

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: P843440

Luminaire Tested: **LD4C20DE010B2750 EU4C20B30 4LBLWWH**

Issue Date: 5/7/2024



Test Information

Test Method: LM-79-08
Report Number: P843440
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 EU4C20B30 4LBLWWH
Description: 4in Downlight with BioUp LEDs
Light Source: -
Ballast/Driver:

Summary

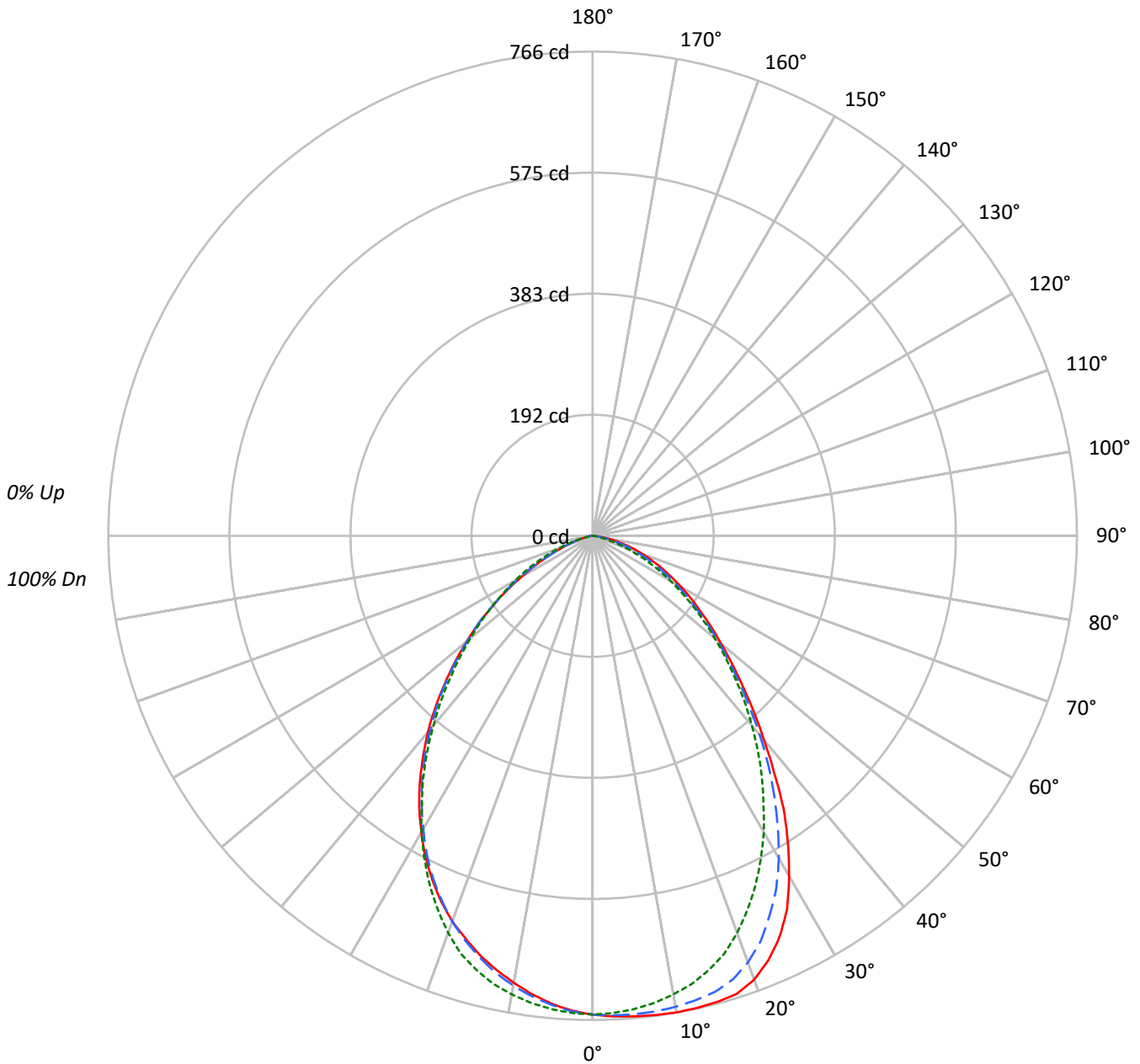
Lumens per Lamp: N/A
Luminaire Lumens: 1427.8 lumens
Efficiency: N/A
Efficacy: 65.5 lumens/watt
Spacing Criteria (0/90/45): 1.15 / 1.09 / 1.17
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

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°	93074	93074	93074
5°	94120	92689	91666
10°	95495	91890	89570
15°	97069	90430	87429
20°	97674	87359	84849
25°	94874	82634	81373
30°	88180	76802	76845
35°	78933	70009	71494
40°	67582	62754	65048
45°	58169	55337	57404
50°	50572	48164	49616
55°	44487	41424	41060
60°	39608	34596	31868
65°	34738	27703	23023
70°	29814	19576	15625
75°	24208	11345	9114
80°	17263	4952	4599
85°	6625	2114	2114



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	71.4	5.0
10°-20°	202.1	14.2
20°-30°	288.6	20.2
30°-40°	301.9	21.1
40°-50°	253.0	17.7
50°-60°	177.0	12.4
60°-70°	96.4	6.8
70°-80°	33.5	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°	562.1	39.4
0°-40°	864.1	60.5
0°-60°	1294.1	90.6
0°-90°	1427.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1427.8	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	758	758	758	758	758	
5°	763	760	752	745	743	73
15°	763	747	711	691	687	216
25°	700	663	610	598	600	320
35°	526	500	467	470	477	326
45°	335	327	318	329	330	260
55°	208	201	193	193	192	188
65°	120	109	95	80	79	119
75°	51	41	24	19	19	55
85°	5	3	2	2	2	8
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°	757.6	757.6	757.6	757.6	757.6	757.6	757.6	757.6	757.6	757.6	757.6
2.5°	761.1	760.2	760.5	760.5	760.5	760.2	760.5	760.2	760.2	759.9	759.4
5°	763.2	762.6	762.6	762.6	762.3	762.0	762.0	761.7	761.1	760.9	759.7
7.5°	764.7	764.0	764.0	763.7	763.5	763.2	762.9	762.0	761.1	760.5	759.1
10°	765.5	764.7	764.7	764.0	763.5	763.2	762.6	761.4	760.2	758.7	756.7
12.5°	764.9	764.0	763.7	763.2	762.0	761.4	760.9	759.4	757.4	755.3	752.7
15°	763.2	762.6	762.0	761.1	759.7	758.7	758.2	755.9	753.2	750.4	747.1
17.5°	759.7	758.7	757.6	756.4	754.4	753.6	752.1	749.2	745.4	741.3	736.3
20°	747.1	746.6	745.4	743.3	740.1	739.0	737.0	733.2	728.2	723.2	718.0
22.5°	726.5	725.5	723.8	722.0	719.2	717.1	715.4	710.1	704.6	699.3	694.4
25°	699.9	699.1	696.8	694.4	691.5	688.0	686.2	682.2	676.6	669.9	662.6
27.5°	665.9	662.9	662.1	659.4	655.1	653.9	651.3	646.0	640.8	635.0	628.9
30°	621.6	621.6	619.8	618.6	614.6	613.4	610.5	605.0	602.0	593.9	589.2
32.5°	574.6	574.1	572.6	571.8	569.4	567.3	564.5	561.5	555.2	551.0	544.6
35°	526.3	522.8	523.3	521.6	520.1	517.8	517.5	514.3	508.5	506.2	500.4
37.5°	471.2	469.7	471.8	469.2	467.7	468.0	465.7	463.6	461.2	457.2	456.1
40°	421.4	422.5	422.2	419.9	421.0	419.6	417.2	415.2	414.1	411.4	410.6
42.5°	376.7	375.0	374.4	374.4	374.7	374.7	373.6	372.1	372.1	369.5	366.9
45°	334.8	334.8	334.2	336.0	333.4	333.4	332.5	332.2	331.0	330.4	327.2
47.5°	298.7	298.4	298.1	297.8	297.5	297.5	295.7	294.3	294.0	292.2	290.5
50°	264.6	266.3	265.8	264.3	263.7	264.0	262.8	262.0	261.7	258.8	259.0
52.5°	236.1	235.7	236.3	235.4	233.9	234.3	233.1	231.9	230.8	229.3	228.1
55°	207.7	209.2	208.7	207.7	207.5	206.9	206.0	204.5	204.2	201.1	200.7
57.5°	184.1	183.9	183.3	181.8	181.5	180.6	180.6	179.5	177.8	176.0	174.5
60°	161.2	161.2	160.2	160.0	158.9	158.5	158.2	157.1	155.0	153.6	151.2
62.5°	139.0	139.6	139.0	138.1	137.3	136.1	135.5	134.6	132.8	131.5	129.3
65°	119.5	119.2	118.9	117.7	117.4	116.2	116.0	114.2	112.4	111.3	108.9
67.5°	100.8	99.9	99.9	99.4	98.8	97.9	97.3	95.6	93.5	92.3	90.0
70°	83.0	82.5	82.5	82.5	81.0	80.2	79.9	79.0	76.0	74.9	72.6
72.5°	66.7	66.4	66.1	65.3	64.4	64.4	63.2	61.4	60.1	58.6	56.8
75°	51.0	51.6	51.0	49.8	49.5	49.0	48.1	46.6	45.2	43.5	41.4
77.5°	37.3	36.7	36.2	36.2	35.5	34.4	34.1	32.9	31.2	30.0	27.9
80°	24.4	24.2	23.6	23.1	22.7	22.4	22.1	20.9	19.2	18.4	16.6
82.5°	13.4	13.1	13.1	12.8	12.0	12.0	11.6	10.5	9.6	9.0	8.1
85°	4.7	4.7	4.7	4.3	4.3	4.3	4.1	3.8	3.5	3.2	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°	757.6	757.6	757.6	757.6	757.6	757.6	757.6	757.6	757.6	757.6	757.6
2.5°	758.7	758.2	757.9	757.6	757.4	757.1	756.7	756.2	755.9	755.6	755.0
5°	758.7	757.6	757.1	756.2	755.6	755.0	754.1	753.2	752.4	751.6	750.6
7.5°	757.6	755.9	754.7	752.9	752.4	751.6	749.8	748.6	747.1	745.4	743.3
10°	754.7	752.7	750.4	748.1	747.1	745.6	743.3	741.3	739.0	736.6	734.6
12.5°	750.1	746.8	743.9	740.8	739.0	737.5	734.3	731.4	728.5	725.9	722.4
15°	743.1	739.3	735.5	731.1	729.0	727.3	722.7	719.2	714.5	711.0	707.6
17.5°	731.7	725.9	721.2	715.7	712.7	710.7	706.6	701.1	696.8	693.0	688.8
20°	712.2	706.6	700.3	694.1	690.8	688.3	682.5	676.6	672.2	668.2	663.8
22.5°	686.5	679.5	674.9	667.3	664.7	661.4	654.5	649.3	644.3	640.2	636.2
25°	655.3	649.3	642.8	635.8	632.6	628.9	623.1	617.4	614.3	609.6	604.6
27.5°	619.5	614.6	606.7	600.5	597.4	594.5	588.9	583.9	579.3	576.1	571.4
30°	581.6	575.8	568.8	562.3	560.7	557.2	552.2	548.4	543.4	541.4	539.4
32.5°	539.9	533.3	528.0	524.0	520.5	517.5	514.9	508.8	507.9	502.7	502.1
35°	494.5	491.6	486.6	483.1	480.3	478.2	473.8	470.9	467.7	466.8	464.7
37.5°	451.7	448.1	443.5	440.3	438.3	438.0	434.8	433.0	430.7	429.5	427.2
40°	406.8	405.3	401.3	400.6	397.5	397.1	395.4	393.3	391.3	391.3	391.6
42.5°	365.4	363.6	361.9	359.9	358.1	358.1	357.3	356.6	356.1	355.3	356.6
45°	326.7	324.3	323.1	321.1	321.9	320.3	319.6	319.6	318.8	318.5	320.6
47.5°	290.5	287.9	286.7	286.2	286.2	286.4	283.9	284.7	284.4	285.0	285.9
50°	257.6	255.3	253.5	253.5	253.8	252.7	251.5	252.4	251.5	252.0	254.1
52.5°	227.0	224.6	223.8	223.8	222.0	221.8	222.3	221.2	221.5	221.8	222.9
55°	198.7	197.2	195.8	194.4	194.6	194.1	192.9	192.6	193.2	193.4	194.9
57.5°	173.3	171.3	169.3	168.7	168.2	168.2	166.7	166.4	167.0	165.5	165.5
60°	149.2	148.1	145.4	144.6	144.6	143.1	141.9	142.5	141.0	140.8	141.0
62.5°	126.7	125.9	124.2	122.4	121.8	121.2	119.7	119.2	118.6	117.4	115.7
65°	107.2	105.2	103.1	102.0	101.1	99.6	98.8	97.6	95.8	95.3	93.5
67.5°	87.7	85.7	83.7	82.7	81.9	81.0	79.5	78.1	76.0	73.7	71.7
70°	70.5	67.9	66.7	64.4	63.8	62.6	60.6	59.1	57.1	54.5	52.5
72.5°	53.9	52.1	50.4	48.3	47.0	46.0	44.3	42.0	39.7	38.2	36.2
75°	38.7	37.9	35.5	33.2	32.7	31.5	29.4	27.9	26.2	23.9	22.1
77.5°	26.2	24.4	23.1	20.9	20.4	19.2	18.1	16.6	15.4	14.0	12.8
80°	15.4	14.0	13.1	11.6	11.1	10.5	9.6	8.5	7.6	7.0	6.7
82.5°	7.6	6.5	6.1	5.3	5.0	4.7	4.1	3.8	3.2	3.2	3.2
85°	2.6	2.0	2.0	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°	757.6	757.6	757.6	757.6	757.6	757.6	757.6	757.6	757.6	757.6	757.6
2.5°	754.7	754.4	754.1	753.9	753.9	753.6	753.6	753.2	753.2	752.9	752.9
5°	749.4	748.6	748.1	747.4	747.4	746.6	745.9	745.4	745.1	745.1	744.5
7.5°	742.1	741.0	739.8	739.0	738.7	737.3	736.1	736.1	734.9	734.3	733.8
10°	732.5	730.5	728.8	727.9	726.7	725.9	724.4	723.5	722.7	721.2	720.9
12.5°	719.5	718.0	715.4	714.2	713.6	711.9	709.6	708.4	708.1	706.9	706.1
15°	704.6	701.4	699.1	697.6	697.6	694.7	693.5	691.8	690.6	689.7	689.5
17.5°	685.3	682.2	679.8	677.8	677.2	674.9	673.1	672.5	671.1	671.7	670.2
20°	660.6	658.0	656.3	653.6	653.6	652.1	651.6	650.1	649.5	649.0	649.5
22.5°	634.1	630.9	627.9	627.7	627.7	625.6	625.4	625.1	623.9	624.7	624.4
25°	602.9	600.5	598.8	598.5	598.5	597.4	596.2	596.8	597.7	597.4	598.2
27.5°	570.6	568.3	567.6	567.3	566.8	566.5	567.1	567.1	567.9	569.1	570.3
30°	535.6	535.0	534.1	533.8	533.3	534.7	535.3	536.2	535.9	537.6	538.8
32.5°	500.6	499.4	499.2	499.7	500.6	500.4	502.1	502.7	503.2	505.2	506.2
35°	465.4	465.0	464.5	464.5	464.7	467.2	467.2	469.2	470.3	470.9	473.2
37.5°	427.5	428.7	429.2	430.1	430.4	431.3	431.8	433.8	435.0	436.2	437.4
40°	392.8	392.2	394.8	393.1	393.7	396.3	397.5	397.1	398.9	400.6	401.8
42.5°	355.8	356.6	357.3	357.8	359.3	359.6	361.1	363.1	363.6	365.7	366.3
45°	319.9	320.3	321.4	322.6	323.4	325.8	326.4	327.2	329.0	329.0	329.9
47.5°	286.2	287.4	287.4	289.1	290.5	290.2	292.2	292.9	292.5	294.0	294.6
50°	253.8	255.5	255.3	256.5	257.0	257.3	259.0	259.6	258.5	260.0	260.2
52.5°	222.9	223.8	225.0	225.3	224.6	226.1	225.5	226.8	226.4	227.6	226.4
55°	194.6	194.4	194.4	194.9	194.4	194.9	195.6	194.4	193.4	194.6	194.4
57.5°	166.4	166.4	165.8	166.7	165.8	164.9	164.7	163.7	162.9	162.9	162.6
60°	139.8	139.3	138.1	137.8	137.8	136.3	135.8	134.6	134.6	133.5	132.3
62.5°	115.1	113.7	112.7	112.7	112.2	110.7	108.1	106.4	105.8	104.1	103.8
65°	91.8	90.3	89.5	87.7	86.3	85.7	83.0	81.0	80.2	78.4	78.7
67.5°	70.5	68.2	65.6	64.4	63.6	61.4	60.6	59.1	58.3	58.3	58.3
70°	50.7	48.7	46.0	45.2	44.6	42.8	42.0	41.7	42.5	42.2	42.5
72.5°	34.1	32.0	30.9	30.4	29.7	28.9	29.4	29.7	29.2	29.4	29.7
75°	20.7	20.1	19.2	18.9	18.9	19.2	18.9	18.9	19.2	19.2	19.6
77.5°	12.0	11.3	11.3	11.1	11.6	11.3	11.3	11.3	11.6	11.6	11.6
80°	6.5	6.5	6.5	6.5	6.7	6.5	6.7	6.7	6.7	6.7	6.7
82.5°	3.2	3.2	3.2	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.2
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°	757.6	757.6	757.6	757.6	757.6	757.6	757.6	757.6
2.5°	752.4	752.4	752.4	751.8	752.1	752.1	751.8	751.8
5°	744.3	743.9	743.3	743.3	742.8	743.3	743.1	743.3
7.5°	733.2	733.2	732.3	732.3	732.0	731.7	731.4	731.7
10°	720.0	720.0	719.5	719.2	719.5	718.2	718.2	718.0
12.5°	705.4	704.9	704.3	704.6	704.3	703.4	703.1	703.4
15°	688.5	687.7	688.0	687.1	687.1	686.8	687.4	687.4
17.5°	669.9	669.4	668.7	669.1	668.4	668.7	668.4	668.2
20°	649.3	649.0	649.0	647.8	648.0	647.8	648.0	649.0
22.5°	625.4	625.1	625.4	624.4	625.1	625.1	625.9	625.9
25°	599.1	598.8	599.4	599.7	600.0	600.8	600.0	600.3
27.5°	570.0	570.8	571.8	572.0	573.1	572.3	571.8	572.6
30°	540.6	540.6	540.2	541.4	542.2	543.2	541.7	541.7
32.5°	506.7	508.2	508.2	508.5	509.4	509.4	509.4	510.5
35°	474.3	475.3	475.5	474.3	475.0	474.7	476.7	476.7
37.5°	438.3	438.3	438.6	440.6	440.6	439.8	440.3	440.3
40°	403.9	404.1	403.0	403.6	405.1	404.4	405.1	405.6
42.5°	366.3	368.4	367.2	367.7	367.4	367.7	368.1	368.1
45°	330.4	331.0	331.0	331.4	331.9	332.5	330.7	330.4
47.5°	295.5	295.7	296.7	295.2	297.0	295.2	297.0	294.9
50°	260.2	261.3	260.5	261.1	260.2	260.2	260.0	259.6
52.5°	226.8	226.4	226.4	226.1	226.1	226.8	226.1	227.0
55°	193.2	193.4	192.9	192.6	192.3	193.2	192.3	191.7
57.5°	161.4	162.0	160.9	161.4	159.4	160.2	160.5	160.9
60°	132.0	131.1	131.1	130.0	130.0	130.8	129.7	129.7
62.5°	102.3	102.9	102.0	103.1	103.1	104.3	103.8	104.3
65°	78.4	78.7	79.0	79.0	79.0	80.7	80.2	79.2
67.5°	59.1	59.4	59.8	59.4	60.3	59.8	59.8	60.1
70°	42.8	43.2	43.5	43.5	43.2	43.5	43.5	43.5
72.5°	29.7	30.0	29.7	30.0	30.4	30.0	30.0	30.4
75°	19.6	19.6	19.2	19.2	19.2	19.2	19.6	19.2
77.5°	11.3	11.6	11.3	11.6	11.6	11.6	11.6	11.6
80°	6.7	6.7	6.7	6.5	6.7	6.7	6.7	6.5
82.5°	3.5	3.5	3.2	3.2	3.5	3.5	3.5	3.5
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)