

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: P843299

Luminaire Tested: **LD4C10DE010B2750 EU4C10B30 4LBDWWLI**

Issue Date: 5/7/2024

**Test Information**

Test Method: LM-79-08  
Report Number: P843299  
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 EU4C10B30 4LBLDWWLI  
Description: 4in Downlight with BioUp LEDs  
Light Source: -  
Ballast/Driver:

**Summary**

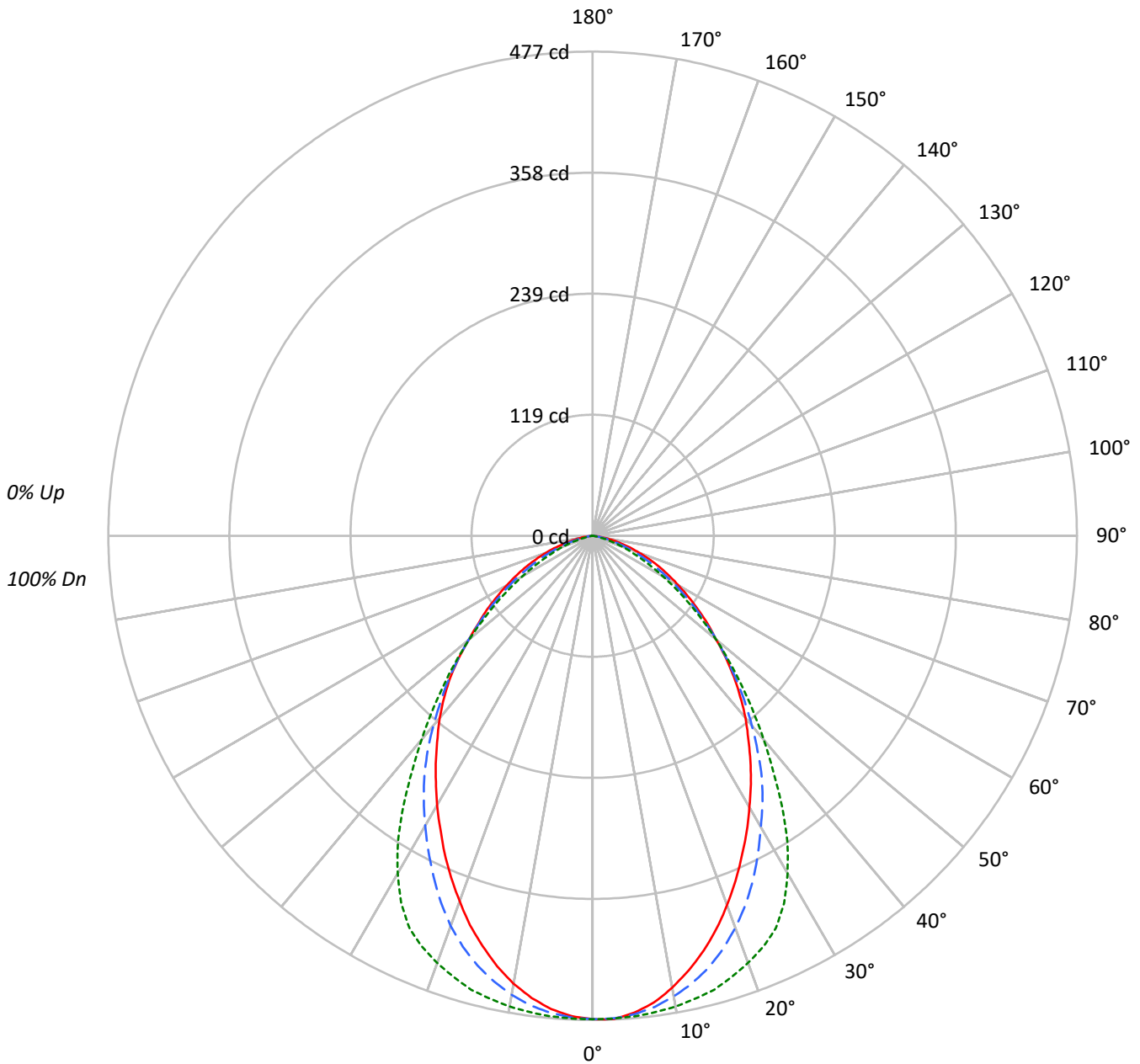
Lumens per Lamp: N/A  
Luminaire Lumens: 874.7 lumens  
Efficiency: N/A  
Efficacy: 65.8 lumens/watt  
Spacing Criteria (0/90/45): 1 / 1.19 / 1.15  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

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				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°	58515	58515	58515
5°	58159	58603	57727
10°	56386	58744	55900
15°	53787	58875	53215
20°	50622	58544	50073
25°	47159	57854	46766
30°	43806	54474	43451
35°	40629	48727	40344
40°	37560	42018	37544
45°	34210	35878	34505
50°	30217	30313	30408
55°	27095	24803	27202
60°	23932	19706	23981
65°	21046	15000	20872
70°	17493	10740	17493
75°	13623	6171	13101
80°	8844	1486	8490
85°	3242	423	2537



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	44.7	5.1
10°-20°	123.7	14.1
20°-30°	172.9	19.8
30°-40°	182.4	20.9
40°-50°	155.2	17.7
50°-60°	109.5	12.5
60°-70°	62.1	7.1
70°-80°	22.1	2.5
80°-90°	2.1	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°	341.3	39.0
0°-40°	523.7	59.9
0°-60°	788.3	90.1
0°-90°	874.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	874.7	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	476	476	476	476	476	
5°	472	473	475	472	468	44
15°	423	441	463	438	418	119
25°	348	374	427	370	345	160
35°	271	290	325	289	269	169
45°	197	200	206	201	199	151
55°	126	122	116	123	127	114
65°	72	62	52	62	72	72
75°	29	20	13	19	28	31
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°	476.3	476.3	476.3	476.3	476.3	476.3	476.3	476.3	476.3	476.3	476.3
2.5°	476.6	475.7	475.7	475.7	475.7	475.7	475.7	475.7	475.7	475.9	475.9
5°	471.6	471.3	471.1	471.1	471.1	471.1	471.3	472.0	472.3	472.9	473.2
7.5°	463.8	463.0	463.5	463.5	463.8	464.1	464.7	465.4	466.4	467.2	468.1
10°	452.0	451.3	452.2	452.6	453.6	454.1	455.1	456.2	458.3	459.3	460.7
12.5°	438.3	438.0	438.3	439.8	440.8	441.6	442.6	444.9	447.1	449.4	451.8
15°	422.9	422.1	422.6	424.4	426.2	427.5	428.3	431.4	434.3	437.8	440.8
17.5°	405.9	404.7	406.0	407.5	409.8	410.9	412.2	415.5	419.5	423.4	426.8
20°	387.2	386.9	387.7	389.7	392.0	393.4	394.5	398.2	401.6	407.0	410.9
22.5°	367.7	368.2	368.9	371.0	372.6	374.5	376.2	379.6	383.5	388.5	393.4
25°	347.9	348.4	349.7	351.0	353.7	354.7	356.7	360.3	363.7	368.3	373.9
27.5°	328.6	328.8	330.2	330.9	333.4	335.7	336.6	340.3	344.3	347.9	352.6
30°	308.8	309.4	310.2	312.2	314.8	315.6	316.7	320.0	323.1	327.5	331.3
32.5°	290.0	289.6	290.6	291.7	294.6	296.1	296.8	300.7	303.3	307.8	311.4
35°	270.9	270.0	271.6	272.7	275.2	276.6	277.3	280.4	282.8	286.6	290.5
37.5°	251.8	252.6	253.3	254.1	255.4	255.7	257.9	258.6	261.8	264.6	266.8
40°	234.2	233.8	233.5	234.4	236.0	236.7	236.9	238.8	239.6	242.4	244.0
42.5°	215.3	215.5	215.3	215.5	216.4	216.4	216.9	218.2	218.7	219.6	221.6
45°	196.9	196.9	196.4	196.6	196.8	196.6	196.8	197.4	198.4	198.4	199.8
47.5°	177.9	177.6	178.3	177.8	177.4	177.3	177.8	177.3	178.3	178.3	178.6
50°	158.1	158.1	159.1	158.9	159.2	158.5	158.6	158.6	158.9	158.6	159.4
52.5°	142.9	142.5	142.1	141.2	141.6	140.9	140.9	141.1	140.6	140.3	139.5
55°	126.5	126.8	126.3	126.0	126.0	125.2	125.0	124.0	123.2	122.7	122.2
57.5°	111.7	112.0	111.9	110.9	109.9	110.1	109.7	108.6	107.0	106.0	105.1
60°	97.4	97.8	97.4	96.6	96.1	95.5	95.3	93.8	92.6	91.2	90.1
62.5°	84.6	84.6	84.4	83.1	82.3	82.5	81.5	80.5	78.9	76.9	75.3
65°	72.4	72.3	71.4	70.9	70.1	69.3	68.7	67.2	65.9	64.3	62.2
67.5°	60.4	59.9	59.4	58.9	57.3	57.2	56.5	55.0	53.3	52.0	50.2
70°	48.7	48.4	47.7	47.7	46.5	45.9	44.8	43.7	42.0	40.3	38.8
72.5°	38.5	38.1	37.4	36.7	35.6	35.2	34.4	33.1	31.7	29.9	28.1
75°	28.7	28.3	28.1	27.3	26.3	25.5	25.1	23.9	22.4	21.2	19.6
77.5°	20.1	19.8	19.2	18.7	18.2	17.7	17.1	16.1	14.8	13.7	12.3
80°	12.5	12.2	11.7	11.5	11.0	10.9	10.2	9.6	8.6	7.8	7.0
82.5°	6.5	6.5	6.0	5.9	5.5	5.4	5.2	4.7	4.1	3.6	3.1
85°	2.3	2.3	2.1	2.0	2.0	1.8	1.8	1.6	1.3	1.3	0.8
87.5°	0.2	0.2	0.3	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°	476.3	476.3	476.3	476.3	476.3	476.3	476.3	476.3	476.3	476.3	476.3
2.5°	476.0	475.9	476.0	476.0	476.3	476.3	476.3	476.0	476.3	476.0	476.0
5°	473.2	473.7	474.1	474.5	474.7	474.8	474.8	475.0	475.2	475.2	475.0
7.5°	468.7	469.8	470.9	471.6	472.0	472.3	472.9	473.2	473.6	473.4	473.2
10°	462.9	464.7	466.1	467.5	468.2	468.7	469.7	470.3	470.8	470.9	470.3
12.5°	454.6	457.0	459.3	461.7	462.7	463.5	465.3	466.4	467.2	467.2	466.6
15°	444.0	447.6	451.0	453.9	455.7	456.8	459.5	461.3	462.4	462.9	462.0
17.5°	431.4	435.4	439.6	443.5	445.3	446.9	450.6	453.1	455.4	455.7	454.7
20°	415.1	420.3	425.0	429.7	431.7	434.3	438.5	442.6	446.1	447.8	444.7
22.5°	397.0	402.6	407.0	412.8	415.5	418.2	423.7	428.9	435.1	438.5	433.1
25°	378.1	383.0	388.0	393.8	397.6	400.4	406.8	413.4	421.8	426.8	419.2
27.5°	357.8	362.1	368.3	374.5	377.4	381.0	388.6	395.8	403.8	408.2	402.6
30°	336.8	342.1	348.0	353.7	357.8	361.2	367.4	373.5	380.2	384.0	379.9
32.5°	315.9	321.1	326.1	332.3	334.6	337.7	343.2	348.4	353.6	357.0	352.1
35°	294.0	298.7	303.3	307.6	308.6	312.2	316.7	319.7	322.2	324.9	321.6
37.5°	270.2	273.7	276.0	280.7	282.5	283.0	286.6	288.7	291.4	291.9	291.7
40°	246.0	249.2	251.1	253.9	255.4	255.4	257.9	259.9	261.8	262.0	261.8
42.5°	223.4	225.0	226.5	228.3	227.9	230.1	231.2	232.0	233.5	233.5	233.8
45°	200.5	201.8	203.2	203.6	205.0	205.0	205.9	206.2	207.0	206.5	205.7
47.5°	179.4	179.9	180.1	181.7	182.0	180.7	181.8	182.0	181.8	181.8	181.5
50°	159.2	159.6	159.4	158.9	159.1	159.6	159.1	158.3	158.6	158.6	159.1
52.5°	139.6	139.0	138.6	138.6	137.8	137.8	137.0	136.6	136.4	135.7	136.6
55°	121.6	120.6	119.0	118.7	118.0	117.9	116.9	115.9	115.6	115.8	115.6
57.5°	104.4	102.8	101.7	101.3	100.8	99.7	98.5	97.6	97.4	97.1	97.1
60°	88.7	86.9	85.4	83.7	83.9	83.1	82.0	81.4	80.9	80.2	80.7
62.5°	74.5	72.4	70.8	69.1	68.0	67.5	66.6	65.7	65.2	64.6	65.4
65°	60.4	58.8	56.8	55.2	54.7	54.2	53.3	51.8	51.6	51.6	52.0
67.5°	47.7	45.9	44.2	43.2	42.4	41.7	41.4	40.6	40.1	39.8	39.9
70°	36.7	34.9	33.5	32.4	31.8	31.7	30.5	30.2	30.1	29.9	29.7
72.5°	26.8	25.3	24.0	23.4	22.6	22.1	21.7	21.2	21.0	21.0	21.0
75°	18.3	17.2	15.9	14.9	14.6	14.1	13.5	13.2	12.8	13.0	13.0
77.5°	11.0	9.9	9.1	8.4	8.1	7.6	7.1	6.8	6.2	6.2	6.5
80°	6.0	5.2	4.4	3.9	3.6	3.4	2.9	2.6	2.3	2.1	2.1
82.5°	2.6	2.1	1.8	1.6	1.4	1.3	1.1	0.8	0.8	0.7	0.8
85°	0.8	0.7	0.5	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
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°	476.3	476.3	476.3	476.3	476.3	476.3	476.3	476.3	476.3	476.3	476.3
2.5°	475.9	475.9	475.7	475.7	475.7	475.4	475.4	475.2	475.0	474.8	474.5
5°	474.7	474.5	474.1	473.9	473.7	473.2	472.7	472.3	471.8	471.1	470.8
7.5°	472.9	472.3	471.6	471.3	470.8	469.5	468.6	467.7	466.8	465.6	464.1
10°	469.8	468.7	467.7	466.9	466.1	464.5	462.7	461.3	459.3	457.5	455.6
12.5°	465.6	464.3	462.2	461.1	460.1	457.7	455.4	452.3	449.7	447.2	444.9
15°	460.2	458.0	455.4	453.9	452.3	448.6	445.1	441.9	438.3	435.3	431.5
17.5°	452.3	449.0	445.5	443.8	441.7	437.4	433.1	428.7	424.6	420.8	416.2
20°	440.6	436.9	432.3	429.7	428.0	422.3	418.2	413.2	408.9	404.3	399.2
22.5°	427.0	421.8	416.6	413.0	411.1	405.4	399.9	395.3	390.8	385.4	381.7
25°	411.4	405.0	398.7	395.2	392.2	386.1	380.7	376.2	370.5	365.8	362.1
27.5°	394.0	386.7	379.4	375.8	372.9	366.4	360.7	355.9	350.3	346.3	342.4
30°	373.1	366.6	359.6	356.7	353.4	346.6	340.0	335.7	329.7	325.4	321.1
32.5°	347.1	342.9	337.3	333.4	331.7	325.4	319.8	314.8	309.6	306.2	301.8
35°	318.7	314.9	310.2	308.1	305.8	301.8	297.4	293.0	288.8	285.7	281.8
37.5°	289.8	286.0	283.2	280.9	279.4	275.8	273.2	269.8	266.9	264.0	261.8
40°	259.9	258.8	255.7	254.7	254.4	250.4	248.1	245.5	243.7	241.9	240.6
42.5°	233.3	231.5	229.2	229.4	228.3	226.2	224.6	222.8	221.6	220.6	219.5
45°	207.1	205.7	204.7	205.5	203.7	203.1	201.8	201.6	200.7	199.2	198.6
47.5°	182.2	182.0	182.2	181.7	181.3	181.0	181.2	180.2	179.4	178.8	178.1
50°	159.4	159.6	159.9	160.4	159.2	159.8	159.6	159.4	159.4	158.9	159.2
52.5°	137.3	137.5	137.8	138.3	138.6	138.6	139.1	139.5	140.1	141.1	141.1
55°	116.4	117.7	118.5	119.3	118.8	119.8	120.4	122.1	122.6	122.6	123.2
57.5°	97.9	99.2	99.7	100.8	101.2	102.1	103.4	104.4	105.7	106.7	107.8
60°	81.0	81.5	83.0	84.6	84.3	86.4	87.5	88.8	90.4	91.2	92.6
62.5°	65.9	66.6	67.7	68.2	69.5	70.5	73.0	74.5	75.8	77.6	79.1
65°	52.4	53.1	54.2	55.2	55.7	57.3	58.6	61.1	62.3	64.3	65.9
67.5°	40.1	41.1	42.0	42.7	43.2	44.7	46.6	47.7	50.0	52.0	53.3
70°	29.9	30.8	31.8	31.7	32.4	33.6	35.1	36.7	38.5	40.3	41.7
72.5°	20.8	21.7	22.4	22.6	23.4	24.2	25.3	26.5	27.9	29.7	31.7
75°	13.2	13.3	14.1	14.4	14.8	15.9	16.7	18.0	19.2	20.6	21.9
77.5°	6.6	7.1	7.5	7.8	8.0	8.9	9.8	10.9	12.0	13.3	14.6
80°	2.5	2.6	3.2	3.4	3.7	4.2	5.0	5.5	6.5	7.5	8.1
82.5°	0.8	1.1	1.3	1.3	1.4	1.8	2.0	2.5	3.1	3.4	3.7
85°	0.3	0.3	0.3	0.3	0.3	0.5	0.5	0.7	0.8	1.1	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):**

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	476.3	476.3	476.3	476.3	476.3	476.3	476.3	476.3
2.5°	474.2	474.2	474.1	473.9	473.9	473.9	473.7	473.7
5°	470.0	469.5	469.3	469.0	468.7	468.6	468.1	468.1
7.5°	463.0	462.4	461.9	461.3	460.6	460.1	460.1	459.3
10°	453.8	452.3	451.7	451.0	450.0	449.0	448.6	448.1
12.5°	442.6	439.8	439.0	437.8	436.4	435.6	434.4	434.4
15°	428.7	425.7	424.1	423.4	421.6	420.3	419.8	418.4
17.5°	412.5	410.2	407.7	406.7	404.7	403.1	402.3	402.1
20°	396.1	392.4	390.8	389.1	386.9	385.4	384.3	383.0
22.5°	377.3	373.9	371.5	370.5	368.5	366.0	364.2	364.2
25°	357.3	354.2	353.0	350.7	348.4	347.4	345.3	345.0
27.5°	338.2	335.2	332.7	331.5	328.8	327.5	325.8	325.0
30°	318.5	314.9	313.1	313.0	309.7	308.5	307.0	306.3
32.5°	298.7	295.6	293.9	292.8	291.4	289.3	288.0	287.3
35°	279.1	277.1	275.5	274.2	271.9	270.9	269.8	269.0
37.5°	258.6	256.8	256.2	255.0	253.9	252.0	251.6	251.0
40°	238.8	236.5	236.5	235.9	234.7	234.6	234.1	234.1
42.5°	218.2	217.1	216.9	217.1	216.4	216.1	215.5	216.7
45°	197.7	198.2	197.4	197.6	197.1	197.9	197.9	198.6
47.5°	178.8	178.1	178.4	178.8	179.4	179.4	179.2	179.0
50°	158.6	159.4	160.1	159.2	159.6	159.8	158.9	159.1
52.5°	141.4	141.6	142.1	141.6	142.1	141.9	142.4	141.6
55°	124.7	124.7	125.4	125.5	125.8	126.3	126.5	127.0
57.5°	108.5	109.4	110.2	110.1	110.7	111.5	110.9	111.5
60°	94.4	95.1	96.0	96.4	96.9	97.2	97.2	97.6
62.5°	80.2	81.5	82.3	83.0	83.0	83.7	84.4	84.6
65°	67.4	69.0	69.5	70.0	70.3	71.1	71.9	71.8
67.5°	55.2	56.3	57.0	57.3	58.4	58.8	59.4	60.2
70°	43.3	44.7	45.3	45.9	46.9	47.6	48.2	48.7
72.5°	33.1	34.2	34.6	35.2	36.2	36.9	37.2	37.8
75°	23.2	25.0	25.1	25.6	26.3	27.3	27.8	27.6
77.5°	15.3	16.6	16.7	17.5	18.2	18.9	19.0	19.2
80°	9.1	9.8	9.9	10.4	10.9	11.2	11.5	12.0
82.5°	4.2	4.7	5.0	5.0	5.4	5.7	5.7	5.9
85°	1.4	1.4	1.6	1.6	1.8	1.8	2.0	1.8
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)