

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: P843307

Luminaire Tested: **LD4C10DE010B2750 EU4C10B30 4LBSWLI**

Issue Date: 5/7/2024



Test Information

Test Method: LM-79-08
Report Number: P843307
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: LD4C10DE010B2750 EU4C10B30 4LBSWLI
Description: 4in Downlight with BioUp LEDs
Light Source: -
Ballast/Driver:

Summary

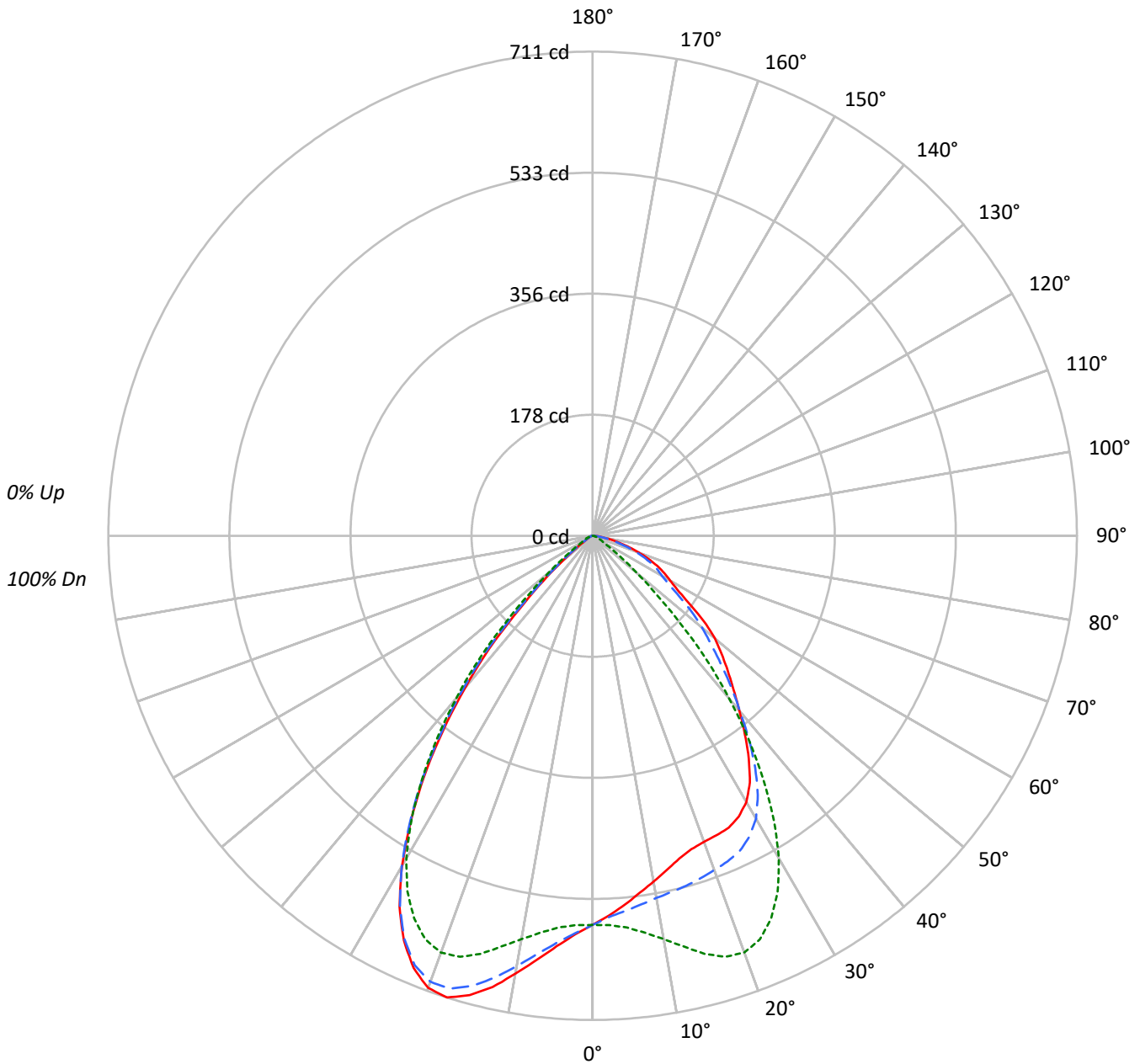
Lumens per Lamp: N/A
Luminaire Lumens: 1054.4 lumens
Efficiency: N/A
Efficacy: 79.3 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.3 / 1.19
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

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									
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°	70198	70198	70198
5°	67063	71207	74610
10°	64308	75011	81436
15°	62424	80828	88802
20°	62519	85137	92353
25°	64117	84030	88883
30°	64021	77568	79370
35°	59961	65555	64670
40°	53725	50005	46669
45°	48734	31760	26061
50°	44781	16112	11124
55°	36733	7197	3663
60°	32261	4030	2015
65°	30349	3052	1512
70°	25970	2443	1329
75°	19841	1756	1044
80°	14220	1061	495
85°	10431	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	55.5	5.3
10°-20°	173.0	16.4
20°-30°	267.6	25.4
30°-40°	263.7	25.0
40°-50°	161.9	15.4
50°-60°	72.0	6.8
60°-70°	40.2	3.8
70°-80°	17.4	1.6
80°-90°	3.1	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°	496.1	47.1
0°-40°	759.8	72.1
0°-60°	993.7	94.2
0°-90°	1054.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1054.4	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	571	571	571	571	571	
5°	544	553	577	600	605	51
15°	491	532	636	684	698	139
25°	473	511	620	653	656	217
35°	400	416	437	436	431	248
45°	280	266	183	160	150	217
55°	172	155	34	19	17	158
65°	104	94	10	6	5	102
75°	42	36	4	2	2	46
85°	7	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°	571.4	571.4	571.4	571.4	571.4	571.4	571.4	571.4	571.4	571.4	571.4
2.5°	558.0	558.0	558.0	558.0	559.5	557.3	559.5	559.5	561.7	562.4	560.2
5°	543.8	543.1	543.8	543.8	545.3	544.6	546.8	548.3	551.2	552.8	552.8
7.5°	528.9	528.9	528.9	530.4	532.6	531.9	534.1	536.3	540.8	543.8	546.1
10°	515.5	514.8	517.0	517.7	519.9	519.9	523.6	526.0	531.1	537.1	540.1
12.5°	502.8	502.1	503.5	505.8	509.5	509.5	512.4	516.2	523.6	530.4	535.6
15°	490.8	491.6	493.8	495.3	499.8	499.8	503.5	508.0	516.2	524.4	531.9
17.5°	482.6	483.3	484.9	487.1	491.6	491.6	495.3	500.6	509.5	518.5	527.4
20°	478.2	478.9	480.4	482.6	486.4	487.1	490.1	496.0	504.3	514.0	522.2
22.5°	475.9	477.4	478.9	480.4	484.1	484.1	487.9	492.3	500.6	510.2	517.7
25°	473.0	474.5	475.2	477.4	480.4	480.4	482.6	487.9	495.3	503.5	510.9
27.5°	464.7	466.2	466.9	469.2	472.2	471.4	474.5	478.2	484.9	492.3	498.3
30°	451.3	452.0	453.5	454.3	456.6	456.6	458.8	462.5	466.9	473.7	479.6
32.5°	429.7	431.2	431.9	432.7	434.9	434.2	434.9	437.1	441.6	447.6	451.3
35°	399.8	402.9	402.9	404.3	405.1	404.3	404.3	407.3	409.5	414.0	416.3
37.5°	367.0	369.2	368.5	370.0	370.8	368.5	370.0	370.8	373.8	376.0	376.7
40°	335.0	335.7	335.7	335.7	335.7	335.0	335.7	336.4	338.7	338.7	336.4
42.5°	305.9	306.6	306.6	305.1	306.6	305.9	305.9	305.9	305.9	302.9	300.6
45°	280.5	281.2	281.2	280.5	280.5	279.0	278.3	277.5	275.2	271.5	266.3
47.5°	256.6	258.1	258.8	257.3	256.6	255.1	255.1	250.7	247.7	243.1	235.7
50°	234.3	235.7	235.7	234.3	234.3	232.0	229.8	228.2	223.8	218.6	209.6
52.5°	205.9	208.1	208.1	207.4	207.4	204.4	203.6	200.6	196.9	191.0	183.5
55°	171.5	174.6	173.8	173.0	171.5	171.5	171.5	169.3	167.1	162.6	155.2
57.5°	146.9	147.8	147.8	146.9	146.9	145.4	145.4	143.2	142.5	138.0	132.0
60°	131.3	131.3	132.0	131.3	130.5	129.8	129.0	127.6	125.3	122.4	117.8
62.5°	118.6	119.4	119.4	118.6	117.8	117.1	116.3	114.9	113.4	111.2	106.7
65°	104.4	105.9	105.2	104.4	103.6	102.9	102.9	101.4	99.9	98.5	94.0
67.5°	88.7	89.5	90.2	88.7	88.7	88.0	88.0	86.5	85.8	82.8	79.9
70°	72.3	73.1	73.1	72.3	72.3	71.6	71.6	70.9	70.1	67.9	64.9
72.5°	56.7	57.4	56.7	55.9	55.9	55.9	55.2	54.5	53.7	52.2	50.0
75°	41.8	41.8	42.5	41.8	41.0	41.0	40.3	40.3	38.8	38.1	35.9
77.5°	29.8	30.6	29.8	29.8	29.1	28.3	28.3	27.6	27.6	26.9	25.4
80°	20.1	20.1	20.9	20.1	19.4	20.1	19.4	18.6	18.6	17.9	16.4
82.5°	12.7	13.4	12.7	12.7	12.7	12.7	12.7	12.0	12.0	11.2	10.5
85°	7.4	7.4	7.4	7.4	7.4	7.4	7.4	6.8	6.8	6.8	5.9
87.5°	3.7	3.7	3.0	3.0	3.7	3.7	3.7	3.0	3.0	3.0	3.0
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°	571.4	571.4	571.4	571.4	571.4	571.4	571.4	571.4	571.4	571.4	571.4
2.5°	563.2	563.9	565.4	567.6	567.6	566.2	570.0	570.0	571.4	572.2	575.1
5°	557.3	558.7	561.7	565.4	566.2	565.4	570.7	572.9	575.1	577.4	581.8
7.5°	552.0	555.0	560.2	565.4	567.6	567.6	575.9	578.8	583.4	587.8	593.0
10°	549.0	553.5	561.0	569.2	571.4	573.7	583.4	589.3	595.2	601.3	608.7
12.5°	545.3	553.5	563.2	573.7	578.1	581.1	594.5	602.0	610.1	617.7	627.4
15°	544.6	554.3	567.0	580.3	586.4	590.8	605.7	616.2	625.9	635.5	645.3
17.5°	541.6	553.5	569.2	584.1	591.5	597.6	614.7	627.4	638.6	648.2	659.4
20°	537.8	551.2	568.5	584.9	593.0	599.0	617.7	629.6	642.3	651.2	661.7
22.5°	532.6	546.1	563.2	579.6	587.1	592.3	610.9	621.4	632.6	641.6	651.2
25°	523.6	536.3	551.2	564.7	572.2	576.6	593.0	602.7	610.9	619.9	628.9
27.5°	510.9	520.7	533.4	543.1	547.5	552.0	565.4	573.7	581.1	588.6	594.5
30°	488.6	496.0	505.0	513.3	517.7	518.5	531.1	535.6	541.6	546.8	551.2
32.5°	458.8	464.7	469.9	474.5	477.4	478.2	487.9	489.4	495.3	495.3	502.1
35°	420.7	423.7	427.4	427.4	429.7	427.4	434.2	435.6	436.4	437.1	442.4
37.5°	377.5	379.0	381.2	376.7	376.7	374.5	376.7	378.2	375.2	375.2	379.0
40°	336.4	333.5	330.4	326.0	323.7	319.3	319.3	315.6	313.3	311.8	312.5
42.5°	296.9	290.2	283.4	273.7	269.3	264.8	260.4	255.1	253.6	249.9	247.7
45°	258.8	249.2	240.2	224.5	215.5	211.1	201.4	191.0	184.2	182.8	176.8
47.5°	226.8	212.6	197.7	179.1	170.1	161.9	147.8	138.8	129.8	125.3	121.6
50°	198.4	185.7	166.4	146.2	135.1	126.8	111.2	100.7	91.0	84.3	79.9
52.5°	173.8	159.6	141.7	118.6	107.5	98.5	81.3	69.4	61.1	54.5	49.3
55°	146.2	135.1	117.1	95.5	84.3	73.8	58.9	46.2	38.1	33.6	29.8
57.5°	126.1	116.3	99.2	78.4	67.9	58.2	43.3	32.8	26.1	21.6	19.4
60°	112.6	103.6	88.7	68.6	58.9	50.0	35.9	26.1	20.1	16.4	14.9
62.5°	101.4	92.5	79.1	60.4	52.2	43.3	30.6	21.6	16.4	13.4	11.2
65°	88.7	80.6	68.6	52.2	44.7	37.3	26.1	17.9	13.4	10.5	9.0
67.5°	75.3	67.9	57.4	43.3	37.3	31.3	20.9	14.9	11.2	9.0	7.4
70°	61.1	55.2	45.5	35.1	29.8	24.6	17.1	12.0	8.2	6.8	5.9
72.5°	47.0	41.8	35.1	26.9	22.4	18.6	12.7	9.0	6.8	5.2	4.4
75°	33.6	29.8	24.6	19.4	16.4	13.4	9.7	6.8	4.4	3.7	3.0
77.5°	23.2	20.9	17.1	13.4	11.2	9.7	6.8	4.4	3.7	3.0	2.2
80°	14.9	13.4	11.2	8.2	6.8	5.9	3.7	3.0	2.2	1.5	1.5
82.5°	9.0	8.2	6.8	4.4	3.7	3.0	2.2	1.5	1.5	0.7	0.7
85°	5.2	4.4	3.0	2.2	2.2	1.5	1.5	0.7	0.7	0.0	0.0
87.5°	2.2	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°	571.4	571.4	571.4	571.4	571.4	571.4	571.4	571.4	571.4	571.4	571.4
2.5°	573.7	577.4	576.6	578.8	578.1	578.1	581.8	580.3	584.1	584.1	584.9
5°	581.8	587.1	587.1	590.8	590.1	591.5	595.2	595.2	599.8	601.3	601.3
7.5°	593.8	600.5	602.0	605.7	606.4	609.4	612.5	613.2	619.1	620.6	621.4
10°	610.1	618.4	620.6	624.4	625.9	628.9	632.6	634.1	641.6	642.3	645.3
12.5°	630.3	639.2	641.6	646.0	646.7	650.4	655.7	657.2	664.6	666.9	669.2
15°	649.7	658.0	661.7	666.1	666.9	671.4	675.8	677.3	684.1	687.0	689.3
17.5°	663.1	672.9	675.1	681.1	681.1	684.8	689.3	690.7	697.5	699.7	701.2
20°	666.1	675.1	678.0	682.6	683.3	685.6	689.3	690.7	696.8	697.5	699.7
22.5°	655.0	663.9	665.4	669.9	670.6	672.9	675.8	675.1	682.6	681.8	682.6
25°	631.1	639.2	639.2	644.5	643.8	646.0	647.5	646.7	653.4	653.4	653.4
27.5°	596.7	604.2	605.0	608.7	606.4	607.2	608.7	607.9	612.5	612.5	612.5
30°	554.3	560.2	558.0	561.0	559.5	561.0	559.5	558.7	560.2	561.7	561.0
32.5°	501.3	505.8	505.8	506.5	506.5	502.1	500.6	500.6	499.8	499.1	499.1
35°	440.1	443.9	442.4	442.4	441.6	437.1	434.9	433.4	435.6	431.2	434.2
37.5°	377.5	378.2	376.0	375.2	371.4	371.4	367.7	364.8	366.3	365.5	362.6
40°	308.8	311.8	307.3	305.9	308.1	305.1	301.4	297.6	300.6	296.9	298.4
42.5°	241.7	240.9	239.4	239.4	239.4	235.0	234.3	233.5	234.3	231.3	229.0
45°	174.6	172.3	170.1	170.1	167.1	165.6	165.6	163.4	159.6	159.6	155.2
47.5°	117.8	112.6	111.2	110.4	108.9	108.9	107.5	105.9	105.2	101.4	101.4
50°	76.8	71.6	70.1	69.4	70.1	68.6	67.2	65.7	64.2	63.5	62.0
52.5°	46.2	44.0	42.5	41.8	40.3	39.6	38.8	37.3	36.6	36.6	35.9
55°	27.6	25.4	22.4	22.4	22.4	21.6	20.9	20.1	19.4	19.4	18.6
57.5°	17.1	15.7	14.2	13.4	13.4	13.4	12.7	12.7	12.7	12.7	12.0
60°	12.7	11.2	10.5	10.5	10.5	9.7	9.7	9.7	9.7	9.0	9.0
62.5°	9.7	9.0	8.2	8.2	7.4	7.4	7.4	7.4	7.4	7.4	6.8
65°	8.2	6.8	6.8	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9
67.5°	5.9	5.2	5.2	5.2	5.2	4.4	4.4	4.4	4.4	4.4	4.4
70°	4.4	4.4	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7
72.5°	3.7	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
75°	3.0	3.0	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2
77.5°	2.2	2.2	2.2	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°	571.4	571.4	571.4	571.4	571.4	571.4	571.4	571.4
2.5°	584.9	588.6	584.9	584.9	587.1	586.4	587.8	585.6
5°	602.0	607.2	603.5	602.7	606.4	605.7	606.4	605.0
7.5°	622.8	628.1	624.4	624.4	628.1	627.4	629.6	628.1
10°	646.7	652.8	647.5	648.2	653.4	652.8	652.8	652.8
12.5°	671.4	677.3	674.3	674.3	678.0	678.8	679.5	678.8
15°	691.5	697.5	693.8	693.8	699.0	698.2	699.0	698.2
17.5°	703.4	709.5	704.9	704.9	709.5	709.5	710.2	710.9
20°	700.5	707.1	703.4	702.0	707.1	707.1	706.4	706.4
22.5°	683.3	689.3	686.3	684.8	688.5	687.0	686.3	687.0
25°	653.4	659.4	653.4	653.4	656.5	655.7	656.5	655.7
27.5°	613.2	617.7	611.7	610.9	614.0	612.5	611.7	614.0
30°	559.5	563.9	561.0	558.7	562.4	560.2	558.7	559.5
32.5°	498.3	501.3	499.8	496.0	498.3	496.8	496.0	496.8
35°	431.2	434.9	429.0	428.2	431.9	429.0	427.4	431.2
37.5°	361.8	366.3	361.1	361.8	359.6	360.3	358.9	361.1
40°	296.1	295.4	293.9	293.2	293.9	291.7	293.2	291.0
42.5°	225.3	226.8	226.0	225.3	226.0	223.1	221.6	224.5
45°	156.6	155.9	154.4	152.9	152.9	152.2	152.2	150.0
47.5°	100.7	99.9	97.0	97.7	99.2	97.7	95.5	98.5
50°	61.1	60.4	60.4	59.7	61.1	59.7	58.2	58.2
52.5°	34.3	34.3	33.6	33.6	33.6	33.6	32.8	32.0
55°	18.6	17.9	17.9	17.9	17.1	17.1	17.1	17.1
57.5°	12.0	12.0	12.0	12.0	12.0	12.0	11.2	11.2
60°	9.0	9.0	9.0	9.0	8.2	9.0	8.2	8.2
62.5°	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8
65°	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2
67.5°	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
70°	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7
72.5°	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
75°	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2
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)