

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: P843265

Luminaire Tested: **LD4C08DE010B40 EU4C08B40 4LBSWLI**

Issue Date: 5/7/2024

Test Information

Test Method: LM-79-08
Report Number: P843265
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P251556)
Test Lab: INNOVATION CENTER
Issue Date: 5/7/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: PORTFOLIO
Catalog Number: LD4C08DE010B40 EU4C08B40 4LBSWLI
Description: 4in Downlight with BioUp LEDs
Light Source: -
Ballast/Driver:

Summary

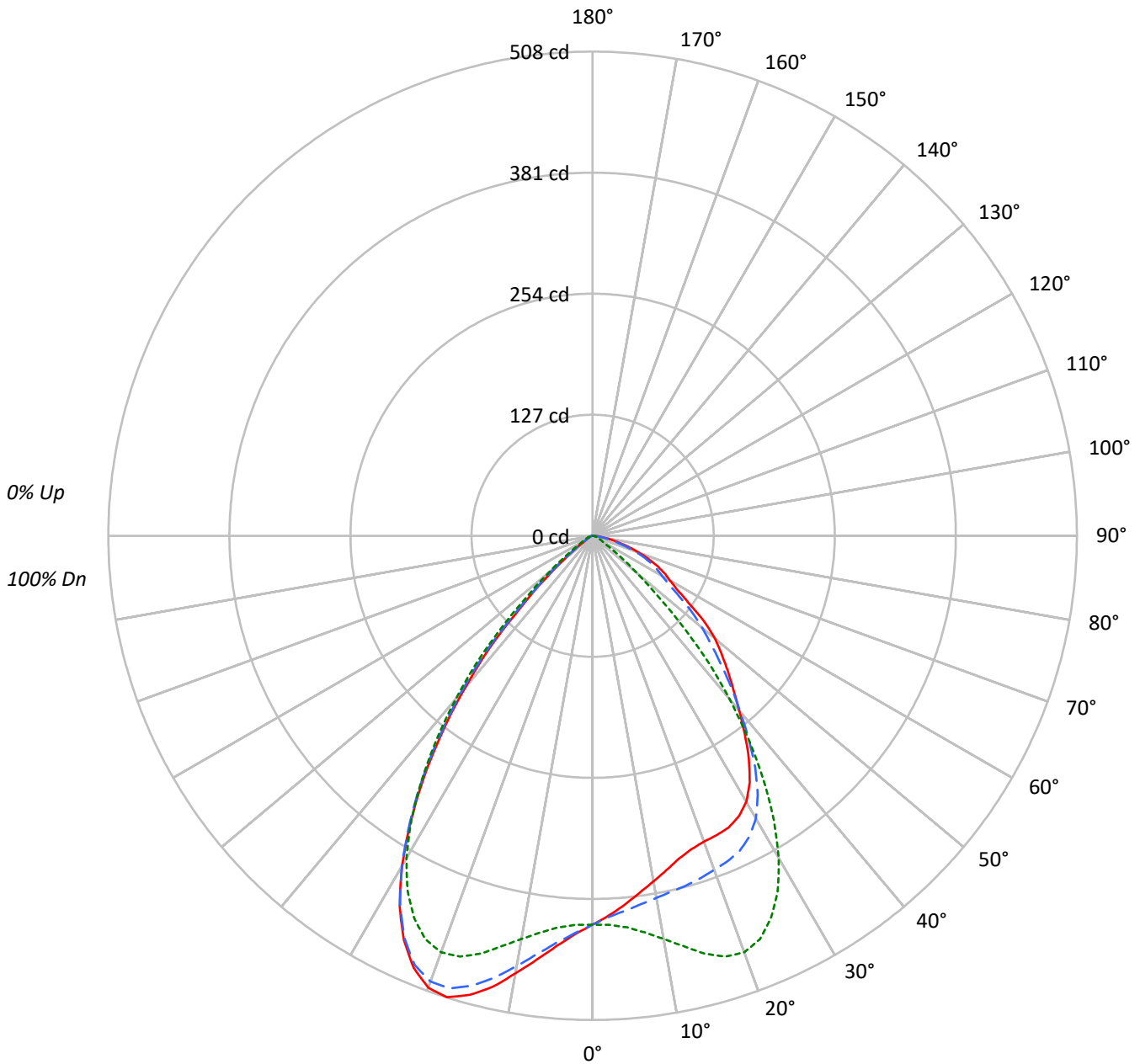
Lumens per Lamp: N/A
Luminaire Lumens: 753.0 lumens
Efficiency: N/A
Efficacy: 78.4 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.3 / 1.19
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 9.6
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	112	108	105	102	109	106	103	101	102	100	98	98	96	95	95	93	92	90																			
2	104	98	93	89	102	96	92	88	93	89	86	90	87	84	87	85	82	80																			
3	97	89	83	78	95	88	82	77	85	80	76	82	78	75	80	77	74	72																			
4	91	81	75	69	89	80	74	69	78	72	68	76	71	67	74	70	66	64																			
5	85	75	67	62	83	74	67	62	72	66	61	70	65	60	68	64	60	58																			
6	79	69	61	56	78	68	61	56	66	60	55	64	59	55	63	58	54	53																			
7	75	63	56	51	73	62	55	51	61	55	50	60	54	50	58	53	50	48																			
8	70	58	51	46	69	58	51	46	57	50	46	55	50	46	54	49	45	44																			
9	66	54	47	42	65	54	47	42	53	46	42	52	46	42	51	46	42	40																			
10	62	51	44	39	61	50	43	39	49	43	39	48	43	39	47	42	39	37																			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	50124	50124	50124
5°	47899	50858	53275
10°	45920	53567	58145
15°	44579	57730	63428
20°	44647	60793	65957
25°	45777	60010	63466
30°	45721	55396	56687
35°	42833	46823	46178
40°	38361	35699	33326
45°	34800	22673	18590
50°	31975	11506	7951
55°	26260	5141	2635
60°	23023	2875	1425
65°	21686	2151	1076
70°	18571	1724	934
75°	14145	1234	759
80°	10188	778	354
85°	7471	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	39.6	5.3
10°-20°	123.5	16.4
20°-30°	191.1	25.4
30°-40°	188.3	25.0
40°-50°	115.6	15.4
50°-60°	51.4	6.8
60°-70°	28.7	3.8
70°-80°	12.4	1.6
80°-90°	2.2	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°	354.3	47.1
0°-40°	542.6	72.1
0°-60°	709.7	94.2
0°-90°	753.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	753.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	408	408	408	408	408	
5°	388	395	412	428	432	36
15°	350	380	454	488	499	99
25°	338	365	443	467	468	155
35°	286	297	312	311	308	177
45°	200	190	130	114	107	155
55°	123	111	24	14	12	113
65°	75	67	7	4	4	73
75°	30	26	3	2	2	33
85°	5	4	0	0	0	7
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°	408.0	408.0	408.0	408.0	408.0	408.0	408.0	408.0	408.0	408.0	408.0
2.5°	398.5	398.5	398.5	398.5	399.6	398.0	399.6	399.6	401.2	401.7	400.1
5°	388.4	387.8	388.4	388.4	389.4	388.9	390.5	391.5	393.7	394.7	394.7
7.5°	377.7	377.7	377.7	378.7	380.3	379.8	381.4	383.1	386.2	388.4	389.9
10°	368.1	367.6	369.2	369.7	371.3	371.3	374.0	375.6	379.3	383.6	385.7
12.5°	359.1	358.5	359.6	361.2	363.8	363.8	365.9	368.7	374.0	378.7	382.4
15°	350.5	351.0	352.6	353.7	357.0	357.0	359.6	362.8	368.7	374.5	379.8
17.5°	344.7	345.2	346.3	347.9	351.0	351.0	353.7	357.5	363.8	370.3	376.6
20°	341.5	342.0	343.1	344.7	347.3	347.9	350.0	354.3	360.1	367.0	372.9
22.5°	339.9	341.0	342.0	343.1	345.7	345.7	348.4	351.6	357.5	364.4	369.7
25°	337.7	338.8	339.4	341.0	343.1	343.1	344.7	348.4	353.7	359.6	364.9
27.5°	331.9	332.9	333.5	335.1	337.2	336.6	338.8	341.5	346.3	351.6	355.9
30°	322.3	322.8	324.0	324.4	326.1	326.1	327.7	330.3	333.5	338.2	342.6
32.5°	306.8	307.9	308.4	308.9	310.6	310.0	310.6	312.2	315.4	319.6	322.3
35°	285.6	287.7	287.7	288.7	289.3	288.7	288.7	290.8	292.4	295.7	297.3
37.5°	262.1	263.7	263.1	264.2	264.7	263.1	264.2	264.7	266.9	268.5	269.1
40°	239.2	239.8	239.8	239.8	239.8	239.2	239.8	240.3	241.9	241.9	240.3
42.5°	218.4	218.9	218.9	217.9	218.9	218.4	218.4	218.4	218.4	216.3	214.7
45°	200.3	200.8	200.8	200.3	200.3	199.3	198.7	198.2	196.6	193.9	190.2
47.5°	183.3	184.3	184.9	183.8	183.3	182.2	182.2	179.0	176.8	173.7	168.4
50°	167.3	168.4	168.4	167.3	167.3	165.6	164.0	163.0	159.8	156.1	149.7
52.5°	147.0	148.6	148.6	148.1	148.1	146.0	145.4	143.3	140.7	136.3	131.0
55°	122.6	124.7	124.2	123.6	122.6	122.6	122.6	120.9	119.3	116.1	110.8
57.5°	104.9	105.4	105.4	104.9	104.9	103.9	103.9	102.3	101.7	98.6	94.3
60°	93.7	93.7	94.3	93.7	93.3	92.6	92.1	91.1	89.5	87.4	84.2
62.5°	84.7	85.2	85.2	84.7	84.2	83.7	83.1	82.1	81.0	79.3	76.1
65°	74.6	75.6	75.1	74.6	74.0	73.5	73.5	72.4	71.4	70.3	67.2
67.5°	63.4	63.9	64.4	63.4	63.4	62.8	62.8	61.8	61.2	59.1	57.0
70°	51.7	52.2	52.2	51.7	51.7	51.1	51.1	50.7	50.0	48.4	46.3
72.5°	40.5	41.0	40.5	40.0	40.0	40.0	39.4	38.9	38.4	37.3	35.6
75°	29.8	29.8	30.4	29.8	29.3	29.3	28.8	28.8	27.7	27.2	25.6
77.5°	21.3	21.8	21.3	21.3	20.7	20.2	20.2	19.7	19.7	19.1	18.1
80°	14.4	14.4	14.9	14.4	13.9	14.4	13.9	13.3	13.3	12.8	11.7
82.5°	9.1	9.6	9.1	9.1	9.1	9.1	9.1	8.6	8.6	8.0	7.4
85°	5.3	5.3	5.3	5.3	5.3	5.3	5.3	4.8	4.8	4.8	4.2
87.5°	2.6	2.6	2.1	2.1	2.6	2.6	2.6	2.1	2.1	2.1	2.1
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°	408.0	408.0	408.0	408.0	408.0	408.0	408.0	408.0	408.0	408.0	408.0
2.5°	402.2	402.7	403.8	405.4	405.4	404.3	407.0	407.0	408.0	408.6	410.7
5°	398.0	399.0	401.2	403.8	404.3	403.8	407.5	409.1	410.7	412.4	415.5
7.5°	394.2	396.3	400.1	403.8	405.4	405.4	411.3	413.4	416.6	419.8	423.5
10°	392.1	395.2	400.6	406.4	408.0	409.6	416.6	420.8	425.1	429.4	434.7
12.5°	389.4	395.2	402.2	409.6	412.9	415.0	424.5	429.9	435.7	441.1	448.0
15°	388.9	395.9	404.9	414.5	418.7	421.9	432.6	440.0	447.0	453.9	460.8
17.5°	386.8	395.2	406.4	417.1	422.4	426.8	438.9	448.0	456.1	462.9	471.0
20°	384.1	393.7	405.9	417.7	423.5	427.8	441.1	449.6	458.7	465.0	472.6
22.5°	380.3	389.9	402.2	414.0	419.2	422.9	436.3	443.8	451.7	458.2	465.0
25°	374.0	383.1	393.7	403.3	408.6	411.7	423.5	430.5	436.3	442.7	449.1
27.5°	364.9	371.9	380.9	387.8	391.0	394.2	403.8	409.6	415.0	420.3	424.5
30°	348.9	354.3	360.7	366.5	369.7	370.3	379.3	382.4	386.8	390.5	393.7
32.5°	327.7	331.9	335.6	338.8	341.0	341.5	348.4	349.4	353.7	353.7	358.5
35°	300.5	302.6	305.2	305.2	306.8	305.2	310.0	311.2	311.7	312.2	315.9
37.5°	269.6	270.6	272.2	269.1	269.1	267.5	269.1	270.1	268.0	268.0	270.6
40°	240.3	238.1	236.0	232.8	231.2	228.0	228.0	225.4	223.7	222.6	223.3
42.5°	212.1	207.2	202.4	195.5	192.3	189.1	185.9	182.2	181.2	178.4	176.8
45°	184.9	177.9	171.5	160.3	154.0	150.7	143.8	136.3	131.6	130.5	126.3
47.5°	161.9	151.8	141.2	127.9	121.5	115.6	105.4	99.1	92.6	89.5	86.8
50°	141.7	132.6	118.8	104.4	96.5	90.5	79.3	71.9	65.0	60.2	57.0
52.5°	124.2	114.0	101.2	84.7	76.7	70.3	58.1	49.5	43.7	38.9	35.2
55°	104.4	96.5	83.7	68.2	60.2	52.8	42.1	33.0	27.2	24.0	21.3
57.5°	90.0	83.1	70.9	55.9	48.4	41.6	30.9	23.5	18.6	15.4	13.9
60°	80.5	74.0	63.4	49.0	42.1	35.6	25.6	18.6	14.4	11.7	10.7
62.5°	72.4	66.1	56.5	43.2	37.3	30.9	21.8	15.4	11.7	9.6	8.0
65°	63.4	57.5	49.0	37.3	31.9	26.7	18.6	12.8	9.6	7.4	6.3
67.5°	53.8	48.4	41.0	30.9	26.7	22.4	14.9	10.7	8.0	6.3	5.3
70°	43.7	39.4	32.5	25.1	21.3	17.6	12.3	8.6	5.8	4.8	4.2
72.5°	33.5	29.8	25.1	19.1	16.0	13.3	9.1	6.3	4.8	3.7	3.2
75°	24.0	21.3	17.6	13.9	11.7	9.6	7.0	4.8	3.2	2.6	2.1
77.5°	16.5	14.9	12.3	9.6	8.0	7.0	4.8	3.2	2.6	2.1	1.6
80°	10.7	9.6	8.0	5.8	4.8	4.2	2.6	2.1	1.6	1.1	1.1
82.5°	6.3	5.8	4.8	3.2	2.6	2.1	1.6	1.1	1.1	0.5	0.5
85°	3.7	3.2	2.1	1.6	1.6	1.1	1.1	0.5	0.5	0.0	0.0
87.5°	1.6	1.1	1.1	0.5	0.5	0.5	0.5	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°	408.0	408.0	408.0	408.0	408.0	408.0	408.0	408.0	408.0	408.0	408.0
2.5°	409.6	412.4	411.7	413.4	412.9	412.9	415.5	414.5	417.1	417.1	417.7
5°	415.5	419.2	419.2	421.9	421.4	422.4	425.1	425.1	428.3	429.4	429.4
7.5°	424.0	428.9	429.9	432.6	433.1	435.2	437.3	437.9	442.2	443.3	443.8
10°	435.7	441.7	443.3	445.9	447.0	449.1	451.7	452.8	458.2	458.7	460.8
12.5°	450.1	456.6	458.2	461.3	461.9	464.5	468.2	469.4	474.7	476.3	477.8
15°	464.0	469.8	472.6	475.7	476.3	479.4	482.6	483.8	488.5	490.6	492.2
17.5°	473.6	480.5	482.2	486.4	486.4	489.0	492.2	493.3	498.0	499.7	500.8
20°	475.7	482.2	484.3	487.5	488.0	489.6	492.2	493.3	497.6	498.0	499.7
22.5°	467.7	474.1	475.2	478.4	478.9	480.5	482.6	482.2	487.5	486.9	487.5
25°	450.7	456.6	456.6	460.3	459.8	461.3	462.4	461.9	466.6	466.6	466.6
27.5°	426.1	431.5	432.0	434.7	433.1	433.6	434.7	434.2	437.3	437.3	437.3
30°	395.9	400.1	398.5	400.6	399.6	400.6	399.6	399.0	400.1	401.2	400.6
32.5°	358.0	361.2	361.2	361.7	361.7	358.5	357.5	357.5	357.0	356.4	356.4
35°	314.3	317.0	315.9	315.9	315.4	312.2	310.6	309.6	311.2	307.9	310.0
37.5°	269.6	270.1	268.5	268.0	265.3	265.3	262.6	260.5	261.6	261.0	258.9
40°	220.5	222.6	219.5	218.4	220.0	217.9	215.2	212.6	214.7	212.1	213.1
42.5°	172.6	172.1	171.0	171.0	171.0	167.8	167.3	166.8	167.3	165.2	163.5
45°	124.7	123.1	121.5	121.5	119.3	118.2	118.2	116.7	114.0	114.0	110.8
47.5°	84.2	80.5	79.3	78.9	77.7	77.7	76.7	75.6	75.1	72.4	72.4
50°	54.9	51.1	50.0	49.5	50.0	49.0	47.9	46.9	45.8	45.3	44.2
52.5°	33.0	31.4	30.4	29.8	28.8	28.2	27.7	26.7	26.1	26.1	25.6
55°	19.7	18.1	16.0	16.0	16.0	15.4	14.9	14.4	13.9	13.9	13.3
57.5°	12.3	11.2	10.2	9.6	9.6	9.6	9.1	9.1	9.1	9.1	8.6
60°	9.1	8.0	7.4	7.4	7.4	7.0	7.0	7.0	7.0	6.3	6.3
62.5°	7.0	6.3	5.8	5.8	5.3	5.3	5.3	5.3	5.3	5.3	4.8
65°	5.8	4.8	4.8	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2
67.5°	4.2	3.7	3.7	3.7	3.7	3.2	3.2	3.2	3.2	3.2	3.2
70°	3.2	3.2	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
72.5°	2.6	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
75°	2.1	2.1	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
77.5°	1.6	1.6	1.6	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
80°	1.1	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
82.5°	0.5	0.5	0.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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°	408.0	408.0	408.0	408.0	408.0	408.0	408.0	408.0
2.5°	417.7	420.3	417.7	417.7	419.2	418.7	419.8	418.2
5°	429.9	433.6	431.0	430.5	433.1	432.6	433.1	432.0
7.5°	444.8	448.5	445.9	445.9	448.5	448.0	449.6	448.5
10°	461.9	466.1	462.4	462.9	466.6	466.1	466.1	466.1
12.5°	479.4	483.8	481.5	481.5	484.3	484.8	485.3	484.8
15°	493.8	498.0	495.4	495.4	499.2	498.7	499.2	498.7
17.5°	502.4	506.6	503.4	503.4	506.6	506.6	507.1	507.7
20°	500.3	505.0	502.4	501.3	505.0	505.0	504.5	504.5
22.5°	488.0	492.2	490.1	489.0	491.7	490.6	490.1	490.6
25°	466.6	471.0	466.6	466.6	468.7	468.2	468.7	468.2
27.5°	437.9	441.1	436.8	436.3	438.4	437.3	436.8	438.4
30°	399.6	402.7	400.6	399.0	401.7	400.1	399.0	399.6
32.5°	355.9	358.0	357.0	354.3	355.9	354.8	354.3	354.8
35°	307.9	310.6	306.3	305.8	308.4	306.3	305.2	307.9
37.5°	258.4	261.6	257.9	258.4	256.8	257.3	256.3	257.9
40°	211.5	211.0	209.9	209.4	209.9	208.2	209.4	207.8
42.5°	160.9	161.9	161.4	160.9	161.4	159.3	158.2	160.3
45°	111.9	111.4	110.3	109.1	109.1	108.7	108.7	107.0
47.5°	71.9	71.4	69.3	69.8	70.9	69.8	68.2	70.3
50°	43.7	43.2	43.2	42.6	43.7	42.6	41.6	41.6
52.5°	24.5	24.5	24.0	24.0	24.0	24.0	23.5	23.0
55°	13.3	12.8	12.8	12.8	12.3	12.3	12.3	12.3
57.5°	8.6	8.6	8.6	8.6	8.6	8.6	8.0	8.0
60°	6.3	6.3	6.3	6.3	5.8	6.3	5.8	5.8
62.5°	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8
65°	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7
67.5°	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
70°	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
72.5°	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
75°	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
77.5°	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
80°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	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



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— 0°-180° - - 45°-225° - - - - 90°-270°













(END OF REPORT)