

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: P843335

Luminaire Tested: **LD4C10DE010B40 EU4C10B40 4LBSWLI**

Issue Date: 5/7/2024

**Test Information**

Test Method: LM-79-08  
Report Number: P843335  
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: LD4C10DE010B40 EU4C10B40 4LBSWLI  
Description: 4in Downlight with BioUp LEDs  
Light Source: -  
Ballast/Driver:

**Summary**

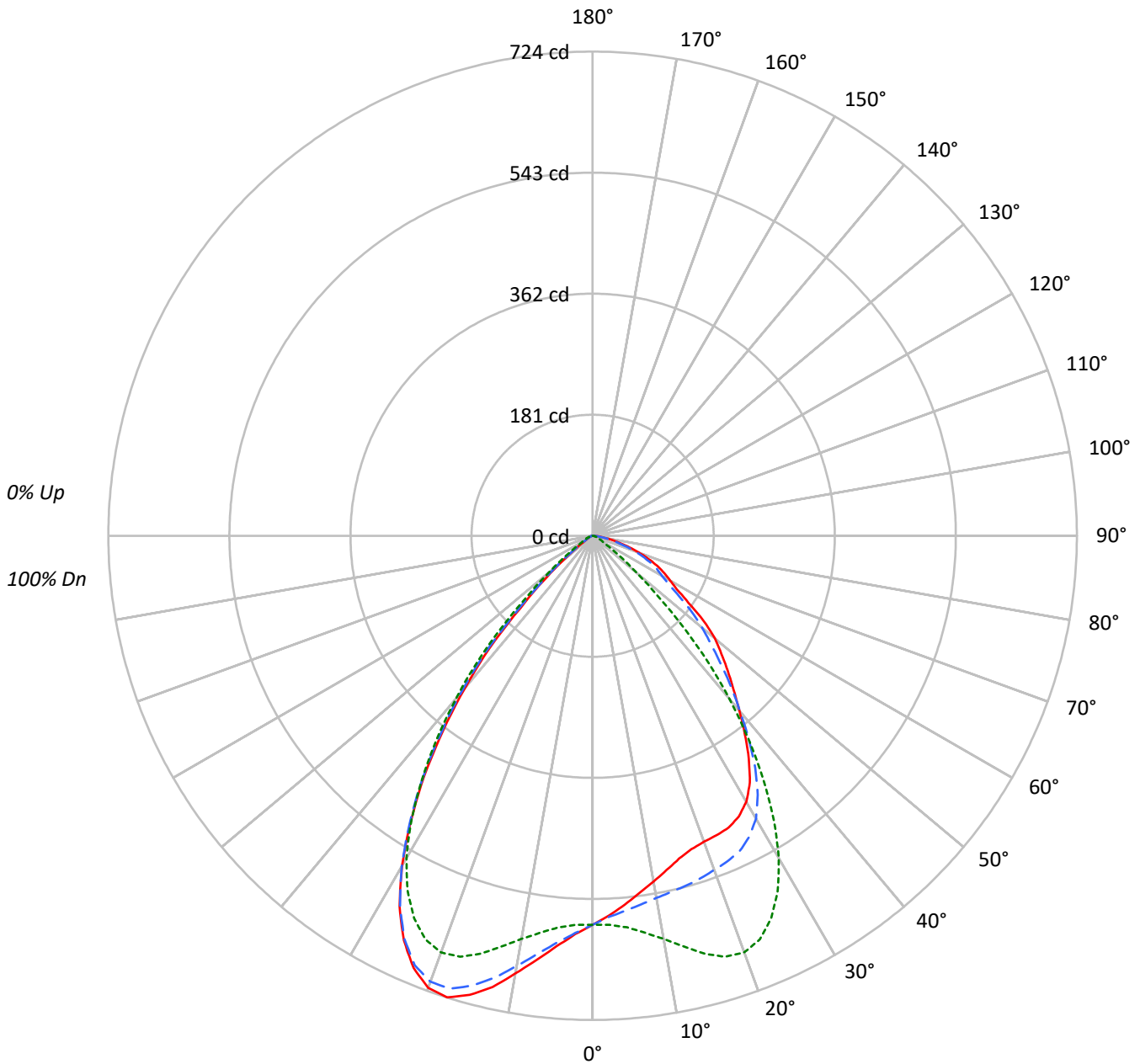
Lumens per Lamp: N/A  
Luminaire Lumens: 1073.5 lumens  
Efficiency: N/A  
Efficacy: 80.7 lumens/watt  
Spacing Criteria (0/90/45): 1.25 / 1.3 / 1.19  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

Input Watts (W): 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	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°	71464	71464	71464
5°	68271	72489	75954
10°	65468	76371	82896
15°	63555	82303	90405
20°	63643	86679	94027
25°	65256	85548	90496
30°	65170	78959	80789
35°	61055	66754	65825
40°	54687	50903	47503
45°	49620	32316	26513
50°	45584	16399	11315
55°	37419	7325	3748
60°	32851	4103	2064
65°	30901	3081	1541
70°	26473	2478	1365
75°	20173	1804	1092
80°	14503	1061	495
85°	10713	0	0



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	56.5	5.3
10°-20°	176.1	16.4
20°-30°	272.5	25.4
30°-40°	268.4	25.0
40°-50°	164.8	15.4
50°-60°	73.3	6.8
60°-70°	40.9	3.8
70°-80°	17.7	1.7
80°-90°	3.2	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°	505.1	47.1
0°-40°	773.5	72.1
0°-60°	1011.7	94.2
0°-90°	1073.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1073.5	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	582	582	582	582	582	
5°	554	563	588	611	616	52
15°	500	542	647	696	711	142
25°	481	520	631	665	668	221
35°	407	424	445	444	439	253
45°	286	271	186	163	153	221
55°	175	158	34	20	18	161
65°	106	96	11	6	5	104
75°	42	36	4	2	2	47
85°	8	6	0	0	0	9
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°	581.7	581.7	581.7	581.7	581.7	581.7	581.7	581.7	581.7	581.7	581.7
2.5°	568.1	568.1	568.1	568.1	569.5	567.3	569.5	569.5	571.9	572.6	570.4
5°	553.6	552.8	553.6	553.6	555.2	554.4	556.6	558.2	561.3	562.8	562.8
7.5°	538.4	538.4	538.4	539.9	542.2	541.5	543.7	546.1	550.6	553.6	555.9
10°	524.8	524.1	526.3	527.0	529.3	529.3	533.2	535.4	540.7	546.8	549.9
12.5°	511.9	511.0	512.6	515.0	518.7	518.7	521.7	525.5	533.2	539.9	545.2
15°	499.7	500.5	502.7	504.3	508.8	508.8	512.6	517.2	525.5	533.9	541.5
17.5°	491.4	492.1	493.6	495.9	500.5	500.5	504.3	509.6	518.7	527.8	537.0
20°	486.8	487.6	489.0	491.4	495.2	495.9	499.0	505.0	513.4	523.2	531.6
22.5°	484.5	486.1	487.6	489.0	492.9	492.9	496.7	501.2	509.6	519.5	527.0
25°	481.4	483.0	483.8	486.1	489.0	489.0	491.4	496.7	504.3	512.6	520.3
27.5°	473.2	474.7	475.4	477.7	480.7	480.0	483.0	486.8	493.6	501.2	507.2
30°	459.4	460.2	461.8	462.5	464.7	464.7	467.1	470.9	475.4	482.3	488.3
32.5°	437.4	438.9	439.8	440.5	442.7	442.0	442.7	445.1	449.6	455.6	459.4
35°	407.1	410.0	410.0	411.6	412.4	411.6	411.6	414.6	416.9	421.5	423.8
37.5°	373.7	375.9	375.1	376.6	377.5	375.1	376.6	377.5	380.5	382.8	383.5
40°	341.0	341.7	341.7	341.7	341.7	341.0	341.7	342.5	344.8	344.8	342.5
42.5°	311.4	312.1	312.1	310.6	312.1	311.4	311.4	311.4	311.4	308.3	306.1
45°	285.6	286.3	286.3	285.6	285.6	284.0	283.2	282.5	280.2	276.5	271.1
47.5°	261.2	262.7	263.6	262.0	261.2	259.8	259.8	255.2	252.1	247.6	240.0
50°	238.5	240.0	240.0	238.5	238.5	236.2	233.9	232.4	227.8	222.5	213.4
52.5°	209.6	211.8	211.8	211.1	211.1	208.1	207.3	204.3	200.5	194.4	186.8
55°	174.7	177.7	176.9	176.2	174.7	174.7	174.7	172.4	170.1	165.5	158.0
57.5°	149.5	150.4	150.4	149.5	149.5	148.1	148.1	145.8	145.0	140.5	134.4
60°	133.7	133.7	134.4	133.7	132.9	132.1	131.4	129.9	127.6	124.6	120.0
62.5°	120.8	121.5	121.5	120.8	120.0	119.2	118.5	117.0	115.5	113.2	108.6
65°	106.3	107.8	107.0	106.3	105.6	104.8	104.8	103.2	101.7	100.3	95.7
67.5°	90.3	91.2	91.9	90.3	90.3	89.6	89.6	88.1	87.4	84.3	81.2
70°	73.7	74.5	74.5	73.7	73.7	72.9	72.9	72.1	71.4	69.2	66.1
72.5°	57.7	58.5	57.7	56.9	56.9	56.9	56.2	55.4	54.7	53.2	50.9
75°	42.5	42.5	43.3	42.5	41.8	41.8	41.0	41.0	39.4	38.7	36.5
77.5°	30.4	31.1	30.4	30.4	29.6	28.9	28.9	28.1	28.1	27.4	25.8
80°	20.5	20.5	21.3	20.5	19.8	20.5	19.8	18.9	18.9	18.2	16.7
82.5°	12.9	13.6	12.9	12.9	12.9	12.9	12.9	12.2	12.2	11.4	10.6
85°	7.6	7.6	7.6	7.6	7.6	7.6	7.6	6.9	6.9	6.9	6.0
87.5°	3.8	3.8	3.1	3.1	3.8	3.8	3.8	3.1	3.1	3.1	3.1
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°	581.7	581.7	581.7	581.7	581.7	581.7	581.7	581.7	581.7	581.7	581.7
2.5°	573.3	574.1	575.7	577.9	577.9	576.4	580.2	580.2	581.7	582.4	585.5
5°	567.3	568.8	571.9	575.7	576.4	575.7	581.0	583.3	585.5	587.8	592.4
7.5°	562.0	565.0	570.4	575.7	577.9	577.9	586.2	589.3	593.9	598.4	603.8
10°	559.0	563.5	571.1	579.5	581.7	584.0	593.9	600.0	606.0	612.2	619.7
12.5°	555.2	563.5	573.3	584.0	588.6	591.5	605.3	612.9	621.3	628.8	638.7
15°	554.4	564.2	577.2	590.8	596.9	601.5	616.7	627.3	637.1	647.1	656.9
17.5°	551.3	563.5	579.5	594.6	602.2	608.4	625.8	638.7	650.1	660.0	671.4
20°	547.5	561.3	578.7	595.3	603.8	609.8	628.8	640.9	653.8	663.0	673.6
22.5°	542.2	555.9	573.3	590.1	597.7	603.0	622.0	632.6	644.0	653.1	663.0
25°	533.2	546.1	561.3	574.9	582.4	587.0	603.8	613.6	622.0	631.1	640.2
27.5°	520.3	530.1	543.0	552.8	557.5	562.0	575.7	584.0	591.5	599.1	605.3
30°	497.4	505.0	514.1	522.5	527.0	527.8	540.7	545.2	551.3	556.6	561.3
32.5°	467.1	473.2	478.5	483.0	486.1	486.8	496.7	498.1	504.3	504.3	511.0
35°	428.3	431.4	435.1	435.1	437.4	435.1	442.0	443.5	444.3	445.1	450.3
37.5°	384.2	385.8	388.0	383.5	383.5	381.3	383.5	385.1	382.0	382.0	385.8
40°	342.5	339.5	336.4	331.9	329.6	325.0	325.0	321.2	319.0	317.4	318.2
42.5°	302.3	295.4	288.6	278.7	274.1	269.6	265.0	259.8	258.2	254.5	252.1
45°	263.6	253.6	244.5	228.6	219.5	214.9	205.1	194.4	187.6	186.0	180.0
47.5°	230.9	216.4	201.3	182.2	173.1	164.8	150.4	141.3	132.1	127.6	123.7
50°	202.0	189.1	169.3	148.8	137.5	129.1	113.2	102.5	92.6	85.8	81.2
52.5°	176.9	162.6	144.3	120.8	109.4	100.3	82.8	70.6	62.3	55.4	50.1
55°	148.8	137.5	119.2	97.2	85.8	75.2	60.0	47.1	38.7	34.2	30.4
57.5°	128.4	118.5	101.0	79.7	69.2	59.2	44.0	33.4	26.5	22.0	19.8
60°	114.6	105.6	90.3	69.9	60.0	50.9	36.5	26.5	20.5	16.7	15.1
62.5°	103.2	94.1	80.5	61.4	53.2	44.0	31.1	22.0	16.7	13.6	11.4
65°	90.3	82.1	69.9	53.2	45.6	38.0	26.5	18.2	13.6	10.6	9.1
67.5°	76.7	69.2	58.5	44.0	38.0	31.9	21.3	15.1	11.4	9.1	7.6
70°	62.3	56.2	46.3	35.7	30.4	25.1	17.5	12.2	8.4	6.9	6.0
72.5°	47.8	42.5	35.7	27.4	22.7	18.9	12.9	9.1	6.9	5.3	4.5
75°	34.2	30.4	25.1	19.8	16.7	13.6	9.8	6.9	4.5	3.8	3.1
77.5°	23.6	21.3	17.5	13.6	11.4	9.8	6.9	4.5	3.8	3.1	2.3
80°	15.1	13.6	11.4	8.4	6.9	6.0	3.8	3.1	2.3	1.5	1.5
82.5°	9.1	8.4	6.9	4.5	3.8	3.1	2.3	1.5	1.5	0.7	0.7
85°	5.3	4.5	3.1	2.3	2.3	1.5	1.5	0.7	0.7	0.0	0.0
87.5°	2.3	1.5	1.5	0.7	0.7	0.7	0.7	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°	581.7	581.7	581.7	581.7	581.7	581.7	581.7	581.7	581.7	581.7	581.7
2.5°	584.0	587.8	587.0	589.3	588.6	588.6	592.4	590.8	594.6	594.6	595.3
5°	592.4	597.7	597.7	601.5	600.7	602.2	606.0	606.0	610.6	612.2	612.2
7.5°	604.5	611.3	612.9	616.7	617.4	620.4	623.5	624.2	630.3	631.8	632.6
10°	621.3	629.6	631.8	635.6	637.1	640.2	644.0	645.5	653.1	653.8	656.9
12.5°	641.7	650.9	653.1	657.6	658.5	662.2	667.6	669.1	676.7	678.9	681.2
15°	661.4	669.8	673.6	678.2	678.9	683.4	688.0	689.6	696.5	699.4	701.7
17.5°	675.1	685.0	687.3	693.4	693.4	697.2	701.7	703.2	710.1	712.3	713.9
20°	678.2	687.3	690.3	694.9	695.6	697.9	701.7	703.2	709.4	710.1	712.3
22.5°	666.7	675.9	677.4	682.0	682.7	685.0	688.0	687.3	694.9	694.1	694.9
25°	642.5	650.9	650.9	656.2	655.4	657.6	659.2	658.5	665.3	665.3	665.3
27.5°	607.5	615.1	615.9	619.7	617.4	618.2	619.7	618.9	623.5	623.5	623.5
30°	564.2	570.4	568.1	571.1	569.5	571.1	569.5	568.8	570.4	571.9	571.1
32.5°	510.3	515.0	515.0	515.7	515.7	511.0	509.6	509.6	508.8	508.1	508.1
35°	448.0	451.8	450.3	450.3	449.6	445.1	442.7	441.2	443.5	438.9	442.0
37.5°	384.2	385.1	382.8	382.0	378.2	378.2	374.4	371.3	372.8	372.1	369.1
40°	314.4	317.4	312.8	311.4	313.7	310.6	306.8	303.0	306.1	302.3	303.8
42.5°	246.1	245.3	243.8	243.8	243.8	239.2	238.5	237.7	238.5	235.4	233.1
45°	177.7	175.5	173.1	173.1	170.1	168.6	168.6	166.4	162.6	162.6	158.0
47.5°	120.0	114.6	113.2	112.4	110.8	110.8	109.4	107.8	107.0	103.2	103.2
50°	78.3	72.9	71.4	70.6	71.4	69.9	68.3	66.8	65.3	64.5	63.0
52.5°	47.1	44.8	43.3	42.5	41.0	40.3	39.4	38.0	37.2	37.2	36.5
55°	28.1	25.8	22.7	22.7	22.7	22.0	21.3	20.5	19.8	19.8	18.9
57.5°	17.5	16.0	14.4	13.6	13.6	13.6	12.9	12.9	12.9	12.9	12.2
60°	12.9	11.4	10.6	10.6	10.6	9.8	9.8	9.8	9.8	9.1	9.1
62.5°	9.8	9.1	8.4	8.4	7.6	7.6	7.6	7.6	7.6	7.6	6.9
65°	8.4	6.9	6.9	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
67.5°	6.0	5.3	5.3	5.3	5.3	4.5	4.5	4.5	4.5	4.5	4.5
70°	4.5	4.5	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8
72.5°	3.8	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
75°	3.1	3.1	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
77.5°	2.3	2.3	2.3	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
80°	1.5	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
82.5°	0.7	0.7	0.7	0.7	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°	581.7	581.7	581.7	581.7	581.7	581.7	581.7	581.7
2.5°	595.3	599.1	595.3	595.3	597.7	596.9	598.4	596.2
5°	612.9	618.2	614.4	613.6	617.4	616.7	617.4	615.9
7.5°	634.2	639.4	635.6	635.6	639.4	638.7	640.9	639.4
10°	658.5	664.5	659.2	660.0	665.3	664.5	664.5	664.5
12.5°	683.4	689.6	686.5	686.5	690.3	691.1	691.9	691.1
15°	704.0	710.1	706.3	706.3	711.6	710.8	711.6	710.8
17.5°	716.1	722.3	717.7	717.7	722.3	722.3	723.0	723.7
20°	713.1	719.9	716.1	714.6	719.9	719.9	719.2	719.2
22.5°	695.6	701.7	698.7	697.2	701.0	699.4	698.7	699.4
25°	665.3	671.4	665.3	665.3	668.3	667.6	668.3	667.6
27.5°	624.2	628.8	622.7	622.0	625.1	623.5	622.7	625.1
30°	569.5	574.1	571.1	568.8	572.6	570.4	568.8	569.5
32.5°	507.2	510.3	508.8	505.0	507.2	505.8	505.0	505.8
35°	438.9	442.7	436.7	436.0	439.8	436.7	435.1	438.9
37.5°	368.3	372.8	367.5	368.3	366.0	366.8	365.3	367.5
40°	301.5	300.8	299.2	298.5	299.2	297.0	298.5	296.2
42.5°	229.3	230.9	230.1	229.3	230.1	227.1	225.6	228.6
45°	159.5	158.8	157.2	155.7	155.7	154.9	154.9	152.6
47.5°	102.5	101.7	98.7	99.5	101.0	99.5	97.2	100.3
50°	62.3	61.4	61.4	60.7	62.3	60.7	59.2	59.2
52.5°	34.9	34.9	34.2	34.2	34.2	34.2	33.4	32.7
55°	18.9	18.2	18.2	18.2	17.5	17.5	17.5	17.5
57.5°	12.2	12.2	12.2	12.2	12.2	12.2	11.4	11.4
60°	9.1	9.1	9.1	9.1	8.4	9.1	8.4	8.4
62.5°	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9
65°	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3
67.5°	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
70°	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8
72.5°	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
75°	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
77.5°	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
80°	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
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)