

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: P843426

Luminaire Tested: **LD4C20DE010B2750 EU4C20B27 4LBLWWH**

Issue Date: 5/7/2024

Test Information

Test Method: LM-79-08
Report Number: P843426
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: LD4C20DE010B2750 EU4C20B27 4LBLWWH
Description: 4in Downlight with BioUp LEDs
Light Source: -
Ballast/Driver:

Summary

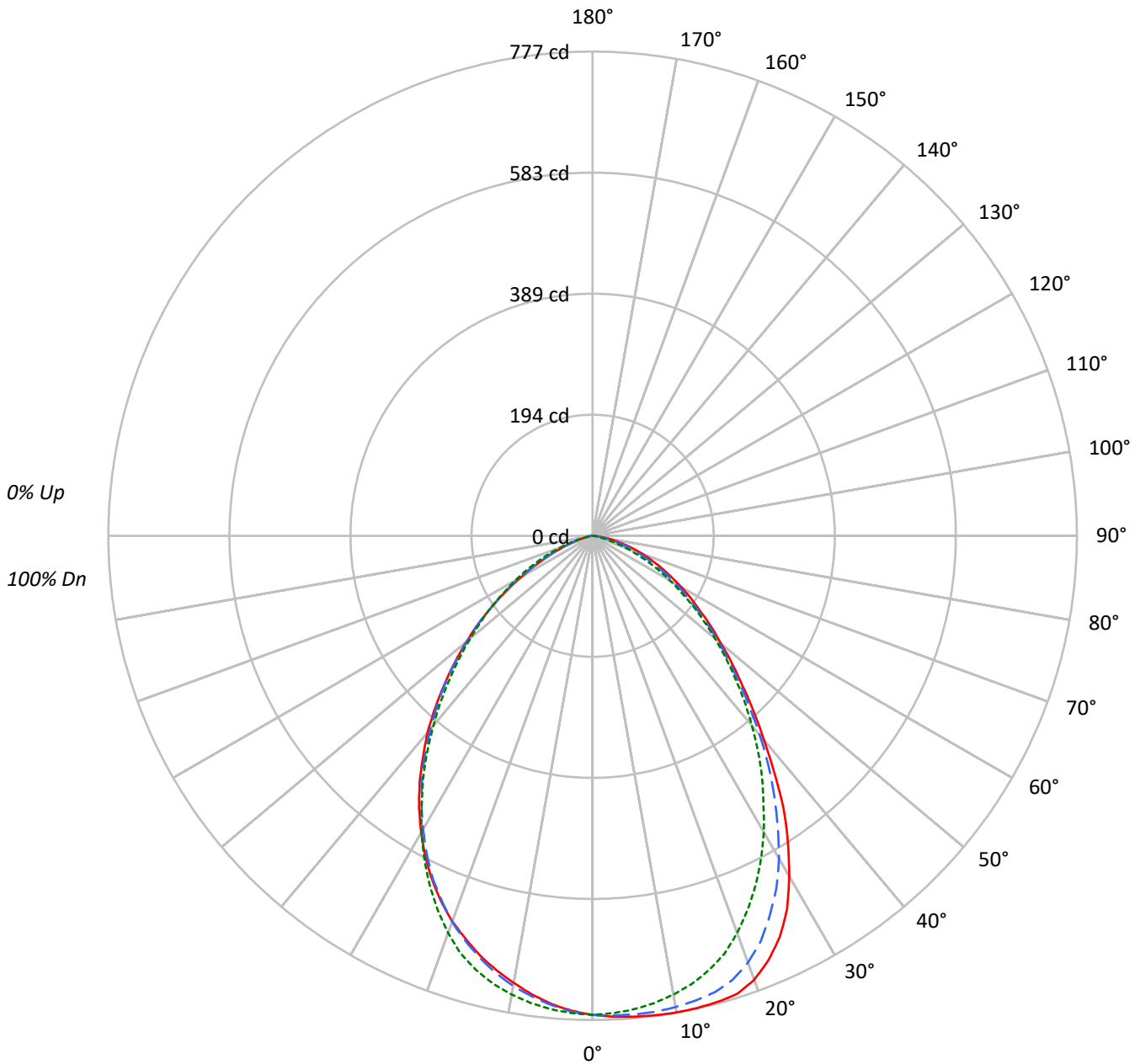
Lumens per Lamp: N/A
Luminaire Lumens: 1449.0 lumens
Efficiency: N/A
Efficacy: 66.5 lumens/watt
Spacing Criteria (0/90/45): 1.15 / 1.09 / 1.17
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 21.8
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	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°	94462	94462	94462
5°	95513	94058	93035
10°	96905	93250	90892
15°	98507	91766	88726
20°	99126	88640	86104
25°	96284	83854	82579
30°	89485	77937	77994
35°	80102	71044	72559
40°	68576	63684	66010
45°	59037	56153	58273
50°	51317	48890	50362
55°	45172	42067	41681
60°	40173	35087	32335
65°	35232	28110	23401
70°	30281	19864	15841
75°	24540	11487	9304
80°	17616	5023	4669
85°	6766	2114	2114



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	72.5	5.0
10°-20°	205.1	14.2
20°-30°	292.9	20.2
30°-40°	306.4	21.1
40°-50°	256.7	17.7
50°-60°	179.7	12.4
60°-70°	97.8	6.8
70°-80°	34.0	2.3
80°-90°	3.9	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°	570.5	39.4
0°-40°	876.9	60.5
0°-60°	1313.3	90.6
0°-90°	1449.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1449.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	769	769	769	769	769	
5°	774	771	763	756	754	74
15°	774	758	722	701	698	219
25°	710	672	619	607	609	324
35°	534	508	474	477	484	331
45°	340	332	323	334	335	264
55°	211	204	196	196	195	191
65°	121	111	97	81	80	121
75°	52	42	24	20	20	56
85°	5	3	2	2	2	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°	768.9	768.9	768.9	768.9	768.9	768.9	768.9	768.9	768.9	768.9	768.9
2.5°	772.4	771.5	771.9	771.9	771.9	771.5	771.9	771.5	771.5	771.2	770.6
5°	774.5	773.9	773.9	773.9	773.6	773.2	773.2	773.0	772.4	772.1	770.9
7.5°	776.0	775.4	775.4	775.0	774.7	774.5	774.2	773.2	772.4	771.9	770.4
10°	776.8	776.0	776.0	775.4	774.7	774.5	773.9	772.7	771.5	770.1	767.9
12.5°	776.2	775.4	775.0	774.5	773.2	772.7	772.1	770.6	768.6	766.5	763.8
15°	774.5	773.9	773.2	772.4	770.9	770.1	769.4	767.1	764.5	761.5	758.2
17.5°	770.9	770.1	768.9	767.6	765.6	764.7	763.2	760.2	756.4	752.3	747.2
20°	758.2	757.6	756.4	754.4	751.1	750.0	747.9	744.0	739.0	734.0	728.6
22.5°	737.2	736.3	734.5	732.7	729.8	727.8	726.0	720.7	715.1	709.7	704.7
25°	710.3	709.5	707.0	704.7	701.7	698.1	696.5	692.2	686.6	679.8	672.4
27.5°	675.7	672.8	671.8	669.2	664.7	663.6	660.9	655.6	650.2	644.3	638.2
30°	630.8	630.8	629.0	627.8	623.7	622.5	619.6	613.9	610.9	602.6	597.9
32.5°	583.2	582.5	581.1	580.2	577.8	575.8	572.8	569.9	563.3	559.2	552.7
35°	534.1	530.5	531.1	529.3	527.9	525.4	525.2	521.9	516.0	513.7	507.8
37.5°	478.2	476.7	478.8	476.1	474.7	474.9	472.6	470.4	468.1	464.0	462.8
40°	427.6	428.8	428.4	426.1	427.3	425.8	423.5	421.4	420.2	417.6	416.7
42.5°	382.3	380.5	380.0	380.0	380.3	380.3	379.1	377.6	377.6	374.9	372.3
45°	339.8	339.8	339.2	341.0	338.3	338.3	337.4	337.1	335.9	335.4	332.1
47.5°	303.1	302.8	302.5	302.2	302.0	302.0	300.2	298.7	298.4	296.6	294.9
50°	268.5	270.3	269.7	268.2	267.6	267.9	266.7	265.9	265.6	262.6	262.9
52.5°	239.6	239.2	239.9	238.9	237.4	237.8	236.6	235.4	234.2	232.7	231.5
55°	210.9	212.4	211.7	210.9	210.6	209.9	209.1	207.6	207.3	204.0	203.7
57.5°	186.9	186.6	186.0	184.6	184.2	183.4	183.4	182.1	180.4	178.6	177.2
60°	163.5	163.5	162.7	162.3	161.2	160.9	160.5	159.4	157.3	155.8	153.5
62.5°	141.1	141.6	141.1	140.1	139.3	138.1	137.5	136.6	134.8	133.4	131.3
65°	121.2	121.0	120.7	119.5	119.2	118.0	117.7	115.9	114.1	113.0	110.6
67.5°	102.3	101.4	101.4	100.8	100.3	99.3	98.8	97.0	95.0	93.7	91.4
70°	84.3	83.7	83.7	83.7	82.2	81.3	81.0	80.2	77.2	76.0	73.6
72.5°	67.7	67.4	67.2	66.2	65.4	65.4	64.2	62.4	60.9	59.4	57.6
75°	51.7	52.4	51.7	50.6	50.2	49.7	48.8	47.3	45.8	44.1	42.0
77.5°	37.9	37.2	36.7	36.7	36.1	34.9	34.6	33.4	31.6	30.5	28.3
80°	24.9	24.5	23.9	23.4	23.1	22.7	22.4	21.3	19.6	18.6	16.8
82.5°	13.6	13.3	13.3	13.0	12.2	12.2	11.8	10.7	9.7	9.2	8.2
85°	4.8	4.8	4.8	4.4	4.4	4.4	4.1	3.8	3.6	3.3	2.6
87.5°	0.6	0.3	0.6	0.3	0.6	0.3	0.3	0.3	0.3	0.3	0.3
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°	768.9	768.9	768.9	768.9	768.9	768.9	768.9	768.9	768.9	768.9	768.9
2.5°	770.1	769.4	769.1	768.9	768.6	768.3	767.9	767.4	767.1	766.8	766.1
5°	770.1	768.9	768.3	767.4	766.8	766.1	765.3	764.5	763.5	762.7	761.7
7.5°	768.9	767.1	765.9	764.1	763.5	762.7	760.9	759.7	758.2	756.4	754.4
10°	765.9	763.8	761.5	759.1	758.2	756.7	754.4	752.3	750.0	747.5	745.5
12.5°	761.2	757.9	754.9	751.7	750.0	748.5	745.2	742.2	739.3	736.6	733.0
15°	754.1	750.2	746.4	741.9	739.9	738.1	733.4	729.8	725.1	721.5	718.0
17.5°	742.6	736.6	731.9	726.3	723.3	721.2	717.1	711.5	707.0	703.2	699.1
20°	722.7	717.1	710.6	704.4	701.1	698.5	692.5	686.6	682.2	678.0	673.6
22.5°	696.7	689.6	684.8	677.2	674.6	671.3	664.2	658.8	653.8	649.7	645.6
25°	665.0	658.8	652.3	645.3	642.0	638.2	632.3	626.6	623.4	618.6	613.6
27.5°	628.7	623.7	615.6	609.5	606.2	603.3	597.7	592.6	587.8	584.7	579.9
30°	590.3	584.3	577.3	570.7	568.9	565.4	560.3	556.5	551.6	549.4	547.3
32.5°	548.0	541.2	535.8	531.7	528.2	525.2	522.6	516.3	515.4	510.1	509.5
35°	501.8	498.9	493.8	490.3	487.4	485.2	480.8	477.8	474.7	473.7	471.7
37.5°	458.4	454.8	450.0	446.9	444.7	444.4	441.2	439.4	437.0	435.9	433.5
40°	412.8	411.3	407.2	406.6	403.4	403.1	401.3	399.3	397.1	397.1	397.5
42.5°	370.8	369.0	367.3	365.2	363.4	363.4	362.6	361.9	361.4	360.4	361.9
45°	331.5	329.1	328.0	325.9	326.8	325.0	324.4	324.4	323.5	323.2	325.3
47.5°	294.9	292.1	291.0	290.4	290.4	290.6	288.0	288.9	288.6	289.2	290.1
50°	261.4	259.0	257.3	257.3	257.5	256.4	255.2	256.1	255.2	255.8	257.9
52.5°	230.4	228.0	227.1	227.1	225.4	225.1	225.6	224.4	224.7	225.1	226.2
55°	201.7	200.2	198.7	197.2	197.6	196.9	195.8	195.5	196.1	196.4	197.9
57.5°	176.0	173.9	171.8	171.2	170.6	170.6	169.1	168.9	169.4	168.0	168.0
60°	151.5	150.2	147.5	146.7	146.7	145.2	144.0	144.6	143.1	142.8	143.1
62.5°	128.6	127.8	126.0	124.2	123.6	123.0	121.5	121.0	120.4	119.2	117.4
65°	108.8	106.7	104.7	103.5	102.6	101.1	100.3	99.1	97.3	96.7	95.0
67.5°	89.1	86.9	84.8	84.0	83.1	82.2	80.7	79.2	77.2	74.8	72.8
70°	71.6	68.9	67.7	65.4	64.7	63.6	61.6	60.1	58.0	55.3	53.2
72.5°	54.7	52.9	51.2	49.1	47.6	46.7	44.9	42.6	40.2	38.7	36.7
75°	39.3	38.4	36.1	33.7	33.1	31.9	29.8	28.3	26.7	24.2	22.4
77.5°	26.7	24.9	23.4	21.3	20.7	19.6	18.3	16.8	15.7	14.2	13.0
80°	15.7	14.2	13.3	11.8	11.2	10.7	9.7	8.6	7.7	7.1	6.8
82.5°	7.7	6.6	6.2	5.3	5.1	4.8	4.1	3.8	3.3	3.3	3.3
85°	2.6	2.1	2.1	1.8	1.5	1.5	1.5	1.5	1.5	1.5	1.5
87.5°	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.6	0.3
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°	768.9	768.9	768.9	768.9	768.9	768.9	768.9	768.9	768.9	768.9	768.9
2.5°	765.9	765.6	765.3	765.0	765.0	764.7	764.7	764.5	764.5	764.1	764.1
5°	760.5	759.7	759.1	758.5	758.5	757.6	757.1	756.4	756.1	756.1	755.6
7.5°	753.1	752.0	750.8	750.0	749.7	748.2	747.0	747.0	745.7	745.2	744.6
10°	743.4	741.4	739.6	738.7	737.5	736.6	735.2	734.2	733.4	731.9	731.6
12.5°	730.1	728.6	726.0	724.8	724.2	722.5	720.0	718.9	718.6	717.4	716.5
15°	715.1	711.8	709.5	708.0	708.0	705.0	703.7	702.1	700.8	699.9	699.6
17.5°	695.5	692.2	689.9	687.8	687.3	684.8	683.1	682.5	681.0	681.6	680.2
20°	670.3	667.7	666.0	663.2	663.2	661.8	661.2	659.8	659.1	658.6	659.1
22.5°	643.5	640.2	637.2	637.0	637.0	634.9	634.6	634.3	633.1	634.1	633.7
25°	611.8	609.5	607.7	607.4	607.4	606.2	605.1	605.6	606.6	606.2	607.1
27.5°	579.1	576.6	576.1	575.8	575.1	574.8	575.5	575.5	576.3	577.6	578.7
30°	543.5	542.9	542.0	541.7	541.2	542.7	543.2	544.2	543.8	545.6	546.8
32.5°	508.0	506.8	506.6	507.1	508.0	507.8	509.5	510.1	510.7	512.7	513.7
35°	472.2	471.9	471.4	471.4	471.7	474.0	474.0	476.1	477.3	477.8	480.3
37.5°	433.8	435.0	435.5	436.5	436.8	437.6	438.3	440.3	441.5	442.7	443.9
40°	398.6	398.0	400.7	398.9	399.5	402.2	403.4	403.1	404.9	406.6	407.8
42.5°	361.1	361.9	362.6	363.1	364.6	364.9	366.4	368.5	369.0	371.1	371.8
45°	324.7	325.0	326.2	327.3	328.3	330.6	331.3	332.1	333.9	333.9	334.7
47.5°	290.4	291.6	291.6	293.4	294.9	294.6	296.6	297.2	296.9	298.4	299.0
50°	257.5	259.3	259.0	260.2	260.8	261.1	262.9	263.5	262.3	263.8	264.1
52.5°	226.2	227.1	228.2	228.6	228.0	229.5	228.9	230.0	229.7	231.0	229.7
55°	197.6	197.2	197.2	197.9	197.2	197.9	198.4	197.2	196.4	197.6	197.2
57.5°	168.9	168.9	168.3	169.1	168.3	167.4	167.1	166.2	165.3	165.3	165.0
60°	141.9	141.3	140.1	139.8	139.8	138.4	137.8	136.6	136.6	135.5	134.2
62.5°	116.8	115.3	114.4	114.4	113.8	112.3	109.7	108.0	107.3	105.6	105.2
65°	93.2	91.7	90.7	89.1	87.6	86.9	84.3	82.2	81.3	79.5	79.9
67.5°	71.6	69.2	66.5	65.4	64.5	62.4	61.6	60.1	59.1	59.1	59.1
70°	51.5	49.4	46.7	45.8	45.3	43.5	42.6	42.3	43.2	42.8	43.2
72.5°	34.6	32.6	31.3	30.8	30.1	29.3	29.8	30.1	29.6	29.8	30.1
75°	21.0	20.4	19.6	19.2	19.2	19.6	19.2	19.2	19.6	19.6	19.8
77.5°	12.2	11.5	11.5	11.2	11.8	11.5	11.5	11.5	11.8	11.8	11.8
80°	6.6	6.6	6.6	6.6	6.8	6.6	6.8	6.8	6.8	6.8	6.8
82.5°	3.3	3.3	3.3	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.3
85°	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
87.5°	0.3	0.6	0.6	0.6	0.6	0.6	0.3	0.3	0.3	0.3	0.3
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°	768.9	768.9	768.9	768.9	768.9	768.9	768.9	768.9
2.5°	763.5	763.5	763.5	763.0	763.2	763.2	763.0	763.0
5°	755.3	754.9	754.4	754.4	753.8	754.4	754.1	754.4
7.5°	744.0	744.0	743.1	743.1	742.9	742.6	742.2	742.6
10°	730.7	730.7	730.1	729.8	730.1	728.9	728.9	728.6
12.5°	715.9	715.3	714.7	715.1	714.7	713.9	713.6	713.9
15°	698.8	697.9	698.1	697.3	697.3	697.0	697.6	697.6
17.5°	679.8	679.2	678.7	679.0	678.4	678.7	678.4	678.0
20°	658.8	658.6	658.6	657.3	657.6	657.3	657.6	658.6
22.5°	634.6	634.3	634.6	633.7	634.3	634.3	635.2	635.2
25°	608.0	607.7	608.2	608.6	608.9	609.7	608.9	609.2
27.5°	578.4	579.3	580.2	580.5	581.7	580.7	580.2	581.1
30°	548.6	548.6	548.3	549.4	550.3	551.2	549.8	549.8
32.5°	514.2	515.7	515.7	516.0	516.9	516.9	516.9	518.1
35°	481.4	482.3	482.6	481.4	482.0	481.8	483.8	483.8
37.5°	444.7	444.7	445.1	447.2	447.2	446.2	446.9	446.9
40°	409.8	410.2	409.0	409.5	411.0	410.5	411.0	411.6
42.5°	371.8	373.8	372.6	373.2	372.9	373.2	373.5	373.5
45°	335.4	335.9	335.9	336.2	336.9	337.4	335.6	335.4
47.5°	299.8	300.2	301.0	299.5	301.3	299.5	301.3	299.3
50°	264.1	265.3	264.4	264.9	264.1	264.1	263.8	263.5
52.5°	230.0	229.7	229.7	229.5	229.5	230.0	229.5	230.4
55°	196.1	196.4	195.8	195.5	195.1	196.1	195.1	194.6
57.5°	163.8	164.5	163.2	163.8	161.7	162.7	163.0	163.2
60°	134.0	133.1	133.1	131.9	131.9	132.7	131.6	131.6
62.5°	103.8	104.4	103.5	104.7	104.7	105.9	105.2	105.9
65°	79.5	79.9	80.2	80.2	80.2	81.9	81.3	80.5
67.5°	60.1	60.3	60.6	60.3	61.2	60.6	60.6	60.9
70°	43.5	43.8	44.1	44.1	43.8	44.1	44.1	44.1
72.5°	30.1	30.5	30.1	30.5	30.8	30.5	30.5	30.8
75°	19.8	19.8	19.6	19.6	19.6	19.6	19.8	19.6
77.5°	11.5	11.8	11.5	11.8	11.8	11.8	11.8	11.8
80°	6.8	6.8	6.8	6.6	6.8	6.8	6.8	6.6
82.5°	3.6	3.6	3.3	3.3	3.6	3.6	3.6	3.6
85°	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
87.5°	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
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)