

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: P843328

Luminaire Tested: **LD4C10DE010B40 EU4C10B40 4LBLWWH**

Issue Date: 5/7/2024



Test Information

Test Method: LM-79-08
Report Number: P843328
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: LD4C10DE010B40 EU4C10B40 4LBLWWH
Description: 4in Downlight with BioUp LEDs
Light Source: -
Ballast/Driver:

Summary

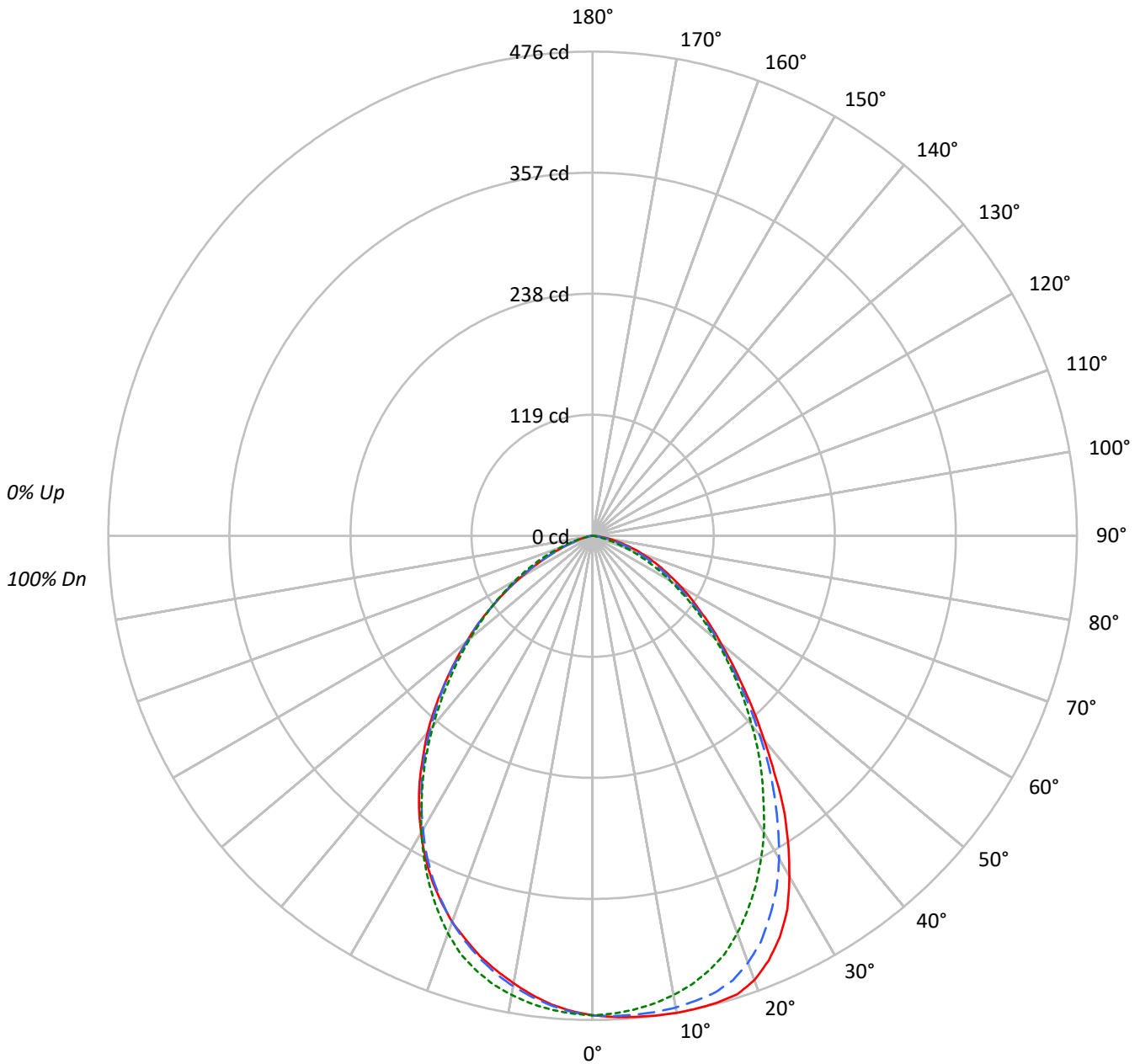
Lumens per Lamp: N/A
Luminaire Lumens: 888.4 lumens
Efficiency: N/A
Efficacy: 66.8 lumens/watt
Spacing Criteria (0/90/45): 1.15 / 1.09 / 1.17
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

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					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	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°	57913	57913	57913
5°	58566	57666	57037
10°	59430	57185	55725
15°	60401	56268	54398
20°	60780	54361	52792
25°	59034	51416	50643
30°	54871	47792	47821
35°	49102	43553	44498
40°	42050	39051	40478
45°	36208	34435	35721
50°	31478	29969	30867
55°	27673	25788	25553
60°	24644	21524	19829
65°	21628	17238	14331
70°	18571	12213	9698
75°	15047	7073	5696
80°	10754	3042	2830
85°	4088	1410	1410



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	44.4	5.0
10°-20°	125.8	14.2
20°-30°	179.6	20.2
30°-40°	187.9	21.1
40°-50°	157.4	17.7
50°-60°	110.2	12.4
60°-70°	60.0	6.8
70°-80°	20.8	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°	349.8	39.4
0°-40°	537.6	60.5
0°-60°	805.2	90.6
0°-90°	888.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	888.4	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	471	471	471	471	471	
5°	475	473	468	464	462	45
15°	475	465	442	430	428	134
25°	436	412	379	372	374	199
35°	327	311	290	293	297	203
45°	208	204	198	205	206	162
55°	129	125	120	120	119	117
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°	471.4	471.4	471.4	471.4	471.4	471.4	471.4	471.4	471.4	471.4	471.4
2.5°	473.6	473.1	473.2	473.2	473.2	473.1	473.2	473.1	473.1	472.9	472.6
5°	474.9	474.5	474.5	474.5	474.3	474.1	474.1	473.9	473.6	473.4	472.7
7.5°	475.7	475.4	475.4	475.2	475.1	474.9	474.7	474.1	473.6	473.2	472.3
10°	476.4	475.7	475.7	475.4	475.1	474.9	474.5	473.8	473.1	472.1	470.9
12.5°	475.9	475.4	475.2	474.9	474.1	473.8	473.4	472.6	471.3	470.0	468.3
15°	474.9	474.5	474.1	473.6	472.7	472.1	471.8	470.3	468.7	466.8	464.9
17.5°	472.7	472.1	471.4	470.6	469.4	468.8	468.0	466.2	463.8	461.2	458.2
20°	464.9	464.5	463.8	462.5	460.5	459.9	458.6	456.2	453.1	450.0	446.7
22.5°	452.0	451.5	450.3	449.3	447.5	446.2	445.2	441.9	438.4	435.1	432.0
25°	435.5	435.0	433.5	432.0	430.2	428.1	427.0	424.4	421.0	416.8	412.3
27.5°	414.3	412.5	411.9	410.4	407.6	406.9	405.3	402.0	398.7	395.1	391.3
30°	386.8	386.8	385.6	385.0	382.4	381.7	379.9	376.4	374.6	369.5	366.6
32.5°	357.6	357.2	356.3	355.8	354.3	353.0	351.2	349.4	345.4	342.9	338.9
35°	327.4	325.2	325.6	324.6	323.6	322.2	322.0	320.0	316.3	315.0	311.3
37.5°	293.2	292.2	293.5	291.9	291.0	291.2	289.7	288.4	287.0	284.5	283.8
40°	262.2	262.9	262.7	261.2	262.0	261.1	259.6	258.4	257.6	256.1	255.4
42.5°	234.5	233.3	233.0	233.0	233.2	233.2	232.5	231.5	231.5	229.9	228.2
45°	208.4	208.4	207.9	209.1	207.4	207.4	206.9	206.7	205.9	205.6	203.6
47.5°	185.8	185.6	185.5	185.3	185.1	185.1	184.0	183.1	183.0	181.8	180.7
50°	164.7	165.7	165.3	164.5	164.0	164.3	163.5	163.0	162.8	161.0	161.2
52.5°	146.9	146.7	147.0	146.5	145.6	145.7	145.0	144.4	143.6	142.7	141.9
55°	129.2	130.2	129.8	129.2	129.1	128.7	128.2	127.2	127.1	125.1	124.9
57.5°	114.5	114.4	114.0	113.2	113.0	112.4	112.4	111.7	110.6	109.5	108.6
60°	100.3	100.3	99.7	99.5	98.8	98.7	98.5	97.7	96.5	95.5	94.1
62.5°	86.5	86.8	86.5	86.0	85.4	84.7	84.3	83.8	82.7	81.8	80.5
65°	74.4	74.1	73.9	73.3	73.1	72.3	72.1	71.1	70.0	69.3	67.8
67.5°	62.7	62.2	62.2	61.9	61.4	60.9	60.6	59.4	58.2	57.4	56.1
70°	51.7	51.3	51.3	51.3	50.4	49.8	49.7	49.2	47.3	46.6	45.2
72.5°	41.6	41.4	41.1	40.6	40.1	40.1	39.3	38.3	37.3	36.5	35.3
75°	31.7	32.0	31.7	31.0	30.8	30.5	29.9	29.0	28.1	27.0	25.7
77.5°	23.2	22.8	22.5	22.5	22.1	21.4	21.3	20.5	19.4	18.7	17.5
80°	15.2	15.0	14.7	14.3	14.2	14.0	13.7	13.0	12.0	11.4	10.4
82.5°	8.4	8.1	8.1	7.9	7.4	7.4	7.3	6.6	6.0	5.6	5.1
85°	2.9	2.9	2.9	2.7	2.7	2.7	2.5	2.3	2.2	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°	471.4	471.4	471.4	471.4	471.4	471.4	471.4	471.4	471.4	471.4	471.4
2.5°	472.1	471.8	471.6	471.4	471.3	471.1	470.9	470.5	470.3	470.1	469.8
5°	472.1	471.4	471.1	470.5	470.1	469.8	469.3	468.7	468.1	467.6	467.1
7.5°	471.4	470.3	469.6	468.5	468.1	467.6	466.5	465.8	464.9	463.8	462.5
10°	469.6	468.3	466.8	465.5	464.9	464.0	462.5	461.2	459.9	458.4	457.1
12.5°	466.7	464.7	462.9	460.9	459.9	458.9	456.9	455.1	453.3	451.6	449.5
15°	462.4	460.0	457.6	454.9	453.6	452.6	449.7	447.5	444.6	442.4	440.2
17.5°	455.3	451.6	448.8	445.3	443.5	442.2	439.7	436.3	433.5	431.2	428.7
20°	443.1	439.7	435.7	431.9	429.9	428.2	424.6	421.0	418.3	415.8	413.0
22.5°	427.2	422.8	419.9	415.2	413.5	411.6	407.2	404.0	400.8	398.3	395.8
25°	407.8	404.0	400.0	395.7	393.7	391.3	387.6	384.2	382.2	379.3	376.2
27.5°	385.5	382.4	377.5	373.7	371.7	369.9	366.5	363.4	360.4	358.4	355.6
30°	361.9	358.3	353.9	350.0	348.8	346.7	343.6	341.2	338.1	336.9	335.6
32.5°	336.0	331.8	328.5	326.0	323.8	322.0	320.4	316.5	316.0	312.7	312.4
35°	307.7	305.9	302.8	300.6	298.8	297.5	294.8	293.0	291.0	290.4	289.2
37.5°	281.0	278.9	275.9	273.9	272.7	272.6	270.5	269.4	268.0	267.3	265.8
40°	253.1	252.2	249.7	249.3	247.3	247.2	246.0	244.7	243.5	243.5	243.7
42.5°	227.4	226.2	225.2	223.9	222.8	222.8	222.3	221.9	221.6	221.0	221.9
45°	203.3	201.8	201.1	199.8	200.3	199.3	198.9	198.9	198.3	198.2	199.5
47.5°	180.7	179.2	178.4	178.0	178.0	178.2	176.6	177.2	176.9	177.4	177.9
50°	160.2	158.9	157.7	157.7	157.9	157.2	156.4	157.1	156.4	156.8	158.1
52.5°	141.2	139.8	139.3	139.3	138.1	138.0	138.3	137.6	137.8	138.0	138.7
55°	123.6	122.8	121.8	120.9	121.1	120.8	120.0	119.8	120.3	120.4	121.3
57.5°	107.9	106.6	105.3	105.0	104.6	104.6	103.8	103.5	103.9	103.0	103.0
60°	92.9	92.1	90.4	89.9	89.9	89.1	88.3	88.6	87.8	87.6	87.8
62.5°	78.9	78.4	77.2	76.1	75.8	75.4	74.6	74.1	73.8	73.1	72.0
65°	66.7	65.5	64.2	63.5	62.9	62.0	61.4	60.7	59.7	59.3	58.2
67.5°	54.6	53.3	52.0	51.5	51.0	50.4	49.5	48.5	47.3	45.9	44.6
70°	43.9	42.2	41.6	40.1	39.7	39.0	37.8	36.8	35.5	34.0	32.7
72.5°	33.5	32.5	31.4	30.1	29.2	28.7	27.6	26.1	24.6	23.8	22.5
75°	24.1	23.6	22.1	20.6	20.3	19.6	18.3	17.5	16.3	14.9	13.7
77.5°	16.3	15.2	14.3	13.0	12.7	12.0	11.2	10.4	9.6	8.7	7.9
80°	9.6	8.7	8.1	7.3	6.9	6.6	6.0	5.3	4.8	4.3	4.1
82.5°	4.8	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°	471.4	471.4	471.4	471.4	471.4	471.4	471.4	471.4	471.4	471.4	471.4
2.5°	469.6	469.4	469.3	469.1	469.1	468.8	468.8	468.7	468.7	468.5	468.5
5°	466.3	465.8	465.5	465.0	465.0	464.5	464.2	463.8	463.7	463.7	463.2
7.5°	461.8	461.1	460.4	459.9	459.6	458.7	458.0	458.0	457.3	456.9	456.6
10°	455.8	454.6	453.5	452.9	452.2	451.6	450.8	450.2	449.7	448.8	448.5
12.5°	447.7	446.7	445.2	444.4	444.0	442.9	441.5	440.8	440.6	439.9	439.3
15°	438.4	436.4	435.0	434.1	434.1	432.3	431.5	430.5	429.7	429.2	429.0
17.5°	426.4	424.4	423.1	421.8	421.4	419.9	418.8	418.5	417.6	418.0	417.0
20°	411.0	409.4	408.4	406.7	406.7	405.8	405.4	404.5	404.1	403.8	404.1
22.5°	394.5	392.6	390.7	390.6	390.6	389.3	389.1	388.9	388.2	388.8	388.6
25°	375.1	373.7	372.6	372.4	372.4	371.7	371.0	371.3	371.9	371.7	372.3
27.5°	355.0	353.6	353.2	353.0	352.6	352.5	352.8	352.8	353.4	354.1	354.8
30°	333.3	332.9	332.3	332.2	331.8	332.7	333.0	333.6	333.5	334.5	335.3
32.5°	311.5	310.7	310.6	310.9	311.5	311.3	312.4	312.7	313.2	314.4	315.0
35°	289.6	289.4	289.1	289.1	289.2	290.6	290.6	291.9	292.6	293.0	294.4
37.5°	266.0	266.7	267.1	267.6	267.8	268.3	268.7	270.0	270.6	271.4	272.1
40°	244.4	244.0	245.7	244.6	244.9	246.5	247.3	247.2	248.2	249.3	250.0
42.5°	221.4	221.9	222.3	222.6	223.6	223.7	224.6	225.9	226.2	227.5	227.9
45°	199.0	199.3	200.0	200.7	201.3	202.7	203.1	203.6	204.7	204.7	205.3
47.5°	178.0	178.7	178.7	179.9	180.7	180.5	181.8	182.2	182.0	183.0	183.3
50°	157.9	159.0	158.9	159.6	159.9	160.1	161.2	161.5	160.9	161.7	161.9
52.5°	138.7	139.3	139.9	140.1	139.8	140.7	140.3	141.1	140.9	141.6	140.9
55°	121.1	120.9	120.9	121.3	120.9	121.3	121.6	120.9	120.4	121.1	120.9
57.5°	103.5	103.5	103.1	103.8	103.1	102.6	102.5	101.9	101.3	101.3	101.2
60°	87.0	86.6	86.0	85.8	85.8	84.8	84.5	83.8	83.8	83.0	82.3
62.5°	71.6	70.8	70.1	70.1	69.8	68.9	67.3	66.2	65.8	64.7	64.5
65°	57.1	56.2	55.6	54.6	53.6	53.3	51.7	50.4	49.8	48.8	49.0
67.5°	43.9	42.4	40.8	40.1	39.6	38.3	37.8	36.8	36.3	36.3	36.3
70°	31.5	30.2	28.7	28.1	27.7	26.7	26.1	25.9	26.4	26.3	26.4
72.5°	21.3	20.0	19.2	18.8	18.5	18.0	18.3	18.5	18.1	18.3	18.5
75°	12.9	12.5	12.0	11.7	11.7	12.0	11.7	11.7	12.0	12.0	12.2
77.5°	7.4	7.1	7.1	6.9	7.3	7.1	7.1	7.1	7.3	7.3	7.3
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	2.2	2.2	2.2	2.2	2.2	2.2	2.2	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°	471.4	471.4	471.4	471.4	471.4	471.4	471.4	471.4
2.5°	468.1	468.1	468.1	467.8	468.0	468.0	467.8	467.8
5°	463.0	462.9	462.5	462.5	462.2	462.5	462.4	462.5
7.5°	456.2	456.2	455.6	455.6	455.4	455.3	455.1	455.3
10°	448.0	448.0	447.7	447.5	447.7	447.0	447.0	446.7
12.5°	438.9	438.6	438.3	438.4	438.3	437.6	437.5	437.6
15°	428.4	427.9	428.1	427.5	427.5	427.4	427.7	427.7
17.5°	416.8	416.5	416.1	416.3	416.0	416.1	416.0	415.8
20°	404.0	403.8	403.8	403.1	403.3	403.1	403.3	403.8
22.5°	389.1	388.9	389.1	388.6	388.9	388.9	389.4	389.4
25°	372.8	372.6	372.9	373.1	373.3	373.9	373.3	373.6
27.5°	354.6	355.2	355.8	355.9	356.6	356.1	355.8	356.3
30°	336.3	336.3	336.1	336.9	337.4	338.0	337.1	337.1
32.5°	315.3	316.2	316.2	316.3	317.0	317.0	317.0	317.6
35°	295.2	295.7	295.9	295.2	295.5	295.4	296.7	296.7
37.5°	272.7	272.7	272.9	274.1	274.1	273.6	273.9	273.9
40°	251.3	251.5	250.8	251.1	252.0	251.6	252.0	252.4
42.5°	227.9	229.2	228.4	228.8	228.7	228.8	229.0	229.0
45°	205.6	205.9	205.9	206.1	206.6	206.9	205.8	205.6
47.5°	183.8	184.0	184.6	183.7	184.8	183.7	184.8	183.5
50°	161.9	162.7	162.1	162.5	161.9	161.9	161.7	161.5
52.5°	141.1	140.9	140.9	140.7	140.7	141.1	140.7	141.2
55°	120.3	120.4	120.0	119.8	119.6	120.3	119.6	119.3
57.5°	100.5	100.8	100.1	100.5	99.2	99.7	99.9	100.1
60°	82.2	81.5	81.5	80.9	80.9	81.4	80.7	80.7
62.5°	63.7	64.0	63.5	64.2	64.2	64.9	64.5	64.9
65°	48.8	49.0	49.2	49.2	49.2	50.2	49.8	49.3
67.5°	36.8	37.0	37.1	37.0	37.5	37.1	37.1	37.3
70°	26.7	26.9	27.0	27.0	26.9	27.0	27.0	27.0
72.5°	18.5	18.7	18.5	18.7	18.8	18.7	18.7	18.8
75°	12.2	12.2	12.0	12.0	12.0	12.0	12.2	12.0
77.5°	7.1	7.3	7.1	7.3	7.3	7.3	7.3	7.3
80°	4.1	4.1	4.1	4.0	4.1	4.1	4.1	4.0
82.5°	2.2	2.2	2.0	2.0	2.2	2.2	2.2	2.2
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)