

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: P843329

Luminaire Tested: **LD4C10DE010B2750 EU4C10B40 4LBLWWLI**

Issue Date: 5/7/2024



**Test Information**

Test Method: LM-79-08  
Report Number: P843329  
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: LD4C10DE010B2750 EU4C10B40 4LBLWWLI  
Description: 4in Downlight with BioUp LEDs  
Light Source: -  
Ballast/Driver:

**Summary**

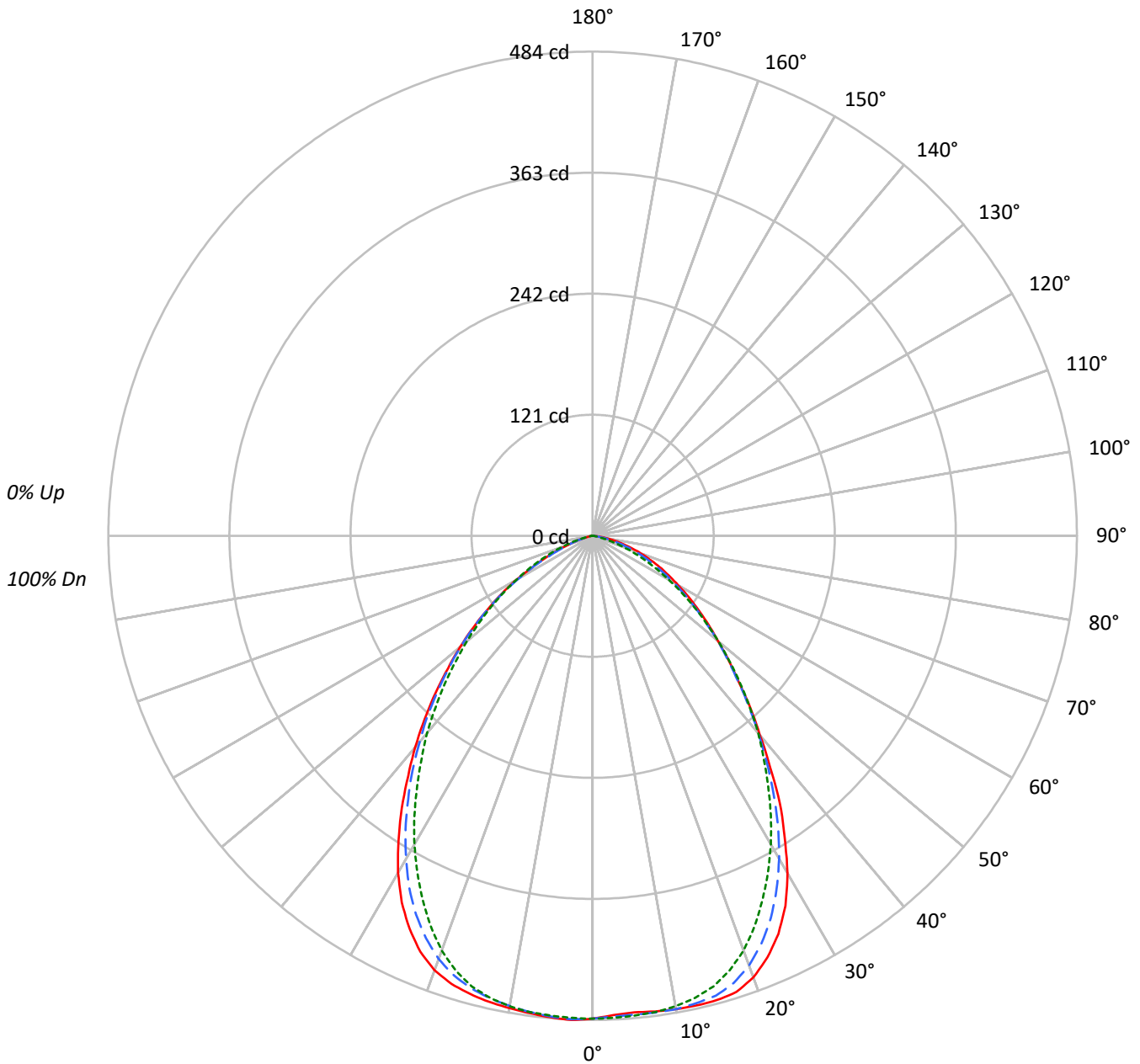
Lumens per Lamp: N/A  
Luminaire Lumens: 925.4 lumens  
Efficiency: N/A  
Efficacy: 69.6 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.12 / 1.18  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

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			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°	59301	59301	59301
5°	58973	59368	59590
10°	59942	59580	59805
15°	61113	59320	60299
20°	61421	57655	60414
25°	59535	54452	58722
30°	55254	50530	55155
35°	48937	45848	49852
40°	41713	41280	44215
45°	35825	36260	38518
50°	31287	31345	33007
55°	27630	26474	27373
60°	24227	21598	21524
65°	21453	16744	14913
70°	18319	11494	8836
75°	14810	6171	4082
80°	10117	1556	1061
85°	3101	423	423



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	45.9	5.0
10°-20°	132.8	14.4
20°-30°	191.9	20.7
30°-40°	198.4	21.4
40°-50°	163.9	17.7
50°-60°	113.1	12.2
60°-70°	59.2	6.4
70°-80°	18.6	2.0
80°-90°	1.6	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°	370.6	40.0
0°-40°	568.9	61.5
0°-60°	846.0	91.4
0°-90°	925.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	925.4	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	483	483	483	483	483	
5°	478	480	481	482	483	46
15°	480	476	466	468	474	136
25°	439	422	402	418	433	201
35°	326	315	306	322	332	203
45°	206	205	209	218	222	161
55°	129	125	124	127	128	116
65°	74	67	58	48	51	73
75°	31	24	13	9	9	33
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°	482.7	482.7	482.7	482.7	482.7	482.7	482.7	482.7	482.7	482.7	482.7
2.5°	479.6	479.8	479.8	480.2	480.2	480.2	480.4	480.4	480.5	480.7	480.9
5°	478.2	478.2	478.6	478.7	479.1	479.2	479.6	479.8	480.2	480.4	480.5
7.5°	479.6	479.6	479.8	480.0	480.0	480.2	480.2	480.4	480.5	480.7	480.7
10°	480.5	480.5	480.5	480.5	480.7	480.7	480.7	480.5	480.5	480.5	480.4
12.5°	480.9	480.9	480.7	480.5	480.7	480.5	480.5	480.0	479.6	479.2	478.7
15°	480.5	480.5	480.4	480.2	480.0	479.6	479.4	478.6	477.8	476.7	476.0
17.5°	478.2	477.8	477.4	477.1	476.4	475.8	475.4	473.8	472.6	470.8	468.7
20°	469.8	469.5	469.0	468.0	467.2	466.4	465.3	462.9	461.7	458.9	457.0
22.5°	456.3	455.8	456.1	454.5	452.6	451.5	450.8	448.8	446.6	443.1	441.0
25°	439.2	438.1	438.1	435.5	434.7	433.9	433.0	430.7	427.4	424.3	421.5
27.5°	417.1	415.7	414.9	414.6	412.4	410.8	409.5	407.6	405.0	402.2	398.2
30°	389.5	389.3	388.5	386.8	385.2	384.4	383.0	379.9	377.4	375.4	372.8
32.5°	357.1	357.0	357.0	357.0	355.8	355.7	353.5	351.9	349.9	346.8	345.1
35°	326.3	326.1	326.3	323.5	322.8	322.3	322.2	321.0	318.3	316.9	315.4
37.5°	291.5	292.0	291.7	291.0	291.8	290.2	291.5	289.2	288.0	287.7	286.0
40°	260.1	261.6	260.1	260.3	261.2	259.5	259.5	259.2	258.5	258.2	257.7
42.5°	233.3	231.5	232.6	231.6	232.6	232.0	231.1	231.6	231.8	231.1	230.9
45°	206.2	206.7	207.0	206.5	206.5	205.9	207.4	206.5	206.5	206.7	205.4
47.5°	184.3	183.8	184.1	183.8	184.0	183.6	184.0	184.1	183.8	183.8	182.8
50°	163.7	163.3	164.6	163.5	163.5	163.3	163.5	163.1	162.6	162.6	163.0
52.5°	145.7	145.0	144.8	145.7	144.5	144.5	144.7	144.3	143.5	143.2	142.3
55°	129.0	128.9	129.0	128.3	128.0	128.0	127.0	126.7	126.5	125.6	125.1
57.5°	113.5	113.0	113.1	113.0	112.2	112.0	111.3	111.3	110.5	109.9	108.9
60°	98.6	98.6	99.1	98.5	97.8	97.5	97.2	96.8	95.5	94.2	93.2
62.5°	85.4	85.6	85.4	84.8	84.5	84.1	83.8	82.7	81.5	80.8	79.5
65°	73.8	73.6	73.1	72.7	71.8	71.8	71.1	70.5	69.3	68.1	66.8
67.5°	61.8	61.4	61.4	61.4	60.4	60.2	59.9	58.7	57.6	56.2	55.1
70°	51.0	51.3	50.8	50.2	49.7	49.5	49.0	47.8	46.5	45.2	44.2
72.5°	40.6	40.9	40.4	40.2	39.1	38.8	38.6	37.7	36.3	35.3	33.8
75°	31.2	31.3	31.0	30.7	29.9	29.7	28.9	28.1	27.2	25.7	24.4
77.5°	22.5	22.1	22.1	21.4	20.6	20.6	20.5	19.4	18.1	17.0	16.0
80°	14.3	14.2	13.6	13.2	12.7	12.5	12.4	11.4	10.5	9.8	9.1
82.5°	7.3	7.1	6.9	6.7	6.3	6.0	6.1	5.4	5.1	4.3	3.8
85°	2.2	2.3	2.3	2.2	2.0	2.0	2.0	1.8	1.5	1.3	1.1
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°	482.7	482.7	482.7	482.7	482.7	482.7	482.7	482.7	482.7	482.7	482.7
2.5°	481.1	481.2	481.4	481.6	481.6	481.8	482.0	482.2	482.4	482.4	482.5
5°	480.7	481.1	481.1	481.2	481.2	481.2	481.4	481.4	481.4	481.4	481.6
7.5°	480.9	480.9	480.9	480.7	480.7	480.5	480.5	480.5	480.2	480.2	480.2
10°	480.0	479.8	479.6	479.2	479.1	478.9	478.6	478.2	477.8	477.6	477.3
12.5°	478.2	477.4	476.7	476.0	475.6	475.4	474.8	474.1	473.6	473.1	472.8
15°	474.6	473.5	472.2	470.8	470.3	470.0	468.7	467.7	466.9	466.4	465.5
17.5°	467.3	465.1	463.7	461.4	460.6	460.2	458.3	457.1	455.8	455.5	454.8
20°	454.5	452.5	449.7	447.7	446.6	445.6	443.9	442.5	441.0	441.0	440.1
22.5°	438.3	435.7	432.4	429.8	429.6	427.4	426.0	424.3	423.8	422.7	422.7
25°	418.0	415.9	412.1	409.8	408.8	408.2	405.8	403.7	402.5	401.7	402.4
27.5°	395.6	392.3	389.3	386.7	385.7	384.7	382.4	381.6	379.6	379.4	379.2
30°	369.7	366.5	363.6	362.3	360.5	359.6	358.0	357.0	356.2	356.2	355.8
32.5°	342.8	339.8	338.4	335.7	334.7	333.5	332.4	331.4	331.7	331.4	331.6
35°	313.6	312.8	310.1	308.5	308.5	308.3	306.5	305.8	305.4	305.7	306.5
37.5°	285.9	283.7	281.9	280.8	281.6	280.6	280.4	280.4	281.5	280.8	282.2
40°	256.3	256.2	255.4	255.7	255.9	254.7	255.0	255.2	255.9	257.4	257.5
42.5°	230.6	230.4	230.4	230.4	230.0	229.3	230.0	231.3	231.1	232.2	233.1
45°	205.7	205.4	206.1	205.6	206.7	207.0	206.5	206.9	207.9	208.7	210.0
47.5°	183.1	183.1	183.3	183.6	182.5	183.4	183.8	184.6	185.1	185.4	186.1
50°	162.0	162.0	161.7	161.7	161.7	162.2	161.5	162.5	162.6	164.0	165.0
52.5°	142.7	141.7	142.3	141.9	141.2	140.9	141.2	141.4	142.5	142.9	143.9
55°	124.2	124.2	122.7	122.4	122.9	122.7	122.6	122.6	123.1	123.6	124.5
57.5°	107.9	106.7	105.7	105.4	104.9	105.1	105.1	104.9	104.6	104.8	104.9
60°	92.4	91.7	90.1	90.1	89.9	89.7	88.8	88.6	87.8	87.9	87.1
62.5°	78.3	77.9	75.7	75.1	75.1	74.5	73.6	73.4	72.1	72.1	71.4
65°	65.6	64.5	63.2	62.0	62.0	61.2	60.7	59.1	58.2	57.6	56.6
67.5°	54.0	52.4	51.1	50.0	49.3	49.1	47.8	46.7	45.3	44.4	42.7
70°	42.7	41.5	40.2	39.1	38.4	37.7	36.4	34.8	33.7	32.0	31.0
72.5°	32.3	31.2	30.0	28.7	27.7	27.2	25.9	24.4	22.6	21.6	20.1
75°	23.2	21.9	20.5	19.2	18.7	18.1	16.7	15.5	14.3	13.0	11.6
77.5°	15.0	13.6	12.5	11.1	10.9	10.5	9.1	7.9	7.1	6.3	5.4
80°	7.9	7.3	6.3	5.4	5.1	4.5	3.8	3.3	2.7	2.2	1.8
82.5°	3.5	2.9	2.3	2.0	1.8	1.6	1.3	1.1	1.0	1.0	0.7
85°	1.0	0.7	0.7	0.5	0.3	0.3	0.3	0.3	0.3	0.3	0.3
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°	482.7	482.7	482.7	482.7	482.7	482.7	482.7	482.7	482.7	482.7	482.7
2.5°	482.7	482.9	483.0	483.0	483.2	483.4	483.4	483.7	483.8	484.0	484.0
5°	481.8	481.8	481.8	482.0	482.0	482.0	482.0	482.4	482.4	482.5	482.7
7.5°	480.0	480.0	480.0	480.0	479.8	480.0	479.8	479.8	480.2	480.4	480.5
10°	477.1	476.9	476.9	476.7	476.7	476.7	476.9	477.1	477.3	477.4	477.9
12.5°	472.6	472.3	472.3	472.2	472.2	472.3	472.6	472.9	473.6	474.0	474.8
15°	465.3	465.1	465.3	465.5	465.9	466.4	466.9	467.5	468.5	469.5	470.3
17.5°	454.8	455.0	455.1	455.5	456.1	456.8	458.3	459.6	460.9	462.4	463.9
20°	440.3	441.0	441.2	442.5	442.8	444.4	446.1	448.2	450.2	452.0	454.0
22.5°	422.8	423.5	424.1	425.6	426.5	428.7	430.7	433.2	435.4	437.8	440.6
25°	403.2	403.3	405.5	405.5	407.6	409.5	411.8	414.6	417.8	420.9	422.8
27.5°	380.6	381.6	383.2	383.9	385.5	388.5	390.5	393.7	396.9	399.7	401.9
30°	357.1	357.8	360.5	360.9	362.1	364.7	367.4	370.5	373.0	376.1	378.1
32.5°	332.2	334.2	335.9	337.2	337.5	341.3	342.8	344.9	347.9	350.9	352.9
35°	308.2	309.0	311.4	312.1	313.3	315.4	318.3	320.1	321.5	323.5	326.0
37.5°	282.6	285.3	285.9	288.0	288.4	290.4	291.8	294.0	295.8	297.6	298.0
40°	258.8	259.8	261.8	262.3	262.6	265.4	267.2	267.7	268.6	270.2	272.4
42.5°	234.7	235.6	237.9	237.2	238.9	240.2	241.0	243.3	244.2	244.7	244.7
45°	211.0	211.3	212.8	213.5	214.4	215.1	216.8	217.9	218.2	219.9	220.4
47.5°	188.4	188.7	189.7	191.0	190.7	191.6	193.4	194.0	194.2	195.2	195.8
50°	166.0	166.9	168.4	168.1	169.1	169.6	171.3	171.7	171.7	171.9	172.0
52.5°	145.2	146.0	146.3	146.7	147.2	148.1	148.8	148.5	149.1	149.9	149.3
55°	124.5	125.1	126.0	126.4	126.4	126.5	126.2	127.8	127.0	126.9	127.0
57.5°	105.7	104.9	104.8	105.7	106.1	105.9	105.3	106.1	106.1	105.7	105.1
60°	87.4	86.8	86.6	86.8	86.1	85.6	85.9	85.6	84.6	84.3	84.5
62.5°	70.6	70.1	68.7	68.7	68.3	68.1	66.7	66.8	66.2	65.0	65.5
65°	55.3	53.8	53.1	52.9	51.6	50.6	50.2	49.0	47.8	47.7	47.8
67.5°	41.5	39.9	38.6	38.1	37.3	36.4	35.1	34.1	34.5	34.3	35.0
70°	28.9	27.7	26.4	25.6	25.9	24.9	24.1	24.1	24.3	24.4	24.9
72.5°	19.2	17.8	17.2	16.7	16.3	15.5	16.0	16.0	15.8	16.0	15.5
75°	10.9	10.2	9.6	9.4	9.1	9.1	9.1	9.1	8.9	8.7	8.7
77.5°	4.9	4.5	4.3	4.1	4.1	4.1	4.0	3.8	3.8	3.8	3.6
80°	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
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°	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
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°	482.7	482.7	482.7	482.7	482.7	482.7	482.7	482.7
2.5°	484.2	484.3	484.3	484.3	484.5	484.5	484.5	484.5
5°	482.9	483.0	483.0	483.0	483.2	483.2	483.2	483.2
7.5°	480.7	480.9	480.9	481.1	481.1	481.2	481.2	481.4
10°	478.2	478.6	478.7	478.9	479.1	479.2	479.2	479.4
12.5°	475.4	475.8	476.0	476.4	476.7	476.9	477.1	477.3
15°	471.5	472.2	472.6	472.8	473.5	473.8	474.0	474.1
17.5°	465.1	466.5	467.2	467.5	468.2	469.0	469.5	469.7
20°	456.1	457.6	458.4	459.3	460.4	461.3	461.7	462.1
22.5°	443.4	445.2	446.3	447.4	448.2	449.2	450.7	450.0
25°	425.3	428.3	429.6	430.1	432.1	433.2	433.9	433.2
27.5°	405.0	406.8	407.8	409.1	410.6	411.6	412.1	413.1
30°	380.4	383.6	383.4	384.7	386.5	387.5	387.9	388.8
32.5°	355.0	356.5	357.6	357.5	358.2	360.1	359.5	361.1
35°	328.1	328.3	330.1	329.9	331.4	331.4	331.4	332.4
37.5°	299.3	301.4	300.6	302.7	302.0	302.5	302.5	302.9
40°	273.0	273.7	273.7	274.5	275.0	274.5	274.8	275.7
42.5°	245.8	246.5	246.7	246.3	246.9	248.5	247.3	248.3
45°	220.4	220.9	221.7	221.2	222.0	221.5	222.0	221.7
47.5°	196.5	196.3	196.1	197.6	196.3	196.5	197.2	196.0
50°	172.0	173.1	172.4	172.9	173.2	173.2	172.7	172.7
52.5°	150.3	150.1	149.5	150.1	149.8	149.9	150.3	149.9
55°	127.8	128.5	128.2	128.0	128.2	128.2	129.2	127.8
57.5°	105.7	105.3	105.9	107.1	105.9	106.7	107.3	107.5
60°	84.6	84.6	85.8	85.2	86.3	87.1	87.9	87.6
62.5°	64.5	65.5	65.8	66.0	67.1	67.8	67.8	67.6
65°	47.8	49.1	49.1	49.8	50.2	50.2	50.6	51.3
67.5°	35.3	35.3	35.5	35.9	35.7	35.7	36.1	36.3
70°	24.6	24.3	24.9	24.6	24.6	24.4	24.6	24.6
72.5°	15.5	15.5	15.8	15.5	15.2	15.4	15.4	15.8
75°	8.4	8.7	8.4	8.4	8.6	8.1	8.4	8.6
77.5°	3.5	3.5	3.5	3.5	3.5	3.3	3.3	3.3
80°	1.6	1.6	1.6	1.6	1.6	1.6	1.5	1.5
82.5°	0.7	1.0	0.7	1.0	0.7	0.7	0.7	0.7
85°	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
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)