

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: P843363

Luminaire Tested: **LD4C15DE010B2750 EU4C15B27 4LBSWLI**

Issue Date: 5/7/2024



Test Information

Test Method: LM-79-08
Report Number: P843363
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: LD4C15DE010B2750 EU4C15B27 4LBSWLI
Description: 4in Downlight with BioUp LEDs
Light Source: -
Ballast/Driver:

Summary

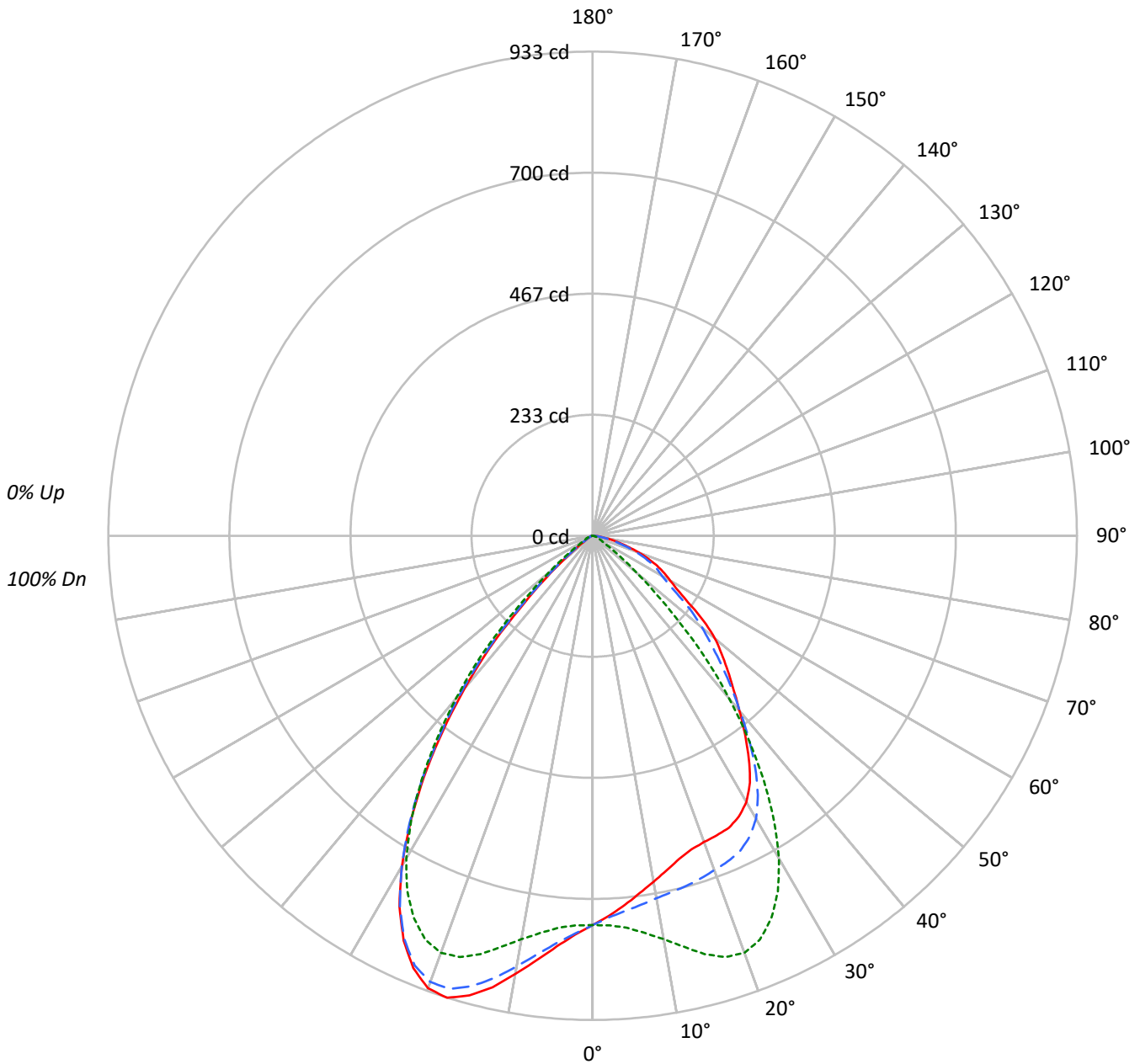
Lumens per Lamp: N/A
Luminaire Lumens: 1384.4 lumens
Efficiency: N/A
Efficacy: 81.4 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.3 / 1.19
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 17
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°	92177	92177	92177
5°	88052	93491	97955
10°	84430	98477	106910
15°	81959	106138	116605
20°	82077	111781	121259
25°	84165	110314	116698
30°	84051	101841	104195
35°	78738	86071	84887
40°	70532	65657	61263
45°	63989	41698	34192
50°	58790	21139	14602
55°	48257	9446	4819
60°	42360	5307	2654
65°	39854	3983	2006
70°	34124	3161	1760
75°	26012	2326	1424
80°	18678	1415	707
85°	13814	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	72.9	5.3
10°-20°	227.1	16.4
20°-30°	351.4	25.4
30°-40°	346.2	25.0
40°-50°	212.6	15.4
50°-60°	94.5	6.8
60°-70°	52.8	3.8
70°-80°	22.9	1.7
80°-90°	4.1	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°	651.4	47.0
0°-40°	997.6	72.1
0°-60°	1304.7	94.2
0°-90°	1384.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1384.4	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	750	750	750	750	750	
5°	714	726	758	787	794	67
15°	644	698	834	898	917	183
25°	621	671	814	858	861	285
35°	525	546	574	572	566	326
45°	368	350	240	210	197	285
55°	225	204	44	26	22	207
65°	137	123	14	8	7	134
75°	55	47	5	3	3	60
85°	10	8	0	0	0	12
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°	750.3	750.3	750.3	750.3	750.3	750.3	750.3	750.3	750.3	750.3	750.3
2.5°	732.6	732.6	732.6	732.6	734.5	731.7	734.5	734.5	737.5	738.4	735.6
5°	714.0	713.1	714.0	714.0	715.9	715.0	717.9	719.8	723.8	725.7	725.7
7.5°	694.4	694.4	694.4	696.3	699.3	698.4	701.2	704.2	710.1	714.0	717.0
10°	676.8	675.8	678.7	679.7	682.6	682.6	687.6	690.5	697.3	705.2	709.1
12.5°	660.1	659.1	661.1	664.1	669.0	669.0	672.9	677.7	687.6	696.3	703.2
15°	644.4	645.5	648.3	650.3	656.2	656.2	661.1	666.9	677.7	688.5	698.4
17.5°	633.6	634.7	636.6	639.6	645.5	645.5	650.3	657.2	669.0	680.7	692.4
20°	627.8	628.8	630.8	633.6	638.6	639.6	643.5	651.3	662.1	674.8	685.6
22.5°	624.8	626.9	628.8	630.8	635.6	635.6	640.5	646.4	657.2	669.9	679.7
25°	620.9	622.8	623.9	626.9	630.8	630.8	633.6	640.5	650.3	661.1	670.9
27.5°	610.1	612.2	613.1	616.1	620.0	618.9	622.8	627.8	636.6	646.4	654.3
30°	592.5	593.5	595.4	596.4	599.4	599.4	602.3	607.2	613.1	621.9	629.7
32.5°	564.1	566.0	567.1	568.1	571.0	570.0	571.0	573.9	579.8	587.6	592.5
35°	525.0	528.9	528.9	530.8	531.8	530.8	530.8	534.7	537.7	543.5	546.5
37.5°	481.9	484.8	483.9	485.8	486.8	483.9	485.8	486.8	490.7	493.6	494.7
40°	439.8	440.7	440.7	440.7	440.7	439.8	440.7	441.7	444.6	444.6	441.7
42.5°	401.6	402.5	402.5	400.5	402.5	401.6	401.6	401.6	401.6	397.7	394.7
45°	368.3	369.2	369.2	368.3	368.3	366.3	365.3	364.4	361.4	356.5	349.7
47.5°	336.9	338.9	339.8	337.9	336.9	335.0	335.0	329.0	325.1	319.3	309.5
50°	307.6	309.5	309.5	307.6	307.6	304.6	301.6	299.7	293.8	286.9	275.2
52.5°	270.3	273.3	273.3	272.2	272.2	268.3	267.4	263.5	258.6	250.8	240.9
55°	225.3	229.2	228.2	227.3	225.3	225.3	225.3	222.3	219.4	213.5	203.7
57.5°	192.9	194.0	194.0	192.9	192.9	191.0	191.0	188.0	187.1	181.2	173.3
60°	172.4	172.4	173.3	172.4	171.4	170.4	169.4	167.5	164.6	160.7	154.7
62.5°	155.7	156.7	156.7	155.7	154.7	153.8	152.8	150.8	148.9	146.0	140.0
65°	137.1	139.1	138.1	137.1	136.1	135.2	135.2	133.2	131.3	129.2	123.4
67.5°	116.6	117.5	118.5	116.6	116.6	115.6	115.6	113.6	112.6	108.7	104.8
70°	95.0	95.9	95.9	95.0	95.0	94.0	94.0	93.1	92.0	89.2	85.2
72.5°	74.5	75.4	74.5	73.4	73.4	73.4	72.4	71.5	70.5	68.5	65.6
75°	54.8	54.8	55.8	54.8	53.8	53.8	52.9	52.9	50.9	49.9	47.0
77.5°	39.1	40.1	39.1	39.1	38.2	37.2	37.2	36.2	36.2	35.2	33.3
80°	26.4	26.4	27.4	26.4	25.5	26.4	25.5	24.4	24.4	23.5	21.6
82.5°	16.6	17.7	16.6	16.6	16.6	16.6	16.6	15.7	15.7	14.7	13.7
85°	9.8	9.8	9.8	9.8	9.8	9.8	9.8	8.8	8.8	8.8	7.8
87.5°	4.9	4.9	3.9	3.9	4.9	4.9	4.9	3.9	3.9	3.9	3.9
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°	750.3	750.3	750.3	750.3	750.3	750.3	750.3	750.3	750.3	750.3	750.3
2.5°	739.5	740.4	742.4	745.3	745.3	743.4	748.3	748.3	750.3	751.2	755.2
5°	731.7	733.6	737.5	742.4	743.4	742.4	749.2	752.2	755.2	758.1	763.9
7.5°	724.8	728.7	735.6	742.4	745.3	745.3	756.1	760.0	765.9	771.8	778.6
10°	720.9	726.7	736.5	747.3	750.3	753.1	765.9	773.8	781.6	789.4	799.1
12.5°	715.9	726.7	739.5	753.1	759.1	763.0	780.6	790.4	801.2	811.0	823.7
15°	715.0	727.8	744.4	762.0	769.9	775.7	795.2	809.0	821.7	834.5	847.2
17.5°	711.0	726.7	747.3	766.9	776.7	784.6	807.0	823.7	838.4	851.1	865.8
20°	706.2	723.8	746.4	767.8	778.6	786.5	811.0	826.6	843.3	855.0	868.7
22.5°	699.3	717.0	739.5	761.0	770.8	777.7	802.1	815.9	830.6	842.3	855.0
25°	687.6	704.2	723.8	741.4	751.2	757.1	778.6	791.3	802.1	813.8	825.6
27.5°	670.9	683.7	700.3	713.1	718.9	724.8	742.4	753.1	763.0	772.8	780.6
30°	641.5	651.3	663.0	673.8	679.7	680.7	697.3	703.2	711.0	717.9	723.8
32.5°	602.3	610.1	617.0	622.8	626.9	627.8	640.5	642.5	650.3	650.3	659.1
35°	552.4	556.3	561.2	561.2	564.1	561.2	570.0	572.0	572.9	573.9	580.7
37.5°	495.6	497.5	500.5	494.7	494.7	491.7	494.7	496.6	492.6	492.6	497.5
40°	441.7	437.8	433.8	428.0	425.1	419.1	419.1	414.3	411.3	409.4	410.4
42.5°	389.8	381.0	372.2	359.4	353.6	347.6	341.8	335.0	332.9	328.1	325.1
45°	339.8	327.1	315.4	294.8	283.0	277.2	264.4	250.8	241.9	240.0	232.2
47.5°	297.7	279.1	259.5	235.1	223.4	212.6	194.0	182.2	170.4	164.6	159.6
50°	260.5	243.9	218.4	192.0	177.3	166.5	146.0	132.2	119.5	110.6	104.8
52.5°	228.2	209.6	186.1	155.7	141.1	129.2	106.7	91.1	80.3	71.5	64.6
55°	192.0	177.3	153.8	125.3	110.6	97.0	77.3	60.7	49.9	44.1	39.1
57.5°	165.5	152.8	130.3	102.8	89.2	76.4	56.8	43.0	34.3	28.3	25.5
60°	147.9	136.1	116.6	90.1	77.3	65.6	47.0	34.3	26.4	21.6	19.6
62.5°	133.2	121.4	103.9	79.3	68.5	56.8	40.1	28.3	21.6	17.7	14.7
65°	116.6	105.8	90.1	68.5	58.7	49.0	34.3	23.5	17.7	13.7	11.7
67.5°	98.9	89.2	75.4	56.8	49.0	41.1	27.4	19.6	14.7	11.7	9.8
70°	80.3	72.4	59.8	46.0	39.1	32.3	22.5	15.7	10.8	8.8	7.8
72.5°	61.7	54.8	46.0	35.2	29.4	24.4	16.6	11.7	8.8	6.9	5.9
75°	44.1	39.1	32.3	25.5	21.6	17.7	12.7	8.8	5.9	4.9	3.9
77.5°	30.4	27.4	22.5	17.7	14.7	12.7	8.8	5.9	4.9	3.9	3.0
80°	19.6	17.7	14.7	10.8	8.8	7.8	4.9	3.9	3.0	2.0	2.0
82.5°	11.7	10.8	8.8	5.9	4.9	3.9	3.0	2.0	2.0	1.0	1.0
85°	6.9	5.9	3.9	3.0	3.0	2.0	2.0	1.0	1.0	0.0	0.0
87.5°	3.0	2.0	2.0	1.0	1.0	1.0	1.0	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):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	750.3	750.3	750.3	750.3	750.3	750.3	750.3	750.3	750.3	750.3	750.3
2.5°	753.1	758.1	757.1	760.0	759.1	759.1	763.9	762.0	766.9	766.9	767.8
5°	763.9	770.8	770.8	775.7	774.7	776.7	781.6	781.6	787.4	789.4	789.4
7.5°	779.6	788.5	790.4	795.2	796.3	800.2	804.1	805.1	812.9	814.9	815.9
10°	801.2	811.9	814.9	819.8	821.7	825.6	830.6	832.5	842.3	843.3	847.2
12.5°	827.6	839.3	842.3	848.1	849.2	854.0	860.9	862.8	872.7	875.6	878.5
15°	853.1	863.8	868.7	874.6	875.6	881.4	887.4	889.3	898.1	902.1	905.0
17.5°	870.6	883.4	886.4	894.2	894.2	899.1	905.0	906.9	915.7	918.7	920.7
20°	874.6	886.4	890.3	896.1	897.1	900.0	905.0	906.9	914.7	915.7	918.7
22.5°	859.9	871.7	873.6	879.5	880.5	883.4	887.4	886.4	896.1	895.2	896.1
25°	828.6	839.3	839.3	846.2	845.3	848.1	850.1	849.2	858.0	858.0	858.0
27.5°	783.5	793.3	794.3	799.1	796.3	797.2	799.1	798.2	804.1	804.1	804.1
30°	727.8	735.6	732.6	736.5	734.5	736.5	734.5	733.6	735.6	737.5	736.5
32.5°	658.2	664.1	664.1	665.0	665.0	659.1	657.2	657.2	656.2	655.2	655.2
35°	577.8	582.8	580.7	580.7	579.8	573.9	571.0	569.0	572.0	566.0	570.0
37.5°	495.6	496.6	493.6	492.6	487.8	487.8	482.9	478.9	480.9	480.0	476.0
40°	405.5	409.4	403.5	401.6	404.5	400.5	395.7	390.8	394.7	389.8	391.7
42.5°	317.3	316.3	314.3	314.3	314.3	308.5	307.6	306.5	307.6	303.6	300.7
45°	229.2	226.2	223.4	223.4	219.4	217.4	217.4	214.5	209.6	209.6	203.7
47.5°	154.7	147.9	146.0	145.0	143.0	143.0	141.1	139.1	138.1	133.2	133.2
50°	100.9	94.0	92.0	91.1	92.0	90.1	88.1	86.2	84.2	83.2	81.3
52.5°	60.7	57.7	55.8	54.8	52.9	51.9	50.9	49.0	48.0	48.0	47.0
55°	36.2	33.3	29.4	29.4	29.4	28.3	27.4	26.4	25.5	25.5	24.4
57.5°	22.5	20.5	18.6	17.7	17.7	17.7	16.6	16.6	16.6	16.6	15.7
60°	16.6	14.7	13.7	13.7	13.7	12.7	12.7	12.7	12.7	11.7	11.7
62.5°	12.7	11.7	10.8	10.8	9.8	9.8	9.8	9.8	9.8	9.8	8.8
65°	10.8	8.8	8.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8
67.5°	7.8	6.9	6.9	6.9	6.9	5.9	5.9	5.9	5.9	5.9	5.9
70°	5.9	5.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
72.5°	4.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9
75°	3.9	3.9	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
77.5°	3.0	3.0	3.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
80°	2.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
82.5°	1.0	1.0	1.0	1.0	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	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°	750.3	750.3	750.3	750.3	750.3	750.3	750.3	750.3
2.5°	767.8	772.8	767.8	767.8	770.8	769.9	771.8	768.9
5°	790.4	797.2	792.4	791.3	796.3	795.2	796.3	794.3
7.5°	817.8	824.6	819.8	819.8	824.6	823.7	826.6	824.6
10°	849.2	857.0	850.1	851.1	858.0	857.0	857.0	857.0
12.5°	881.4	889.3	885.3	885.3	890.3	891.3	892.2	891.3
15°	907.9	915.7	910.8	910.8	917.7	916.8	917.7	916.8
17.5°	923.5	931.5	925.5	925.5	931.5	931.5	932.4	933.4
20°	919.6	928.5	923.5	921.6	928.5	928.5	927.5	927.5
22.5°	897.1	905.0	901.0	899.1	904.0	902.1	901.0	902.1
25°	858.0	865.8	858.0	858.0	861.9	860.9	861.9	860.9
27.5°	805.1	811.0	803.1	802.1	806.0	804.1	803.1	806.0
30°	734.5	740.4	736.5	733.6	738.4	735.6	733.6	734.5
32.5°	654.3	658.2	656.2	651.3	654.3	652.2	651.3	652.2
35°	566.0	571.0	563.2	562.1	567.1	563.2	561.2	566.0
37.5°	475.0	480.9	474.0	475.0	472.1	473.1	471.1	474.0
40°	388.8	387.8	385.9	384.9	385.9	383.0	384.9	382.0
42.5°	295.7	297.7	296.8	295.7	296.8	292.9	290.8	294.8
45°	205.7	204.8	202.7	200.7	200.7	199.8	199.8	196.8
47.5°	132.2	131.3	127.3	128.3	130.3	128.3	125.3	129.2
50°	80.3	79.3	79.3	78.4	80.3	78.4	76.4	76.4
52.5°	45.1	45.1	44.1	44.1	44.1	44.1	43.0	42.1
55°	24.4	23.5	23.5	23.5	22.5	22.5	22.5	22.5
57.5°	15.7	15.7	15.7	15.7	15.7	15.7	14.7	14.7
60°	11.7	11.7	11.7	11.7	10.8	11.7	10.8	10.8
62.5°	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8
65°	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9
67.5°	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9
70°	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
72.5°	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9
75°	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
77.5°	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
80°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
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)