

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: P843357

Luminaire Tested: **LD4C15DE010B2750 EU4C15B27 4LBLWWLI**

Issue Date: 5/7/2024



Test Information

Test Method: LM-79-08
Report Number: P843357
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: LD4C15DE010B2750 EU4C15B27 4LBLWWLI
Description: 4in Downlight with BioUp LEDs
Light Source: -
Ballast/Driver:

Summary

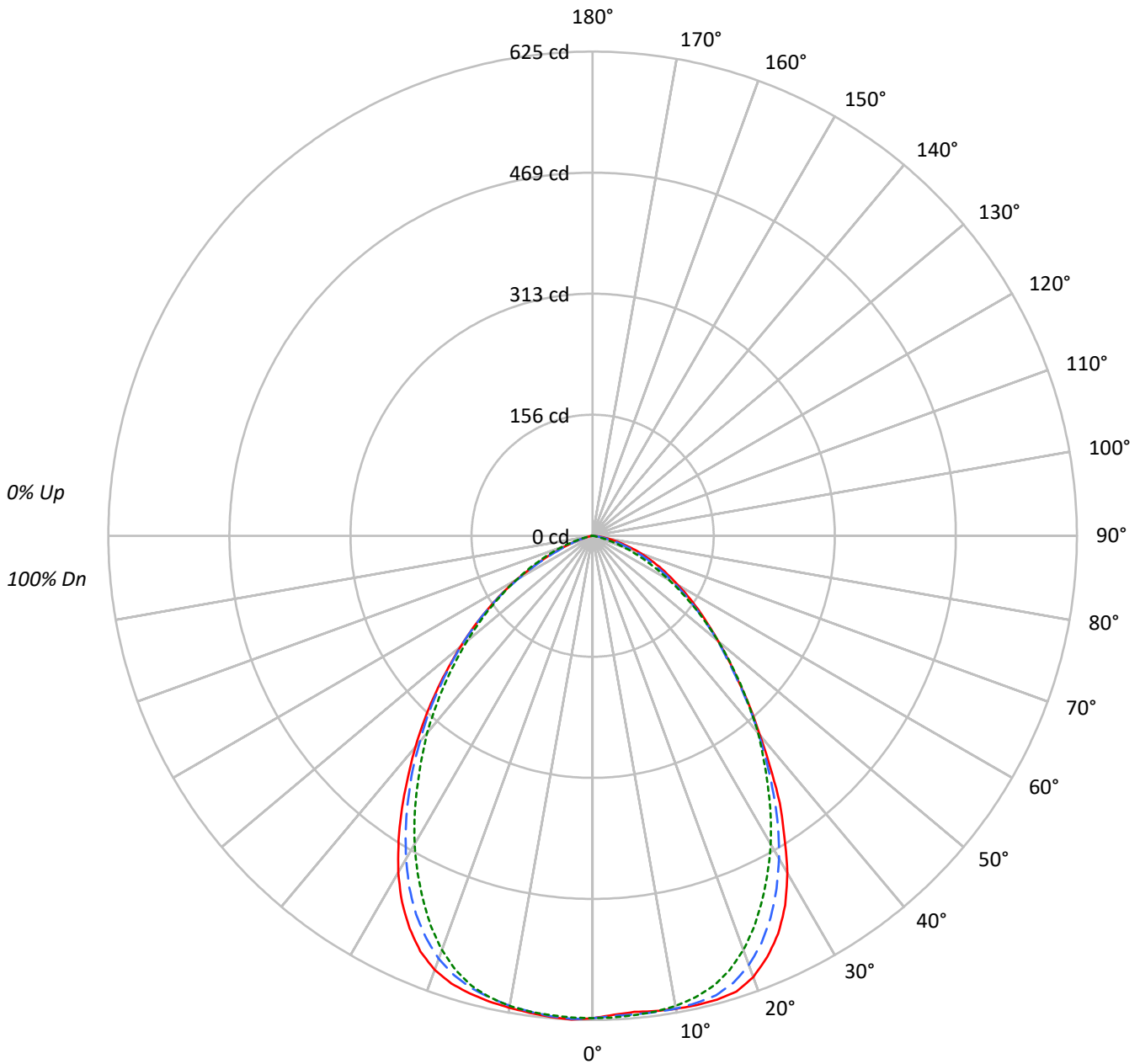
Lumens per Lamp: N/A
Luminaire Lumens: 1194.1 lumens
Efficiency: N/A
Efficacy: 70.2 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.12 / 1.18
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 17
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	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°	76513	76513	76513
5°	76090	76596	76892
10°	77344	76883	77170
15°	78856	76541	77813
20°	79253	74390	77946
25°	76818	70244	75775
30°	71298	65184	71156
35°	63125	59136	64340
40°	53821	53260	57045
45°	46250	46771	49690
50°	40366	40442	42583
55°	35662	34163	35320
60°	31254	27888	27765
65°	27674	21628	19244
70°	23599	14871	11423
75°	19082	7974	5221
80°	13088	2052	1344
85°	4088	564	564



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	59.2	5.0
10°-20°	171.4	14.4
20°-30°	247.6	20.7
30°-40°	256.0	21.4
40°-50°	211.5	17.7
50°-60°	146.0	12.2
60°-70°	76.4	6.4
70°-80°	24.1	2.0
80°-90°	2.0	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°	478.1	40.0
0°-40°	734.1	61.5
0°-60°	1091.6	91.4
0°-90°	1194.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1194.1	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	623	623	623	623	623	
5°	617	620	621	622	624	59
15°	620	614	602	604	612	175
25°	567	544	518	539	559	259
35°	421	407	394	415	429	261
45°	266	265	269	282	286	207
55°	166	161	160	164	165	150
65°	95	86	74	62	66	94
75°	40	32	17	11	11	43
85°	3	1	0	0	0	6
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°	622.8	622.8	622.8	622.8	622.8	622.8	622.8	622.8	622.8	622.8	622.8
2.5°	618.8	619.0	619.0	619.6	619.6	619.6	619.8	619.8	620.0	620.3	620.5
5°	617.0	617.0	617.4	617.7	618.2	618.4	618.8	619.0	619.6	619.8	620.0
7.5°	618.8	618.8	619.0	619.4	619.4	619.6	619.6	619.8	620.0	620.3	620.3
10°	620.0	620.0	620.0	620.0	620.3	620.3	620.3	620.0	620.0	620.0	619.8
12.5°	620.5	620.5	620.3	620.0	620.3	620.0	620.0	619.4	618.8	618.4	617.7
15°	620.0	620.0	619.8	619.6	619.4	618.8	618.6	617.4	616.5	615.1	614.2
17.5°	617.0	616.5	616.1	615.5	614.6	614.0	613.4	611.3	609.7	607.4	604.9
20°	606.2	605.7	605.1	603.9	602.7	601.8	600.4	597.4	595.7	592.2	589.6
22.5°	588.7	588.3	588.5	586.4	584.0	582.5	581.7	579.1	576.3	571.9	569.0
25°	566.7	565.3	565.3	562.0	560.9	559.9	558.7	555.7	551.5	547.5	543.7
27.5°	538.1	536.3	535.4	534.8	532.1	530.0	528.3	526.0	522.5	519.0	513.8
30°	502.6	502.4	501.2	499.1	497.0	496.0	494.2	490.2	486.9	484.4	481.1
32.5°	460.7	460.5	460.5	460.5	459.1	458.9	456.1	453.9	451.4	447.4	445.3
35°	420.9	420.7	420.9	417.4	416.5	415.9	415.7	414.2	410.7	408.8	407.0
37.5°	376.1	376.7	376.3	375.4	376.5	374.4	376.1	373.0	371.7	371.1	369.1
40°	335.6	337.5	335.6	335.9	337.1	335.0	335.0	334.4	333.5	333.0	332.6
42.5°	301.0	298.7	300.1	298.9	300.1	299.4	298.1	298.9	299.1	298.1	297.9
45°	266.2	266.6	267.1	266.4	266.4	265.7	267.6	266.4	266.4	266.6	264.9
47.5°	237.9	237.1	237.7	237.1	237.4	236.9	237.4	237.7	237.1	237.1	235.7
50°	211.2	210.7	212.4	211.0	211.0	210.7	211.0	210.5	209.8	209.8	210.3
52.5°	188.0	187.1	186.9	188.0	186.4	186.4	186.7	186.1	185.2	184.8	183.6
55°	166.5	166.3	166.5	165.6	165.1	165.1	163.9	163.5	163.3	162.0	161.4
57.5°	146.4	145.7	146.0	145.7	144.8	144.6	143.6	143.6	142.7	141.7	140.6
60°	127.2	127.2	128.0	127.0	126.3	125.9	125.3	124.9	123.2	121.6	120.3
62.5°	110.2	110.4	110.2	109.5	108.9	108.5	108.1	106.6	105.2	104.3	102.7
65°	95.2	95.0	94.2	93.8	92.6	92.6	91.7	91.0	89.4	87.9	86.3
67.5°	79.7	79.3	79.3	79.3	77.8	77.6	77.2	75.7	74.4	72.6	71.1
70°	65.7	66.2	65.5	64.8	64.1	63.9	63.1	61.8	60.1	58.3	57.1
72.5°	52.4	52.9	52.1	51.9	50.6	50.0	49.8	48.7	46.7	45.6	43.8
75°	40.2	40.5	40.0	39.6	38.6	38.4	37.2	36.3	35.1	33.2	31.6
77.5°	29.0	28.6	28.6	27.6	26.7	26.7	26.4	25.1	23.4	22.0	20.6
80°	18.5	18.2	17.6	17.0	16.4	16.2	15.9	14.7	13.5	12.6	11.7
82.5°	9.3	9.1	8.9	8.7	8.1	7.7	7.9	7.0	6.6	5.6	4.9
85°	2.9	3.1	3.1	2.9	2.5	2.5	2.5	2.3	1.9	1.6	1.4
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°	622.8	622.8	622.8	622.8	622.8	622.8	622.8	622.8	622.8	622.8	622.8
2.5°	620.7	620.9	621.1	621.5	621.5	621.7	621.9	622.1	622.3	622.3	622.6
5°	620.3	620.7	620.7	620.9	620.9	620.9	621.1	621.1	621.1	621.1	621.5
7.5°	620.5	620.5	620.5	620.3	620.3	620.0	620.0	620.0	619.6	619.6	619.6
10°	619.4	619.0	618.8	618.4	618.2	617.9	617.4	617.0	616.5	616.3	615.9
12.5°	617.0	616.1	615.1	614.2	613.7	613.4	612.6	611.8	611.1	610.5	609.9
15°	612.3	610.9	609.3	607.4	606.9	606.4	604.9	603.4	602.4	601.8	600.6
17.5°	603.0	600.1	598.3	595.4	594.3	593.9	591.2	589.8	588.3	587.7	586.8
20°	586.4	583.8	580.2	577.7	576.3	574.9	572.8	570.9	569.0	569.0	567.8
22.5°	565.5	562.2	557.8	554.5	554.3	551.5	549.7	547.5	546.8	545.4	545.4
25°	539.3	536.5	531.6	528.8	527.4	526.7	523.6	520.9	519.4	518.2	519.2
27.5°	510.3	506.1	502.4	498.9	497.7	496.3	493.5	492.3	489.8	489.5	489.3
30°	477.1	472.9	469.2	467.6	465.1	464.0	461.9	460.5	459.5	459.5	459.1
32.5°	442.3	438.5	436.7	433.1	431.9	430.4	429.0	427.5	428.0	427.5	427.8
35°	404.7	403.7	400.2	398.1	398.1	397.9	395.4	394.6	394.1	394.3	395.4
37.5°	368.8	366.0	363.7	362.2	363.4	362.0	361.8	361.8	363.2	362.2	364.1
40°	330.7	330.5	329.6	330.0	330.2	328.6	329.0	329.3	330.2	332.1	332.3
42.5°	297.5	297.3	297.3	297.3	296.8	295.8	296.8	298.5	298.1	299.6	300.8
45°	265.5	264.9	265.9	265.3	266.6	267.1	266.4	266.8	268.2	269.2	271.1
47.5°	236.2	236.2	236.5	236.9	235.5	236.7	237.1	238.1	238.8	239.2	240.2
50°	209.1	209.1	208.7	208.7	208.7	209.3	208.4	209.5	209.8	211.6	212.8
52.5°	184.0	182.9	183.6	183.1	182.2	181.7	182.2	182.4	183.8	184.3	185.7
55°	160.2	160.2	158.3	157.9	158.5	158.3	158.1	158.1	158.9	159.5	160.7
57.5°	139.2	137.7	136.3	136.1	135.4	135.7	135.7	135.4	135.0	135.2	135.4
60°	119.3	118.3	116.2	116.2	116.0	115.8	114.6	114.3	113.2	113.5	112.5
62.5°	101.0	100.6	97.7	96.9	96.9	96.1	95.0	94.8	93.1	93.1	92.1
65°	84.7	83.2	81.6	80.0	80.0	79.0	78.4	76.3	75.1	74.4	73.0
67.5°	69.7	67.6	66.0	64.5	63.6	63.4	61.8	60.4	58.5	57.3	55.2
70°	55.2	53.5	51.9	50.6	49.6	48.7	47.0	44.9	43.5	41.4	40.0
72.5°	41.7	40.2	38.8	36.9	35.7	35.1	33.4	31.6	29.2	27.8	25.9
75°	29.9	28.3	26.4	24.7	24.1	23.4	21.5	20.1	18.5	16.8	15.0
77.5°	19.5	17.6	16.2	14.3	14.1	13.5	11.7	10.3	9.1	8.1	7.0
80°	10.3	9.3	8.1	7.0	6.6	5.8	4.9	4.2	3.5	2.9	2.3
82.5°	4.4	3.7	3.1	2.5	2.3	2.1	1.6	1.4	1.2	1.2	1.0
85°	1.2	1.0	1.0	0.7	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°	622.8	622.8	622.8	622.8	622.8	622.8	622.8	622.8	622.8	622.8	622.8
2.5°	622.8	623.1	623.3	623.3	623.5	623.8	623.8	624.0	624.2	624.4	624.4
5°	621.7	621.7	621.7	621.9	621.9	621.9	621.9	622.3	622.3	622.6	622.8
7.5°	619.4	619.4	619.4	619.4	619.0	619.4	619.0	619.0	619.6	619.8	620.0
10°	615.5	615.3	615.3	615.1	615.1	615.1	615.3	615.5	615.9	616.1	616.7
12.5°	609.7	609.5	609.5	609.3	609.3	609.5	609.7	610.1	611.1	611.6	612.6
15°	600.4	600.1	600.4	600.6	601.1	601.8	602.4	603.2	604.5	605.7	606.9
17.5°	586.8	587.1	587.3	587.7	588.5	589.4	591.2	593.1	594.7	596.6	598.5
20°	568.1	569.0	569.2	570.9	571.3	573.4	575.6	578.4	581.0	583.3	585.8
22.5°	545.6	546.4	547.3	549.1	550.3	553.1	555.7	559.0	561.8	564.8	568.6
25°	520.1	520.4	523.2	523.2	526.0	528.3	531.4	534.8	539.1	543.1	545.6
27.5°	491.2	492.3	494.4	495.4	497.5	501.2	503.8	508.0	512.2	515.7	518.6
30°	460.7	461.7	465.1	465.7	467.3	470.5	474.0	478.1	481.3	485.3	487.9
32.5°	428.7	431.3	433.4	435.0	435.5	440.4	442.3	445.1	448.9	452.8	455.4
35°	397.6	398.7	401.8	402.7	404.1	407.0	410.7	413.0	414.9	417.4	420.5
37.5°	364.7	368.2	368.8	371.7	372.1	374.7	376.5	379.4	381.7	384.0	384.4
40°	334.0	335.2	337.7	338.4	338.9	342.4	344.8	345.4	346.6	348.7	351.6
42.5°	302.9	304.1	306.8	306.2	308.3	309.9	311.1	313.9	315.1	315.7	315.7
45°	272.2	272.7	274.6	275.5	276.7	277.6	279.7	281.1	281.5	283.7	284.4
47.5°	243.0	243.5	244.8	246.5	246.0	247.2	249.6	250.2	250.4	251.9	252.6
50°	214.3	215.4	217.2	216.8	218.2	218.9	221.0	221.5	221.5	221.7	222.0
52.5°	187.3	188.3	188.8	189.2	190.0	191.1	192.1	191.5	192.5	193.4	192.7
55°	160.7	161.4	162.6	163.0	163.0	163.3	162.8	164.9	163.9	163.7	163.9
57.5°	136.3	135.4	135.2	136.3	136.9	136.5	135.9	136.9	136.9	136.3	135.7
60°	112.7	112.0	111.8	112.0	111.1	110.4	110.8	110.4	109.3	108.7	108.9
62.5°	91.2	90.5	88.6	88.6	88.2	87.9	86.1	86.3	85.4	84.0	84.4
65°	71.3	69.5	68.5	68.3	66.6	65.3	64.8	63.1	61.8	61.6	61.8
67.5°	53.5	51.4	49.8	49.1	48.2	47.0	45.4	44.0	44.4	44.2	45.2
70°	37.2	35.7	34.2	33.0	33.4	32.0	31.1	31.1	31.3	31.6	32.0
72.5°	24.7	23.0	22.2	21.5	21.0	20.1	20.6	20.6	20.3	20.6	20.1
75°	14.1	13.1	12.4	12.2	11.7	11.7	11.7	11.7	11.4	11.2	11.2
77.5°	6.3	5.8	5.6	5.4	5.4	5.4	5.2	4.9	4.9	4.9	4.7
80°	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
82.5°	1.0	1.0	1.2	1.2	1.2	1.0	1.2	1.2	1.0	1.0	1.2
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°	622.8	622.8	622.8	622.8	622.8	622.8	622.8	622.8
2.5°	624.7	625.0	625.0	625.0	625.2	625.2	625.2	625.2
5°	623.1	623.3	623.3	623.3	623.5	623.5	623.5	623.5
7.5°	620.3	620.5	620.5	620.7	620.7	620.9	620.9	621.1
10°	617.0	617.4	617.7	617.9	618.2	618.4	618.4	618.6
12.5°	613.4	614.0	614.2	614.6	615.1	615.3	615.5	615.9
15°	608.4	609.3	609.7	609.9	610.9	611.3	611.6	611.8
17.5°	600.1	602.0	602.7	603.2	604.1	605.1	605.7	606.0
20°	588.5	590.6	591.5	592.7	594.1	595.2	595.7	596.2
22.5°	572.1	574.4	575.8	577.3	578.4	579.6	581.4	580.7
25°	548.7	552.6	554.3	555.0	557.6	559.0	559.9	559.0
27.5°	522.5	524.8	526.3	527.9	529.8	531.1	531.6	533.0
30°	491.0	494.9	494.7	496.3	498.7	500.0	500.5	501.6
32.5°	458.2	460.1	461.4	461.2	462.2	464.7	463.8	465.9
35°	423.4	423.6	425.9	425.7	427.5	427.5	427.5	429.0
37.5°	386.1	388.9	387.7	390.6	389.6	390.4	390.4	390.8
40°	352.2	353.1	353.1	354.1	354.8	354.1	354.5	355.7
42.5°	317.2	318.0	318.3	317.8	318.6	320.7	319.0	320.5
45°	284.4	285.1	286.0	285.3	286.5	285.8	286.5	286.0
47.5°	253.5	253.3	253.1	254.9	253.3	253.5	254.5	252.8
50°	222.0	223.4	222.4	223.2	223.6	223.6	222.8	222.8
52.5°	193.9	193.7	192.9	193.7	193.2	193.4	193.9	193.4
55°	164.9	165.8	165.3	165.1	165.3	165.3	166.8	164.9
57.5°	136.3	135.9	136.5	138.2	136.5	137.7	138.4	138.7
60°	109.3	109.3	110.6	109.9	111.4	112.5	113.5	113.0
62.5°	83.2	84.4	84.9	85.1	86.5	87.5	87.5	87.3
65°	61.8	63.4	63.4	64.3	64.8	64.8	65.3	66.2
67.5°	45.6	45.6	45.8	46.3	46.1	46.1	46.5	46.7
70°	31.8	31.3	32.0	31.8	31.8	31.6	31.8	31.8
72.5°	20.1	20.1	20.3	20.1	19.7	19.9	19.9	20.3
75°	10.8	11.2	10.8	10.8	11.0	10.6	10.8	11.0
77.5°	4.4	4.4	4.4	4.4	4.4	4.2	4.2	4.2
80°	2.1	2.1	2.1	2.1	2.1	2.1	1.9	1.9
82.5°	1.0	1.2	1.0	1.2	1.0	1.0	1.0	1.0
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)