

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: P843286

Luminaire Tested: **LD4C10DE010B2750 EU4C10B27 4LBLWWH**

Issue Date: 5/7/2024



Test Information

Test Method: LM-79-08
Report Number: P843286
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2107-320-2)
Test Lab: INNOVATION CENTER
Issue Date: 5/7/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: PORTFOLIO
Catalog Number: LD4C10DE010B2750 EU4C10B27 4LBLWWH
Description: 4in Downlight with BioUp LEDs
Light Source: -
Ballast/Driver:

Summary

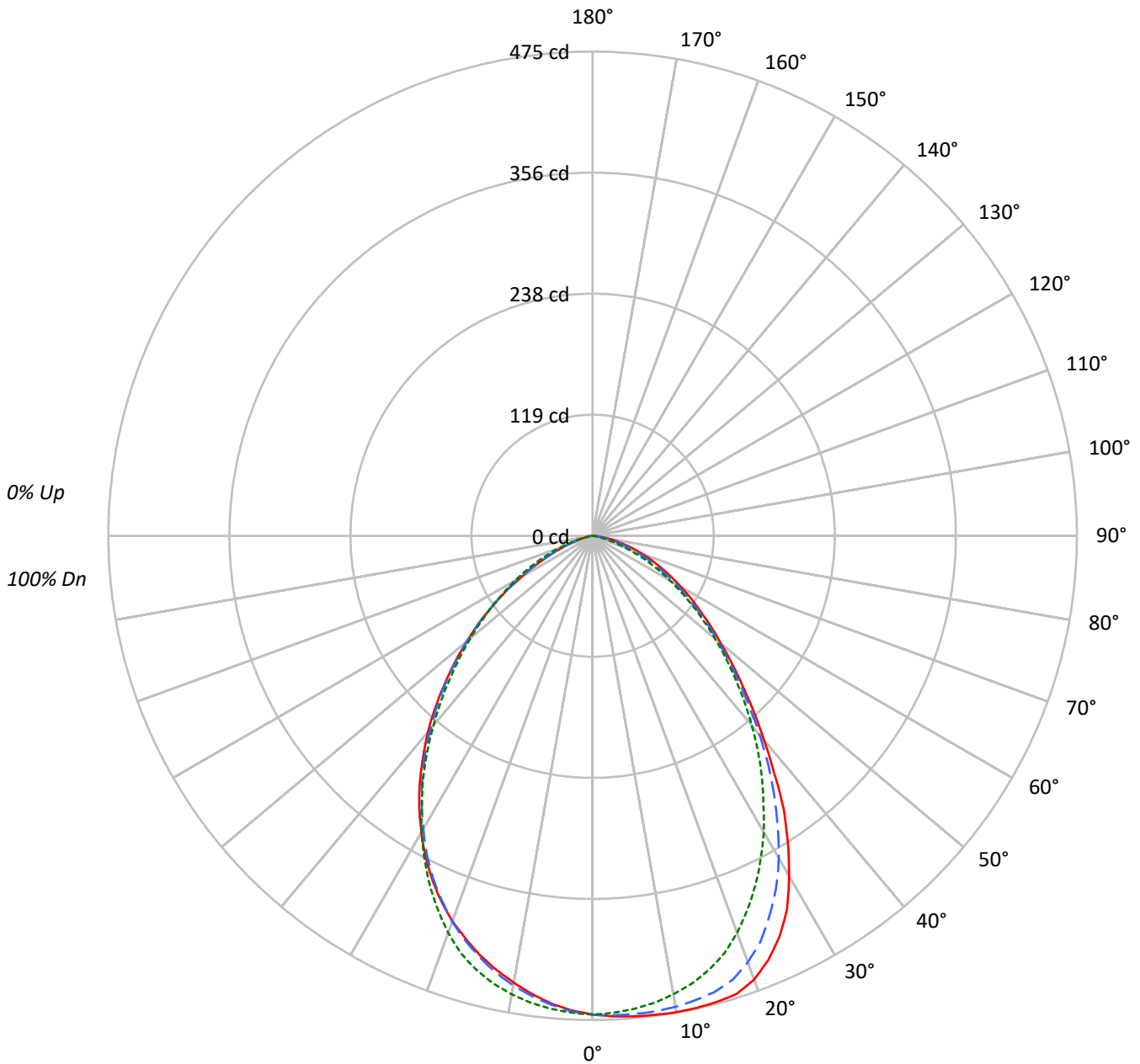
Lumens per Lamp: N/A
Luminaire Lumens: 885.3 lumens
Efficiency: N/A
Efficacy: 66.6 lumens/watt
Spacing Criteria (0/90/45): 1.15 / 1.09 / 1.17
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

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	94	92	90	88																			
2	103	96	90	86	100	94	89	85	91	86	83	88	84	81	85	82	79	77																			
3	95	86	79	74	93	85	78	73	82	76	72	79	75	71	77	73	70	68																			
4	88	78	70	64	86	77	69	64	74	68	63	72	67	62	70	65	62	60																			
5	82	71	63	57	80	69	62	57	67	61	56	66	60	55	64	59	55	53																			
6	76	64	56	51	74	63	56	50	62	55	50	60	54	50	59	53	49	47																			
7	71	59	51	46	69	58	51	45	57	50	45	55	49	45	54	49	44	43																			
8	67	54	47	41	65	54	46	41	52	46	41	51	45	41	50	45	40	39																			
9	62	50	43	38	61	50	42	37	48	42	37	47	41	37	47	41	37	35																			
10	59	47	39	34	58	46	39	34	45	39	34	44	38	34	43	38	34	32																			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	57704	57704	57704
5°	58356	57456	56839
10°	59206	56973	55538
15°	60185	56064	54207
20°	60558	54165	52596
25°	58817	51239	50453
30°	54672	47622	47650
35°	48937	43418	44333
40°	41890	38907	40334
45°	36069	34314	35600
50°	31345	29873	30771
55°	27587	25681	25467
60°	24546	21450	19755
65°	21512	17180	14302
70°	18499	12105	9698
75°	15000	7025	5696
80°	10683	3042	2830
85°	4088	1410	1410



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	44.3	5.0
10°-20°	125.3	14.2
20°-30°	178.9	20.2
30°-40°	187.2	21.1
40°-50°	156.8	17.7
50°-60°	109.8	12.4
60°-70°	59.8	6.8
70°-80°	20.7	2.3
80°-90°	2.4	0.3
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°	348.5	39.4
0°-40°	535.7	60.5
0°-60°	802.3	90.6
0°-90°	885.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	885.3	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	470	470	470	470	470	
5°	473	471	466	462	461	45
15°	473	463	441	428	426	134
25°	434	411	378	371	372	198
35°	326	310	290	292	296	202
45°	208	203	198	204	205	161
55°	129	124	120	120	119	116
65°	74	68	59	50	49	74
75°	32	26	15	12	12	34
85°	3	2	1	1	1	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°	469.7	469.7	469.7	469.7	469.7	469.7	469.7	469.7	469.7	469.7	469.7
2.5°	471.9	471.4	471.5	471.5	471.5	471.4	471.5	471.4	471.4	471.2	470.9
5°	473.2	472.8	472.8	472.8	472.7	472.4	472.4	472.2	471.9	471.7	471.0
7.5°	474.0	473.7	473.7	473.5	473.3	473.2	473.0	472.4	471.9	471.5	470.6
10°	474.6	474.0	474.0	473.7	473.3	473.2	472.8	472.1	471.4	470.4	469.2
12.5°	474.2	473.7	473.5	473.2	472.4	472.1	471.7	470.9	469.6	468.3	466.6
15°	473.2	472.8	472.4	471.9	471.0	470.4	470.1	468.6	467.1	465.3	463.2
17.5°	471.0	470.4	469.7	469.0	467.8	467.2	466.3	464.5	462.2	459.6	456.6
20°	463.2	462.8	462.2	460.9	458.9	458.2	456.9	454.6	451.5	448.4	445.2
22.5°	450.4	449.8	448.8	447.7	445.9	444.6	443.6	440.3	436.8	433.6	430.6
25°	433.9	433.4	431.9	430.6	428.8	426.5	425.5	422.9	419.5	415.3	410.8
27.5°	412.8	411.0	410.5	408.9	406.1	405.4	403.8	400.5	397.2	393.7	389.8
30°	385.4	385.4	384.2	383.6	381.1	380.3	378.5	375.0	373.2	368.2	365.3
32.5°	356.3	355.9	355.0	354.4	353.0	351.8	350.0	348.2	344.2	341.6	337.7
35°	326.3	324.2	324.5	323.4	322.5	321.0	320.9	318.9	315.3	313.8	310.2
37.5°	292.1	291.3	292.5	290.8	290.0	290.1	288.7	287.5	286.0	283.4	282.7
40°	261.2	262.0	261.8	260.4	261.0	260.2	258.7	257.4	256.7	255.1	254.6
42.5°	233.6	232.5	232.2	232.2	232.4	232.4	231.6	230.7	230.7	229.1	227.5
45°	207.6	207.6	207.2	208.4	206.7	206.7	206.1	205.9	205.3	204.9	202.9
47.5°	185.2	185.0	184.8	184.7	184.5	184.5	183.4	182.4	182.3	181.2	180.1
50°	164.0	165.1	164.8	163.8	163.5	163.7	163.0	162.5	162.2	160.4	160.7
52.5°	146.4	146.2	146.5	146.0	145.1	145.2	144.6	143.8	143.1	142.1	141.5
55°	128.8	129.7	129.3	128.8	128.6	128.3	127.8	126.8	126.6	124.7	124.5
57.5°	114.2	114.0	113.6	112.7	112.5	112.0	112.0	111.3	110.2	109.1	108.2
60°	99.9	99.9	99.4	99.2	98.5	98.3	98.1	97.4	96.1	95.2	93.8
62.5°	86.2	86.5	86.2	85.7	85.1	84.4	84.0	83.4	82.4	81.4	80.2
65°	74.0	73.9	73.7	73.0	72.8	72.1	71.9	70.9	69.7	69.1	67.6
67.5°	62.5	62.0	62.0	61.6	61.2	60.7	60.4	59.2	58.0	57.3	55.8
70°	51.5	51.1	51.1	51.1	50.2	49.7	49.5	49.0	47.2	46.4	44.9
72.5°	41.4	41.1	41.0	40.5	40.0	40.0	39.2	38.1	37.2	36.3	35.2
75°	31.6	31.9	31.6	30.9	30.7	30.4	29.8	28.9	28.0	27.0	25.7
77.5°	23.2	22.7	22.4	22.4	22.0	21.4	21.2	20.4	19.4	18.6	17.3
80°	15.1	15.0	14.6	14.3	14.1	14.0	13.7	13.0	12.0	11.4	10.3
82.5°	8.4	8.1	8.1	7.9	7.4	7.4	7.2	6.5	5.9	5.6	5.1
85°	2.9	2.9	2.9	2.7	2.7	2.7	2.5	2.3	2.1	2.0	1.6
87.5°	0.3	0.2	0.3	0.2	0.3	0.2	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	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°	469.7	469.7	469.7	469.7	469.7	469.7	469.7	469.7	469.7	469.7	469.7
2.5°	470.4	470.1	469.9	469.7	469.6	469.4	469.2	468.8	468.6	468.4	468.1
5°	470.4	469.7	469.4	468.8	468.4	468.1	467.6	467.1	466.5	465.9	465.4
7.5°	469.7	468.6	467.9	466.8	466.5	465.9	464.8	464.1	463.2	462.2	460.9
10°	467.9	466.6	465.3	463.8	463.2	462.3	460.9	459.6	458.2	456.7	455.4
12.5°	465.0	463.0	461.2	459.2	458.2	457.2	455.3	453.5	451.7	450.0	447.9
15°	460.7	458.4	456.1	453.3	452.0	451.0	448.0	445.9	443.0	440.8	438.7
17.5°	453.6	450.0	447.2	443.7	441.9	440.6	438.1	434.7	431.9	429.6	427.1
20°	441.6	438.1	434.2	430.4	428.3	426.8	423.2	419.5	416.8	414.3	411.5
22.5°	425.7	421.4	418.4	413.7	412.1	410.2	405.8	402.5	399.5	396.9	394.4
25°	406.3	402.5	398.5	394.2	392.3	389.8	386.2	382.9	380.9	378.0	374.9
27.5°	384.1	381.1	376.1	372.4	370.4	368.6	365.1	362.0	359.2	357.2	354.3
30°	360.7	357.0	352.6	348.7	347.6	345.4	342.4	340.0	337.0	335.7	334.4
32.5°	334.7	330.6	327.3	324.8	322.7	320.9	319.2	315.5	314.9	311.7	311.3
35°	306.6	304.8	301.7	299.5	297.7	296.5	293.8	291.9	290.0	289.5	288.2
37.5°	280.1	277.8	275.0	273.0	271.7	271.5	269.6	268.4	267.1	266.3	264.8
40°	252.2	251.3	248.8	248.4	246.4	246.2	245.2	243.9	242.6	242.6	242.8
42.5°	226.5	225.5	224.4	223.2	222.0	222.0	221.5	221.2	220.7	220.2	221.2
45°	202.5	201.1	200.3	199.0	199.7	198.5	198.2	198.2	197.7	197.5	198.7
47.5°	180.1	178.5	177.8	177.4	177.4	177.6	176.0	176.5	176.3	176.7	177.3
50°	159.7	158.2	157.2	157.2	157.4	156.6	155.9	156.4	155.9	156.3	157.6
52.5°	140.8	139.3	138.8	138.8	137.7	137.5	137.8	137.2	137.3	137.5	138.2
55°	123.2	122.3	121.4	120.5	120.7	120.4	119.6	119.4	119.8	119.9	120.9
57.5°	107.5	106.2	104.9	104.6	104.3	104.3	103.3	103.1	103.5	102.6	102.6
60°	92.5	91.8	90.1	89.6	89.6	88.7	88.0	88.3	87.5	87.3	87.5
62.5°	78.6	78.1	77.0	75.8	75.5	75.2	74.2	73.9	73.5	72.8	71.7
65°	66.5	65.3	64.0	63.2	62.7	61.8	61.2	60.5	59.4	59.1	58.0
67.5°	54.4	53.1	51.8	51.3	50.8	50.2	49.3	48.4	47.2	45.7	44.4
70°	43.7	42.1	41.4	40.0	39.6	38.8	37.5	36.7	35.4	33.7	32.5
72.5°	33.4	32.4	31.3	30.0	29.1	28.6	27.5	26.0	24.5	23.7	22.4
75°	24.0	23.5	22.0	20.6	20.2	19.5	18.3	17.3	16.3	14.8	13.7
77.5°	16.3	15.1	14.3	13.0	12.7	12.0	11.2	10.3	9.6	8.7	7.9
80°	9.6	8.7	8.1	7.2	6.9	6.5	5.9	5.3	4.7	4.3	4.1
82.5°	4.7	4.0	3.8	3.3	3.1	2.9	2.5	2.3	2.0	2.0	2.0
85°	1.6	1.3	1.3	1.1	1.0	1.0	1.0	1.0	1.0	1.0	1.0
87.5°	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2
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°	469.7	469.7	469.7	469.7	469.7	469.7	469.7	469.7	469.7	469.7	469.7
2.5°	467.9	467.8	467.6	467.4	467.4	467.2	467.2	467.1	467.1	466.8	466.8
5°	464.6	464.1	463.8	463.5	463.5	462.8	462.5	462.2	462.0	462.0	461.6
7.5°	460.2	459.4	458.7	458.2	458.0	457.1	456.4	456.4	455.6	455.3	454.9
10°	454.1	452.9	451.8	451.3	450.6	450.0	449.2	448.5	448.0	447.2	447.0
12.5°	446.1	445.2	443.6	442.8	442.4	441.4	439.9	439.2	439.0	438.3	437.8
15°	436.8	434.9	433.4	432.5	432.5	430.7	430.0	428.9	428.1	427.6	427.5
17.5°	425.0	422.9	421.5	420.2	419.9	418.4	417.3	417.0	416.1	416.4	415.5
20°	409.5	407.9	406.9	405.2	405.2	404.3	404.0	403.1	402.7	402.3	402.7
22.5°	393.1	391.1	389.3	389.1	389.1	387.9	387.7	387.5	386.8	387.3	387.2
25°	373.8	372.4	371.2	371.1	371.1	370.4	369.6	370.0	370.6	370.4	370.9
27.5°	353.8	352.3	352.0	351.8	351.3	351.2	351.6	351.6	352.1	352.8	353.6
30°	332.1	331.7	331.1	330.9	330.6	331.6	331.9	332.4	332.2	333.4	334.0
32.5°	310.4	309.7	309.5	309.9	310.4	310.2	311.3	311.7	312.0	313.3	313.8
35°	288.5	288.3	288.0	288.0	288.2	289.6	289.6	290.8	291.6	291.9	293.4
37.5°	265.0	265.8	266.1	266.6	266.8	267.4	267.8	269.1	269.7	270.4	271.2
40°	243.6	243.1	244.8	243.7	244.1	245.7	246.4	246.2	247.4	248.4	249.2
42.5°	220.6	221.2	221.5	221.9	222.7	222.9	223.8	225.1	225.5	226.8	227.1
45°	198.4	198.5	199.3	200.0	200.5	202.0	202.3	202.9	204.0	204.0	204.5
47.5°	177.4	178.1	178.1	179.3	180.1	179.9	181.2	181.6	181.4	182.3	182.7
50°	157.4	158.4	158.2	159.0	159.4	159.5	160.7	161.0	160.2	161.2	161.3
52.5°	138.2	138.8	139.5	139.6	139.3	140.2	139.8	140.6	140.3	141.1	140.3
55°	120.7	120.5	120.5	120.9	120.5	120.9	121.2	120.5	119.9	120.7	120.5
57.5°	103.1	103.1	102.8	103.3	102.8	102.3	102.1	101.5	101.0	101.0	100.8
60°	86.7	86.4	85.7	85.5	85.5	84.5	84.2	83.4	83.4	82.7	82.1
62.5°	71.4	70.4	69.9	69.9	69.6	68.6	67.1	65.9	65.6	64.5	64.3
65°	56.9	56.1	55.4	54.4	53.5	53.1	51.5	50.2	49.7	48.7	48.8
67.5°	43.7	42.3	40.6	40.0	39.3	38.1	37.5	36.7	36.2	36.2	36.2
70°	31.4	30.1	28.6	28.0	27.6	26.5	26.0	25.8	26.3	26.2	26.3
72.5°	21.2	19.9	19.1	18.8	18.4	17.9	18.3	18.4	18.1	18.3	18.4
75°	12.8	12.5	12.0	11.7	11.7	12.0	11.7	11.7	12.0	12.0	12.1
77.5°	7.4	7.1	7.1	6.9	7.2	7.1	7.1	7.1	7.2	7.2	7.2
80°	4.0	4.0	4.0	4.0	4.1	4.0	4.1	4.1	4.1	4.1	4.1
82.5°	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0
85°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
87.5°	0.2	0.3	0.3	0.3	0.3	0.3	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	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	469.7	469.7	469.7	469.7	469.7	469.7	469.7	469.7
2.5°	466.5	466.5	466.5	466.1	466.3	466.3	466.1	466.1
5°	461.4	461.2	460.9	460.9	460.5	460.9	460.7	460.9
7.5°	454.6	454.6	454.0	454.0	453.8	453.6	453.5	453.6
10°	446.4	446.4	446.1	445.9	446.1	445.4	445.4	445.2
12.5°	437.4	437.0	436.7	436.8	436.7	436.2	436.0	436.2
15°	426.9	426.3	426.5	426.0	426.0	425.8	426.2	426.2
17.5°	415.3	415.0	414.6	414.8	414.5	414.6	414.5	414.3
20°	402.5	402.3	402.3	401.6	401.8	401.6	401.8	402.3
22.5°	387.7	387.5	387.7	387.2	387.5	387.5	388.0	388.0
25°	371.4	371.2	371.7	371.8	372.0	372.5	372.0	372.2
27.5°	353.4	353.9	354.4	354.6	355.4	354.8	354.4	355.0
30°	335.2	335.2	335.0	335.7	336.2	336.8	335.9	335.9
32.5°	314.2	315.1	315.1	315.3	315.8	315.8	315.8	316.5
35°	294.1	294.7	294.9	294.1	294.4	294.3	295.6	295.6
37.5°	271.7	271.7	271.9	273.2	273.2	272.7	273.0	273.0
40°	250.4	250.6	249.8	250.2	251.1	250.8	251.1	251.5
42.5°	227.1	228.3	227.6	228.0	227.8	228.0	228.1	228.1
45°	204.9	205.3	205.3	205.4	205.8	206.1	205.1	204.9
47.5°	183.2	183.4	183.9	183.0	184.1	183.0	184.1	182.9
50°	161.3	162.0	161.5	161.9	161.3	161.3	161.2	161.0
52.5°	140.6	140.3	140.3	140.2	140.2	140.6	140.2	140.8
55°	119.8	119.9	119.6	119.4	119.2	119.8	119.2	118.9
57.5°	100.1	100.5	99.7	100.1	98.8	99.4	99.5	99.7
60°	81.9	81.3	81.3	80.6	80.6	81.1	80.4	80.4
62.5°	63.5	63.8	63.2	64.0	64.0	64.7	64.3	64.7
65°	48.7	48.8	49.0	49.0	49.0	50.0	49.7	49.2
67.5°	36.7	36.8	37.0	36.8	37.4	37.0	37.0	37.2
70°	26.5	26.8	27.0	27.0	26.8	27.0	27.0	27.0
72.5°	18.4	18.6	18.4	18.6	18.8	18.6	18.6	18.8
75°	12.1	12.1	12.0	12.0	12.0	12.0	12.1	12.0
77.5°	7.1	7.2	7.1	7.2	7.2	7.2	7.2	7.2
80°	4.1	4.1	4.1	4.0	4.1	4.1	4.1	4.0
82.5°	2.1	2.1	2.0	2.0	2.1	2.1	2.1	2.1
85°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
87.5°	0.2	0.2	0.2	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)