407.3	409.0	409.8	411.5	414.6	416.8	420.2	423.7	426.6	429.0
30°	381.2	381.9	384.9	385.2	386.6	389.3	392.2	395.4	398.2	401.5	403.6
32.5°	354.6	356.7	358.5	359.9	360.2	364.4	365.8	368.2	371.3	374.6	376.7
35°	328.9	329.9	332.4	333.2	334.3	336.6	339.7	341.7	343.2	345.4	347.9
37.5°	301.6	304.5	305.1	307.5	307.9	310.0	311.5	313.8	315.8	317.7	318.1
40°	276.3	277.3	279.4	280.0	280.4	283.2	285.2	285.8	286.7	288.5	290.8
42.5°	250.6	251.5	253.8	253.3	255.0	256.4	257.3	259.6	260.6	261.2	261.2
45°	225.2	225.6	227.2	227.9	228.9	229.7	231.4	232.6	233.0	234.7	235.3
47.5°	201.1	201.4	202.5	203.9	203.6	204.5	206.5	207.0	207.2	208.4	209.0
50°	177.3	178.2	179.8	179.4	180.5	181.1	182.9	183.2	183.2	183.4	183.6
52.5°	154.9	155.8	156.1	156.5	157.1	158.1	158.9	158.4	159.3	160.0	159.4
55°	132.9	133.5	134.4	134.8	134.8	135.1	134.6	136.4	135.6	135.5	135.6
57.5°	112.8	112.0	111.8	112.8	113.2	113.0	112.4	113.2	113.2	112.8	112.2
60°	93.3	92.6	92.4	92.6	91.9	91.3	91.7	91.3	90.3	90.0	90.2
62.5°	75.4	74.9	73.3	73.3	73.0	72.8	71.2	71.4	70.6	69.5	69.8
65°	59.0	57.4	56.7	56.5	55.1	53.9	53.6	52.2	51.1	50.9	51.1
67.5°	44.3	42.5	41.2	40.6	39.9	38.9	37.5	36.4	36.8	36.6	37.3
70°	30.8	29.6	28.2	27.3	27.7	26.5	25.7	25.7	25.9	26.1	26.5
72.5°	20.5	18.9	18.4	17.8	17.5	16.6	17.0	17.0	16.8	17.0	16.6
75°	11.6	10.8	10.3	10.0	9.6	9.6	9.6	9.6	9.5	9.3	9.3
77.5°	5.2	4.9	4.7	4.4	4.4	4.4	4.2	4.0	4.0	4.0	3.9
80°	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
82.5°	0.7	0.7	1.0	1.0	1.0	0.7	1.0	1.0	0.7	0.7	1.0
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°	515.3	515.3	515.3	515.3	515.3	515.3	515.3	515.3
2.5°	516.8	517.0	517.0	517.0	517.2	517.2	517.2	517.2
5°	515.5	515.6	515.6	515.6	515.8	515.8	515.8	515.8
7.5°	513.2	513.3	513.3	513.5	513.5	513.7	513.7	513.9
10°	510.4	510.8	510.9	511.2	511.4	511.6	511.6	511.8
12.5°	507.6	507.9	508.1	508.5	508.8	509.0	509.3	509.5
15°	503.2	504.1	504.4	504.6	505.3	505.8	506.0	506.2
17.5°	496.5	498.0	498.6	499.0	499.7	500.6	501.1	501.3
20°	486.8	488.5	489.4	490.3	491.5	492.4	492.9	493.2
22.5°	473.3	475.2	476.4	477.5	478.5	479.4	481.0	480.4
25°	453.9	457.2	458.6	459.1	461.2	462.4	463.2	462.4
27.5°	432.3	434.2	435.3	436.7	438.3	439.4	439.8	440.9
30°	406.1	409.4	409.2	410.6	412.5	413.6	414.1	415.0
32.5°	379.1	380.5	381.7	381.6	382.3	384.4	383.7	385.4
35°	350.2	350.4	352.3	352.2	353.7	353.7	353.7	354.8
37.5°	319.4	321.7	320.8	323.1	322.4	322.9	322.9	323.3
40°	291.4	292.1	292.1	293.0	293.5	293.0	293.3	294.3
42.5°	262.4	263.1	263.4	262.9	263.6	265.3	263.9	265.0
45°	235.3	235.9	236.6	236.1	237.0	236.5	237.0	236.6
47.5°	209.7	209.5	209.3	210.9	209.5	209.7	210.5	209.2
50°	183.6	184.8	184.0	184.6	185.0	185.0	184.3	184.3
52.5°	160.4	160.2	159.6	160.2	159.8	160.0	160.4	160.0
55°	136.4	137.2	136.8	136.6	136.8	136.8	137.9	136.4
57.5°	112.8	112.4	113.0	114.3	113.0	114.0	114.5	114.8
60°	90.3	90.3	91.5	91.0	92.1	93.1	93.8	93.5
62.5°	68.9	69.8	70.2	70.4	71.6	72.3	72.3	72.1
65°	51.1	52.5	52.5	53.2	53.6	53.6	53.9	54.8
67.5°	37.8	37.8	38.0	38.3	38.1	38.1	38.5	38.7
70°	26.3	25.9	26.5	26.3	26.3	26.1	26.3	26.3
72.5°	16.6	16.6	16.8	16.6	16.3	16.5	16.5	16.8
75°	8.9	9.3	8.9	8.9	9.1	8.7	8.9	9.1
77.5°	3.7	3.7	3.7	3.7	3.7	3.5	3.5	3.5
80°	1.7	1.7	1.7	1.7	1.7	1.7	1.6	1.6
82.5°	0.7	1.0	0.7	1.0	0.7	0.7	0.7	0.7
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)