

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: P843287

Luminaire Tested: **LD4C10DE010B2750 EU4C10B27 4LBLWWLI**

Issue Date: 5/7/2024

**Test Information**

Test Method: LM-79-08  
Report Number: P843287  
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 EU4C10B27 4LBLWWLI  
Description: 4in Downlight with BioUp LEDs  
Light Source: -  
Ballast/Driver:

**Summary**

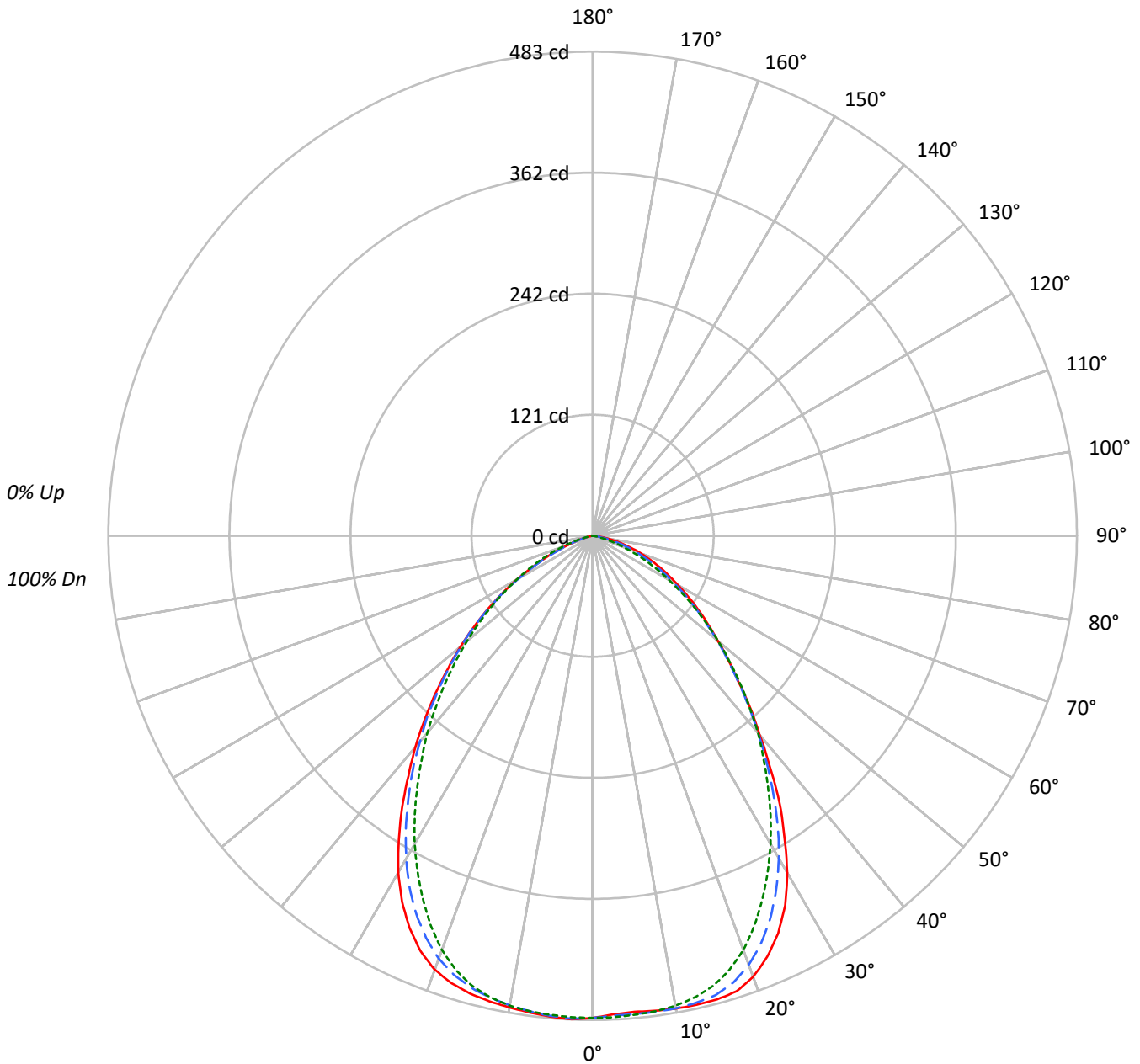
Lumens per Lamp: N/A  
Luminaire Lumens: 922.2 lumens  
Efficiency: N/A  
Efficacy: 69.3 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.12 / 1.18  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

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°	59093	59093	59093
5°	58776	59158	59380
10°	59742	59380	59605
15°	60910	59117	60109
20°	61212	57472	60205
25°	59318	54262	58519
30°	55070	50346	54970
35°	48757	45683	49687
40°	41569	41136	44071
45°	35721	36121	38379
50°	31173	31249	32912
55°	27545	26388	27266
60°	24153	21524	21450
65°	21366	16686	14855
70°	18247	11458	8800
75°	14762	6171	4035
80°	10117	1486	1061
85°	2960	423	423



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	45.7	5.0
10°-20°	132.3	14.4
20°-30°	191.2	20.7
30°-40°	197.7	21.4
40°-50°	163.4	17.7
50°-60°	112.7	12.2
60°-70°	59.0	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°	369.3	40.0
0°-40°	567.0	61.5
0°-60°	843.1	91.4
0°-90°	922.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	922.2	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	481	481	481	481	481	
5°	477	479	480	481	482	46
15°	479	474	465	467	473	135
25°	438	420	400	416	432	200
35°	325	314	305	320	331	202
45°	206	205	208	217	221	160
55°	129	125	123	127	127	116
65°	74	67	57	48	51	73
75°	31	24	13	9	8	33
85°	2	1	0	0	0	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°	481.0	481.0	481.0	481.0	481.0	481.0	481.0	481.0	481.0	481.0	481.0
2.5°	477.9	478.2	478.2	478.5	478.5	478.5	478.7	478.7	478.9	479.1	479.2
5°	476.6	476.6	476.9	477.1	477.4	477.6	477.9	478.2	478.5	478.7	478.9
7.5°	477.9	477.9	478.2	478.4	478.4	478.5	478.5	478.7	478.9	479.1	479.1
10°	478.9	478.9	478.9	478.9	479.1	479.1	479.1	478.9	478.9	478.9	478.7
12.5°	479.2	479.2	479.1	478.9	479.1	478.9	478.9	478.4	477.9	477.6	477.1
15°	478.9	478.9	478.7	478.5	478.4	477.9	477.8	476.9	476.1	475.1	474.3
17.5°	476.6	476.1	475.8	475.4	474.8	474.1	473.8	472.2	471.0	469.2	467.2
20°	468.2	467.9	467.4	466.4	465.5	464.8	463.7	461.3	460.1	457.4	455.4
22.5°	454.7	454.4	454.5	452.9	451.1	450.0	449.3	447.3	445.1	441.7	439.6
25°	437.6	436.6	436.6	434.1	433.2	432.5	431.5	429.2	425.9	422.8	420.0
27.5°	415.7	414.2	413.5	413.1	411.0	409.3	408.0	406.2	403.6	400.8	396.8
30°	388.2	388.0	387.1	385.5	383.8	383.2	381.7	378.6	376.1	374.1	371.5
32.5°	355.9	355.7	355.7	355.7	354.6	354.4	352.3	350.6	348.6	345.5	343.9
35°	325.1	325.0	325.1	322.5	321.7	321.2	321.0	319.9	317.2	315.8	314.3
37.5°	290.4	291.1	290.6	289.9	290.8	289.2	290.4	288.1	287.0	286.7	285.0
40°	259.2	260.7	259.2	259.4	260.3	258.7	258.7	258.3	257.6	257.2	256.9
42.5°	232.5	230.7	231.7	230.9	231.7	231.2	230.4	230.9	231.1	230.4	230.1
45°	205.6	205.9	206.3	205.7	205.7	205.2	206.7	205.7	205.7	205.9	204.7
47.5°	183.7	183.2	183.5	183.2	183.4	183.0	183.4	183.5	183.2	183.2	182.1
50°	163.1	162.8	164.0	163.0	163.0	162.8	163.0	162.6	162.0	162.0	162.3
52.5°	145.2	144.5	144.4	145.2	143.9	143.9	144.2	143.8	143.1	142.7	141.8
55°	128.6	128.4	128.6	127.9	127.6	127.6	126.6	126.3	126.1	125.2	124.7
57.5°	113.1	112.5	112.7	112.5	111.8	111.7	110.9	110.9	110.2	109.5	108.5
60°	98.3	98.3	98.8	98.0	97.5	97.2	96.8	96.5	95.2	93.9	92.9
62.5°	85.0	85.2	85.0	84.5	84.2	83.9	83.4	82.4	81.3	80.6	79.3
65°	73.5	73.3	72.8	72.4	71.5	71.5	70.9	70.2	69.0	67.9	66.6
67.5°	61.6	61.2	61.2	61.2	60.2	60.0	59.7	58.5	57.4	55.9	54.9
70°	50.8	51.1	50.6	50.0	49.5	49.3	48.8	47.7	46.4	44.9	44.1
72.5°	40.5	40.8	40.3	40.1	39.0	38.7	38.5	37.5	36.2	35.2	33.7
75°	31.1	31.2	30.9	30.6	29.8	29.6	28.8	28.0	27.1	25.7	24.4
77.5°	22.4	22.0	22.0	21.4	20.6	20.6	20.4	19.4	18.1	17.0	15.9
80°	14.3	14.1	13.5	13.2	12.7	12.5	12.3	11.4	10.5	9.7	9.0
82.5°	7.2	7.1	6.9	6.7	6.3	5.9	6.1	5.4	5.1	4.3	3.8
85°	2.1	2.3	2.3	2.1	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°	481.0	481.0	481.0	481.0	481.0	481.0	481.0	481.0	481.0	481.0	481.0
2.5°	479.4	479.6	479.7	480.0	480.0	480.2	480.4	480.5	480.7	480.7	480.9
5°	479.1	479.4	479.4	479.6	479.6	479.6	479.7	479.7	479.7	479.7	480.0
7.5°	479.2	479.2	479.2	479.1	479.1	478.9	478.9	478.9	478.5	478.5	478.5
10°	478.4	478.2	477.9	477.6	477.4	477.2	476.9	476.6	476.1	476.0	475.6
12.5°	476.6	475.8	475.1	474.3	474.0	473.8	473.1	472.6	472.0	471.5	471.1
15°	472.9	471.8	470.5	469.2	468.7	468.4	467.2	466.1	465.4	464.8	463.9
17.5°	465.7	463.6	462.1	460.0	459.0	458.7	456.7	455.6	454.4	453.9	453.2
20°	452.9	450.9	448.1	446.2	445.1	444.0	442.4	440.9	439.6	439.6	438.6
22.5°	436.8	434.3	430.9	428.3	428.1	425.9	424.5	422.8	422.3	421.3	421.3
25°	416.6	414.4	410.6	408.5	407.3	406.8	404.4	402.3	401.2	400.3	401.1
27.5°	394.2	390.9	388.0	385.3	384.4	383.3	381.2	380.2	378.3	378.1	377.9
30°	368.5	365.3	362.3	361.1	359.3	358.4	356.7	355.7	354.9	354.9	354.6
32.5°	341.6	338.7	337.3	334.5	333.7	332.4	331.3	330.2	330.6	330.2	330.4
35°	312.5	311.8	309.0	307.5	307.5	307.2	305.4	304.7	304.4	304.6	305.4
37.5°	284.8	282.7	280.9	279.8	280.7	279.6	279.4	279.4	280.5	279.8	281.2
40°	255.4	255.2	254.6	254.9	255.1	253.8	254.1	254.4	255.1	256.5	256.7
42.5°	229.8	229.6	229.6	229.6	229.2	228.6	229.2	230.5	230.4	231.4	232.3
45°	205.1	204.7	205.4	204.9	205.9	206.3	205.7	206.1	207.2	207.9	209.4
47.5°	182.4	182.4	182.7	183.0	181.9	182.8	183.2	183.9	184.5	184.8	185.5
50°	161.5	161.5	161.2	161.2	161.2	161.7	161.0	161.8	162.0	163.5	164.4
52.5°	142.1	141.3	141.8	141.4	140.8	140.3	140.8	140.9	141.9	142.4	143.4
55°	123.7	123.7	122.3	121.9	122.5	122.3	122.2	122.2	122.7	123.2	124.1
57.5°	107.5	106.4	105.3	105.1	104.6	104.8	104.8	104.6	104.3	104.4	104.6
60°	92.1	91.4	89.8	89.8	89.6	89.4	88.5	88.3	87.5	87.6	86.9
62.5°	78.1	77.6	75.5	74.8	74.8	74.2	73.3	73.2	71.9	71.9	71.2
65°	65.4	64.3	63.0	61.8	61.8	61.0	60.5	58.9	58.0	57.4	56.4
67.5°	53.8	52.2	51.0	49.8	49.2	49.0	47.7	46.6	45.2	44.2	42.6
70°	42.6	41.4	40.1	39.0	38.3	37.5	36.3	34.7	33.6	31.9	30.9
72.5°	32.2	31.1	30.0	28.6	27.6	27.1	25.8	24.4	22.5	21.5	20.1
75°	23.2	21.9	20.4	19.1	18.6	18.1	16.6	15.5	14.3	13.0	11.5
77.5°	15.0	13.5	12.5	11.0	10.8	10.5	9.0	7.9	7.1	6.3	5.4
80°	7.9	7.2	6.3	5.4	5.1	4.5	3.8	3.3	2.7	2.1	1.8
82.5°	3.4	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°	481.0	481.0	481.0	481.0	481.0	481.0	481.0	481.0	481.0	481.0	481.0
2.5°	481.0	481.2	481.4	481.4	481.5	481.8	481.8	482.0	482.2	482.3	482.3
5°	480.2	480.2	480.2	480.4	480.4	480.4	480.4	480.7	480.7	480.9	481.0
7.5°	478.4	478.4	478.4	478.4	478.2	478.4	478.2	478.2	478.5	478.7	478.9
10°	475.4	475.3	475.3	475.1	475.1	475.1	475.3	475.4	475.6	475.8	476.4
12.5°	471.0	470.8	470.8	470.5	470.5	470.8	471.0	471.3	472.0	472.3	473.1
15°	463.7	463.6	463.7	463.9	464.2	464.8	465.4	465.9	466.9	467.9	468.7
17.5°	453.2	453.4	453.6	453.9	454.5	455.2	456.7	458.1	459.3	460.8	462.3
20°	438.8	439.6	439.7	440.9	441.4	442.9	444.5	446.7	448.8	450.6	452.5
22.5°	421.5	422.0	422.7	424.1	425.1	427.2	429.2	431.7	433.9	436.3	439.1
25°	401.8	401.9	404.1	404.1	406.2	408.0	410.5	413.1	416.4	419.5	421.5
27.5°	379.4	380.2	381.9	382.5	384.2	387.1	389.1	392.4	395.6	398.3	400.5
30°	355.9	356.6	359.3	359.7	361.0	363.4	366.2	369.2	371.8	374.8	376.8
32.5°	331.1	333.2	334.7	336.0	336.3	340.1	341.6	343.7	346.7	349.8	351.7
35°	307.1	308.0	310.3	311.1	312.1	314.3	317.2	319.0	320.5	322.5	324.8
37.5°	281.6	284.3	284.8	287.0	287.4	289.4	290.8	293.0	294.8	296.6	297.0
40°	258.0	258.9	260.8	261.3	261.8	264.4	266.3	266.8	267.7	269.4	271.5
42.5°	233.9	234.8	237.0	236.5	238.1	239.3	240.3	242.4	243.4	243.9	243.9
45°	210.3	210.6	212.1	212.8	213.7	214.4	216.1	217.1	217.4	219.1	219.7
47.5°	187.7	188.0	189.1	190.4	190.1	190.9	192.7	193.3	193.4	194.5	195.1
50°	165.5	166.4	167.8	167.4	168.6	169.1	170.7	171.0	171.0	171.2	171.4
52.5°	144.7	145.4	145.7	146.2	146.7	147.5	148.3	148.0	148.7	149.3	148.8
55°	124.1	124.7	125.5	125.9	125.9	126.1	125.8	127.3	126.6	126.5	126.6
57.5°	105.3	104.6	104.4	105.3	105.7	105.4	104.9	105.7	105.7	105.3	104.8
60°	87.0	86.5	86.3	86.5	85.8	85.2	85.7	85.2	84.4	84.0	84.2
62.5°	70.4	69.9	68.4	68.4	68.1	67.9	66.5	66.6	65.9	64.8	65.3
65°	55.1	53.6	52.9	52.8	51.5	50.4	50.0	48.8	47.7	47.5	47.7
67.5°	41.4	39.8	38.5	38.0	37.2	36.3	35.0	34.0	34.4	34.2	34.9
70°	28.8	27.6	26.3	25.5	25.8	24.7	24.0	24.0	24.2	24.4	24.7
72.5°	19.1	17.7	17.1	16.6	16.3	15.5	15.9	15.9	15.8	15.9	15.5
75°	10.8	10.2	9.6	9.4	9.0	9.0	9.0	9.0	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°	481.0	481.0	481.0	481.0	481.0	481.0	481.0	481.0
2.5°	482.5	482.7	482.7	482.7	482.8	482.8	482.8	482.8
5°	481.2	481.4	481.4	481.4	481.5	481.5	481.5	481.5
7.5°	479.1	479.2	479.2	479.4	479.4	479.6	479.6	479.7
10°	476.6	476.9	477.1	477.2	477.4	477.6	477.6	477.8
12.5°	473.8	474.1	474.3	474.8	475.1	475.3	475.4	475.6
15°	469.8	470.5	471.0	471.1	471.8	472.2	472.3	472.6
17.5°	463.6	464.9	465.5	465.9	466.6	467.4	467.9	468.0
20°	454.5	456.2	456.8	457.7	458.8	459.8	460.1	460.5
22.5°	441.9	443.7	444.7	445.8	446.7	447.6	449.1	448.5
25°	423.8	426.9	428.1	428.7	430.7	431.7	432.5	431.7
27.5°	403.6	405.4	406.4	407.7	409.2	410.3	410.6	411.6
30°	379.2	382.2	382.0	383.3	385.1	386.2	386.6	387.5
32.5°	353.9	355.4	356.4	356.2	357.0	359.0	358.2	359.8
35°	326.9	327.1	328.9	328.8	330.2	330.2	330.2	331.3
37.5°	298.3	300.4	299.5	301.6	300.9	301.5	301.5	301.8
40°	272.0	272.8	272.8	273.5	274.0	273.5	273.8	274.8
42.5°	244.9	245.7	245.9	245.5	246.0	247.7	246.4	247.5
45°	219.7	220.2	220.9	220.4	221.3	220.7	221.3	220.9
47.5°	195.8	195.7	195.5	196.9	195.7	195.8	196.5	195.2
50°	171.4	172.5	171.8	172.3	172.7	172.7	172.2	172.2
52.5°	149.8	149.5	149.0	149.5	149.2	149.3	149.8	149.3
55°	127.3	128.1	127.8	127.6	127.8	127.8	128.8	127.3
57.5°	105.3	104.9	105.4	106.7	105.4	106.4	106.9	107.1
60°	84.4	84.4	85.5	84.9	86.0	86.9	87.6	87.3
62.5°	64.3	65.3	65.6	65.8	66.8	67.6	67.6	67.4
65°	47.7	49.0	49.0	49.7	50.0	50.0	50.4	51.1
67.5°	35.2	35.2	35.4	35.7	35.5	35.5	36.0	36.2
70°	24.5	24.2	24.7	24.5	24.5	24.4	24.5	24.5
72.5°	15.5	15.5	15.8	15.5	15.1	15.3	15.3	15.8
75°	8.4	8.7	8.4	8.4	8.5	8.1	8.4	8.5
77.5°	3.4	3.4	3.4	3.4	3.4	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)