

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: P843341

Luminaire Tested: **LD4C10DE010B2750 EU4C10B50 4LBDWWLI**

Issue Date: 5/7/2024



**Test Information**

Test Method: LM-79-08  
Report Number: P843341  
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: LD4C10DE010B2750 EU4C10B50 4LBLDWWLI  
Description: 4in Downlight with BioUp LEDs  
Light Source: -  
Ballast/Driver:

**Summary**

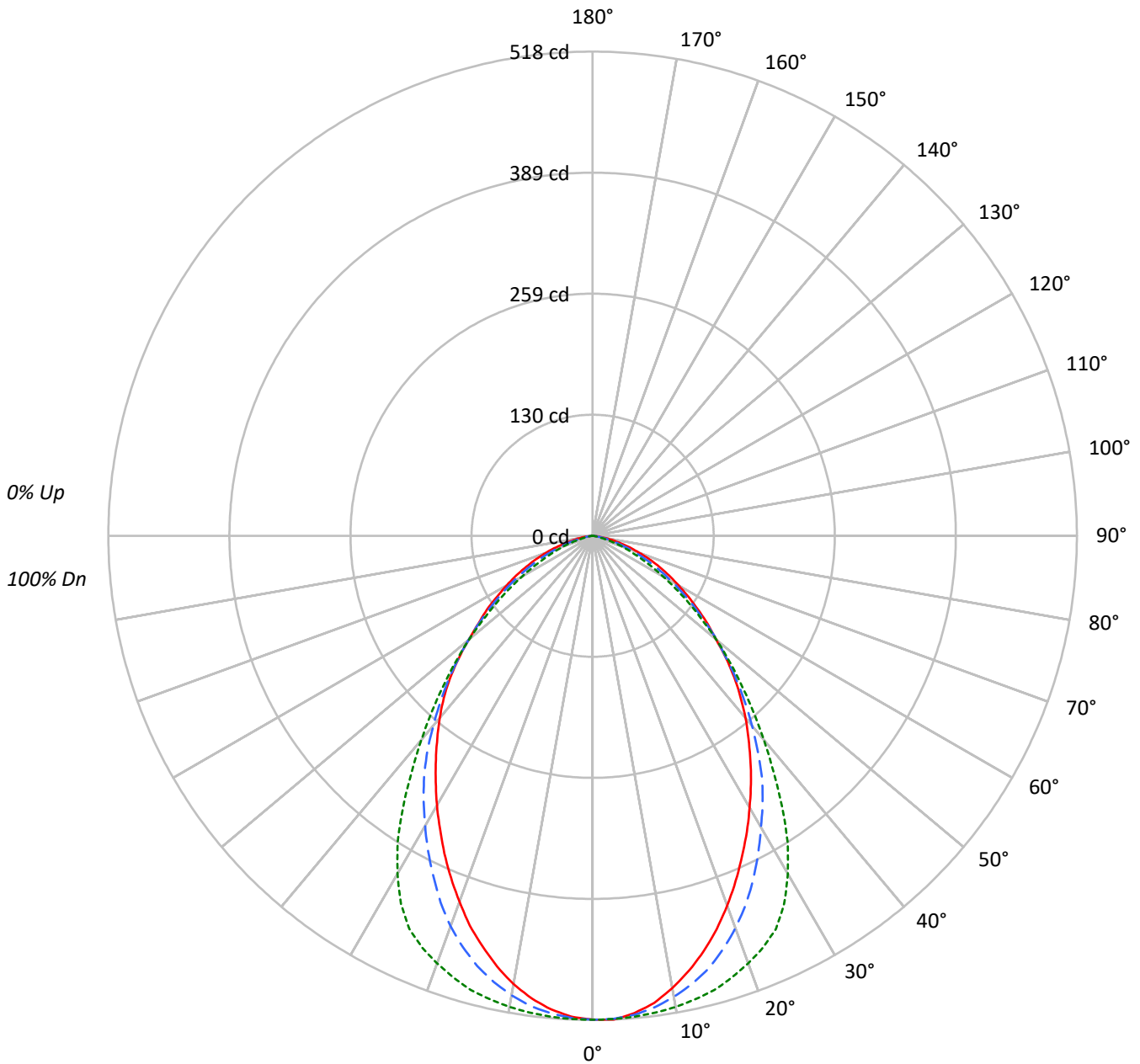
Lumens per Lamp: N/A  
Luminaire Lumens: 950.8 lumens  
Efficiency: N/A  
Efficacy: 71.5 lumens/watt  
Spacing Criteria (0/90/45): 1 / 1.19 / 1.15  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

Input Watts (W): 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									
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°	63601	63601	63601
5°	63215	63696	62747
10°	61302	63859	60765
15°	58493	64001	57845
20°	55028	63630	54426
25°	51253	62883	50833
30°	47622	59212	47239
35°	44153	52957	43838
40°	40831	45674	40799
45°	37215	38987	37511
50°	32874	32969	33046
55°	29451	26966	29558
60°	26020	21401	26070
65°	22907	16337	22703
70°	19002	11710	19002
75°	14810	6740	14240
80°	9551	1627	9197
85°	3524	564	2678



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	48.6	5.1
10°-20°	134.5	14.1
20°-30°	188.0	19.8
30°-40°	198.3	20.9
40°-50°	168.7	17.7
50°-60°	119.0	12.5
60°-70°	67.5	7.1
70°-80°	24.1	2.5
80°-90°	2.3	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°	371.0	39.0
0°-40°	569.3	59.9
0°-60°	857.0	90.1
0°-90°	950.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	950.8	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	518	518	518	518	518	
5°	513	514	516	513	509	48
15°	460	479	503	476	455	129
25°	378	406	464	403	375	174
35°	294	316	353	314	292	184
45°	214	217	224	218	216	165
55°	138	133	126	133	138	123
65°	79	68	56	68	78	78
75°	31	21	14	21	30	34
85°	2	1	0	1	2	4
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°	517.7	517.7	517.7	517.7	517.7	517.7	517.7	517.7	517.7	517.7	517.7
2.5°	518.1	517.2	517.2	517.2	517.2	517.2	517.2	517.2	517.2	517.3	517.3
5°	512.6	512.3	512.1	512.1	512.1	512.1	512.3	513.1	513.5	514.0	514.4
7.5°	504.2	503.4	503.8	503.8	504.2	504.6	505.1	505.9	507.0	507.9	508.8
10°	491.4	490.6	491.6	492.0	493.2	493.7	494.7	495.8	498.1	499.3	500.9
12.5°	476.5	476.0	476.5	478.1	479.2	480.0	481.1	483.7	486.0	488.5	491.2
15°	459.9	458.9	459.4	461.3	463.3	464.6	465.7	469.0	472.0	475.9	479.2
17.5°	441.2	439.9	441.5	442.9	445.5	446.6	448.0	451.7	455.9	460.2	463.9
20°	420.9	420.5	421.5	423.6	426.1	427.7	428.9	432.9	436.6	442.4	446.6
22.5°	399.8	400.2	400.9	403.3	405.1	407.2	408.9	412.6	416.8	422.3	427.7
25°	378.1	378.7	380.0	381.6	384.6	385.7	387.8	391.6	395.3	400.4	406.3
27.5°	357.2	357.4	359.0	359.7	362.5	365.0	365.9	370.0	374.3	378.1	383.4
30°	335.7	336.3	337.3	339.4	342.1	343.1	344.3	348.0	351.2	356.0	360.1
32.5°	315.2	314.9	316.0	317.2	320.3	321.9	322.6	326.8	329.7	334.5	338.4
35°	294.4	293.5	295.3	296.5	299.1	300.7	301.4	304.7	307.5	311.5	315.8
37.5°	273.7	274.6	275.3	276.3	277.6	278.1	280.4	281.1	284.6	287.7	290.0
40°	254.6	254.3	253.8	254.8	256.6	257.3	257.5	259.6	260.4	263.5	265.3
42.5°	234.1	234.3	234.1	234.3	235.2	235.2	235.9	237.1	237.8	238.7	240.8
45°	214.2	214.2	213.5	213.7	214.0	213.7	214.0	214.5	215.7	215.7	217.2
47.5°	193.4	193.0	193.8	193.2	192.8	192.6	193.2	192.6	193.8	193.8	194.2
50°	172.0	172.0	172.9	172.7	173.1	172.3	172.5	172.5	172.7	172.5	173.2
52.5°	155.3	154.8	154.5	153.6	153.9	153.1	153.1	153.4	152.7	152.6	151.6
55°	137.5	137.8	137.3	136.9	136.9	136.1	135.9	134.7	134.0	133.4	132.8
57.5°	121.4	121.7	121.6	120.6	119.4	119.6	119.3	118.1	116.3	115.2	114.2
60°	105.9	106.3	105.9	104.9	104.6	103.8	103.5	102.1	100.7	99.1	97.9
62.5°	92.0	92.0	91.8	90.4	89.5	89.7	88.6	87.5	85.8	83.7	81.9
65°	78.8	78.6	77.6	77.1	76.3	75.3	74.8	73.0	71.6	69.9	67.6
67.5°	65.7	65.0	64.6	64.1	62.3	62.2	61.3	59.9	57.9	56.6	54.6
70°	52.9	52.7	51.9	51.9	50.6	49.9	48.8	47.4	45.7	43.8	42.2
72.5°	41.8	41.5	40.6	39.9	38.7	38.3	37.3	36.0	34.5	32.6	30.6
75°	31.2	30.8	30.6	29.6	28.7	27.7	27.3	25.9	24.4	23.1	21.3
77.5°	21.9	21.5	20.9	20.3	19.8	19.1	18.6	17.5	16.1	14.9	13.3
80°	13.5	13.1	12.8	12.6	12.0	11.8	11.0	10.5	9.3	8.6	7.5
82.5°	7.0	7.0	6.6	6.3	6.0	5.8	5.6	5.1	4.4	3.9	3.3
85°	2.5	2.5	2.3	2.1	2.1	1.9	1.9	1.7	1.4	1.4	1.0
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°	517.7	517.7	517.7	517.7	517.7	517.7	517.7	517.7	517.7	517.7	517.7
2.5°	517.5	517.3	517.5	517.5	517.7	517.7	517.7	517.5	517.7	517.5	517.5
5°	514.4	515.0	515.4	515.8	516.0	516.1	516.1	516.3	516.5	516.5	516.3
7.5°	509.6	510.7	511.9	512.6	513.1	513.5	514.0	514.4	514.9	514.6	514.4
10°	503.2	505.1	506.7	508.2	509.0	509.6	510.5	511.4	511.7	511.9	511.4
12.5°	494.1	496.8	499.3	501.8	503.0	503.8	505.8	507.0	507.9	507.9	507.2
15°	482.7	486.5	490.2	493.5	495.4	496.6	499.5	501.4	502.6	503.2	502.3
17.5°	469.0	473.4	477.8	482.1	484.0	485.8	489.8	492.5	495.1	495.4	494.2
20°	451.3	456.9	462.0	467.2	469.3	472.0	476.7	481.1	485.0	486.7	483.4
22.5°	431.5	437.8	442.4	448.8	451.7	454.6	460.6	466.2	473.0	476.7	470.9
25°	411.0	416.3	421.9	428.0	432.1	435.2	442.2	449.4	458.5	463.9	455.7
27.5°	389.0	393.7	400.4	407.2	410.3	414.2	422.4	430.2	438.9	443.8	437.8
30°	366.2	372.0	378.3	384.6	389.0	392.6	399.5	406.0	413.3	417.4	413.0
32.5°	343.4	349.1	354.5	361.3	363.8	367.1	373.1	378.7	384.3	388.0	382.8
35°	319.6	324.7	329.7	334.3	335.5	339.4	344.3	347.5	350.3	353.1	349.7
37.5°	293.7	297.6	300.1	305.1	307.0	307.7	311.5	313.8	316.8	317.3	317.2
40°	267.4	270.9	273.0	276.0	277.6	277.6	280.4	282.5	284.6	284.8	284.6
42.5°	242.8	244.5	246.3	248.2	247.8	250.1	251.3	252.2	253.8	253.8	254.3
45°	218.0	219.4	220.9	221.3	222.8	222.8	223.8	224.2	225.0	224.4	223.6
47.5°	194.9	195.6	195.8	197.5	197.9	196.5	197.7	197.9	197.7	197.7	197.2
50°	173.1	173.5	173.2	172.7	172.9	173.5	172.9	172.1	172.5	172.5	172.9
52.5°	151.8	151.0	150.6	150.6	149.9	149.9	148.9	148.5	148.3	147.5	148.5
55°	132.2	131.0	129.3	128.9	128.4	128.2	127.0	126.1	125.6	125.9	125.6
57.5°	113.5	111.7	110.5	110.2	109.6	108.4	107.0	106.1	105.9	105.6	105.6
60°	96.5	94.4	92.8	91.0	91.2	90.4	89.1	88.5	87.9	87.1	87.7
62.5°	80.9	78.8	76.9	75.1	73.9	73.4	72.4	71.4	70.9	70.3	71.1
65°	65.7	63.9	61.8	60.0	59.4	58.8	57.9	56.4	56.2	56.2	56.6
67.5°	51.9	49.9	48.0	46.9	46.1	45.3	44.9	44.1	43.6	43.2	43.4
70°	39.9	38.0	36.4	35.2	34.7	34.5	33.1	32.9	32.7	32.6	32.4
72.5°	29.1	27.5	26.1	25.4	24.5	24.0	23.6	23.1	22.8	22.8	22.8
75°	20.0	18.8	17.2	16.3	15.9	15.3	14.7	14.3	14.0	14.2	14.2
77.5°	12.0	10.9	9.8	9.1	8.9	8.4	7.7	7.4	6.8	6.8	7.0
80°	6.6	5.6	4.9	4.2	3.9	3.7	3.1	2.9	2.5	2.3	2.3
82.5°	2.9	2.3	1.9	1.7	1.6	1.4	1.2	1.0	1.0	0.7	1.0
85°	1.0	0.7	0.5	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°	517.7	517.7	517.7	517.7	517.7	517.7	517.7	517.7	517.7	517.7	517.7
2.5°	517.3	517.3	517.2	517.2	517.2	516.8	516.8	516.5	516.3	516.1	515.8
5°	516.0	515.8	515.4	515.2	515.0	514.4	513.8	513.5	512.8	512.1	511.7
7.5°	514.0	513.5	512.6	512.3	511.7	510.3	509.4	508.4	507.5	506.1	504.6
10°	510.7	509.6	508.4	507.7	506.7	504.9	503.0	501.4	499.3	497.4	495.3
12.5°	506.1	504.7	502.4	501.2	500.0	497.6	495.1	491.8	488.8	486.2	483.7
15°	500.3	497.7	495.1	493.5	491.8	487.7	483.9	480.4	476.5	473.2	469.2
17.5°	491.8	488.1	484.2	482.5	480.2	475.5	470.9	466.0	461.6	457.5	452.5
20°	479.0	474.9	469.9	467.2	465.3	459.0	454.6	449.2	444.5	439.4	433.8
22.5°	464.1	458.5	452.9	449.0	446.9	440.6	434.7	429.8	424.7	418.9	414.9
25°	447.3	440.3	433.5	429.6	426.3	419.8	414.0	408.9	402.7	397.7	393.7
27.5°	428.2	420.3	412.4	408.6	405.4	398.3	392.1	386.9	380.9	376.4	372.1
30°	405.6	398.4	390.9	387.8	384.1	376.7	369.6	365.0	358.3	353.7	349.1
32.5°	377.4	372.7	366.7	362.5	360.5	353.7	347.7	342.1	336.5	332.8	328.2
35°	346.4	342.3	337.3	335.0	332.4	328.2	323.3	318.5	314.0	310.5	306.3
37.5°	315.0	310.9	307.9	305.3	303.8	299.9	297.0	293.3	290.2	286.9	284.6
40°	282.5	281.3	278.1	276.9	276.5	272.2	269.7	266.8	264.8	262.9	261.6
42.5°	253.6	251.7	249.2	249.4	248.2	245.9	244.1	242.2	240.8	239.9	238.5
45°	225.2	223.6	222.4	223.5	221.5	220.7	219.4	219.1	218.2	216.5	215.9
47.5°	198.1	197.9	198.1	197.5	197.1	196.7	196.9	196.0	194.9	194.4	193.7
50°	173.2	173.5	173.9	174.4	173.1	173.7	173.5	173.2	173.2	172.7	173.1
52.5°	149.2	149.4	149.9	150.4	150.6	150.6	151.2	151.6	152.4	153.4	153.4
55°	126.6	128.0	128.7	129.7	129.1	130.3	130.8	132.6	133.2	133.2	134.0
57.5°	106.5	107.9	108.4	109.6	110.0	110.9	112.5	113.5	114.9	116.0	117.2
60°	88.1	88.6	90.2	92.0	91.6	93.9	95.1	96.6	98.4	99.1	100.7
62.5°	71.6	72.4	73.6	74.1	75.5	76.7	79.4	80.9	82.5	84.4	86.0
65°	56.9	57.7	58.8	60.0	60.6	62.3	63.7	66.4	67.8	69.9	71.6
67.5°	43.6	44.7	45.7	46.4	46.9	48.5	50.8	51.9	54.4	56.6	57.9
70°	32.6	33.5	34.7	34.5	35.2	36.6	38.2	39.9	41.8	43.8	45.3
72.5°	22.6	23.6	24.4	24.5	25.4	26.3	27.5	28.9	30.4	32.4	34.5
75°	14.3	14.5	15.3	15.7	16.1	17.2	18.2	19.6	20.9	22.4	23.8
77.5°	7.2	7.7	8.1	8.6	8.7	9.7	10.7	11.8	13.0	14.5	15.9
80°	2.7	2.9	3.5	3.7	4.0	4.7	5.4	6.0	7.0	8.1	8.9
82.5°	1.0	1.2	1.4	1.4	1.6	1.9	2.1	2.7	3.3	3.7	4.0
85°	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.7	1.0	1.2	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):**

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	517.7	517.7	517.7	517.7	517.7	517.7	517.7	517.7
2.5°	515.6	515.6	515.4	515.2	515.2	515.2	515.0	515.0
5°	510.9	510.3	510.2	509.8	509.6	509.4	508.8	508.8
7.5°	503.4	502.6	502.1	501.4	500.7	500.0	500.0	499.3
10°	493.3	491.8	491.0	490.2	489.3	488.1	487.7	487.1
12.5°	481.1	478.1	477.2	475.9	474.3	473.6	472.2	472.2
15°	466.0	462.7	461.0	460.2	458.3	456.9	456.4	454.8
17.5°	448.4	445.9	443.1	442.0	439.9	438.2	437.3	437.1
20°	430.6	426.5	424.7	423.1	420.5	418.9	417.8	416.3
22.5°	410.0	406.3	403.9	402.7	400.5	397.9	396.0	396.0
25°	388.4	385.1	383.7	381.2	378.7	377.7	375.5	375.0
27.5°	367.6	364.4	361.7	360.3	357.4	356.0	354.1	353.4
30°	346.2	342.3	340.3	340.1	336.6	335.4	333.8	333.0
32.5°	324.7	321.4	319.4	318.2	316.8	314.4	313.1	312.3
35°	303.4	301.2	299.5	298.1	295.6	294.4	293.3	292.3
37.5°	281.1	279.2	278.4	277.2	276.0	273.9	273.6	272.8
40°	259.6	257.1	257.1	256.4	255.2	255.0	254.4	254.4
42.5°	237.1	236.0	235.9	236.0	235.2	234.9	234.3	235.6
45°	214.9	215.4	214.5	214.7	214.3	215.1	215.1	215.9
47.5°	194.4	193.7	194.0	194.4	194.9	194.9	194.8	194.6
50°	172.5	173.2	174.1	173.1	173.5	173.7	172.7	172.9
52.5°	153.7	153.9	154.5	153.9	154.5	154.3	154.7	153.9
55°	135.5	135.5	136.3	136.5	136.6	137.3	137.5	138.0
57.5°	117.9	118.9	119.8	119.6	120.5	121.2	120.6	121.2
60°	102.6	103.4	104.4	104.7	105.3	105.8	105.8	106.1
62.5°	87.1	88.6	89.5	90.2	90.2	91.0	91.8	92.0
65°	73.2	74.9	75.5	76.0	76.5	77.2	78.3	78.1
67.5°	60.0	61.1	62.0	62.3	63.5	63.9	64.6	65.5
70°	47.1	48.5	49.2	49.9	50.9	51.7	52.5	52.9
72.5°	36.0	37.1	37.5	38.3	39.3	40.1	40.5	41.0
75°	25.2	27.1	27.3	27.9	28.7	29.6	30.2	30.0
77.5°	16.6	18.0	18.2	18.9	19.8	20.5	20.7	20.9
80°	9.8	10.7	10.9	11.2	11.8	12.2	12.6	13.0
82.5°	4.7	5.1	5.4	5.4	5.8	6.2	6.2	6.3
85°	1.6	1.6	1.7	1.7	1.9	1.9	2.1	1.9
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)