

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: P843455

Luminaire Tested: **LD4C20DE010B2750 EU4C20B35 4LBLWWLI**

Issue Date: 5/7/2024



Test Information

Test Method: LM-79-08
Report Number: P843455
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2107-320-1)
Test Lab: INNOVATION CENTER
Issue Date: 5/7/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: PORTFOLIO
Catalog Number: LD4C20DE010B2750 EU4C20B35 4LBLWWLI
Description: 4in Downlight with BioUp LEDs
Light Source: -
Ballast/Driver:

Summary

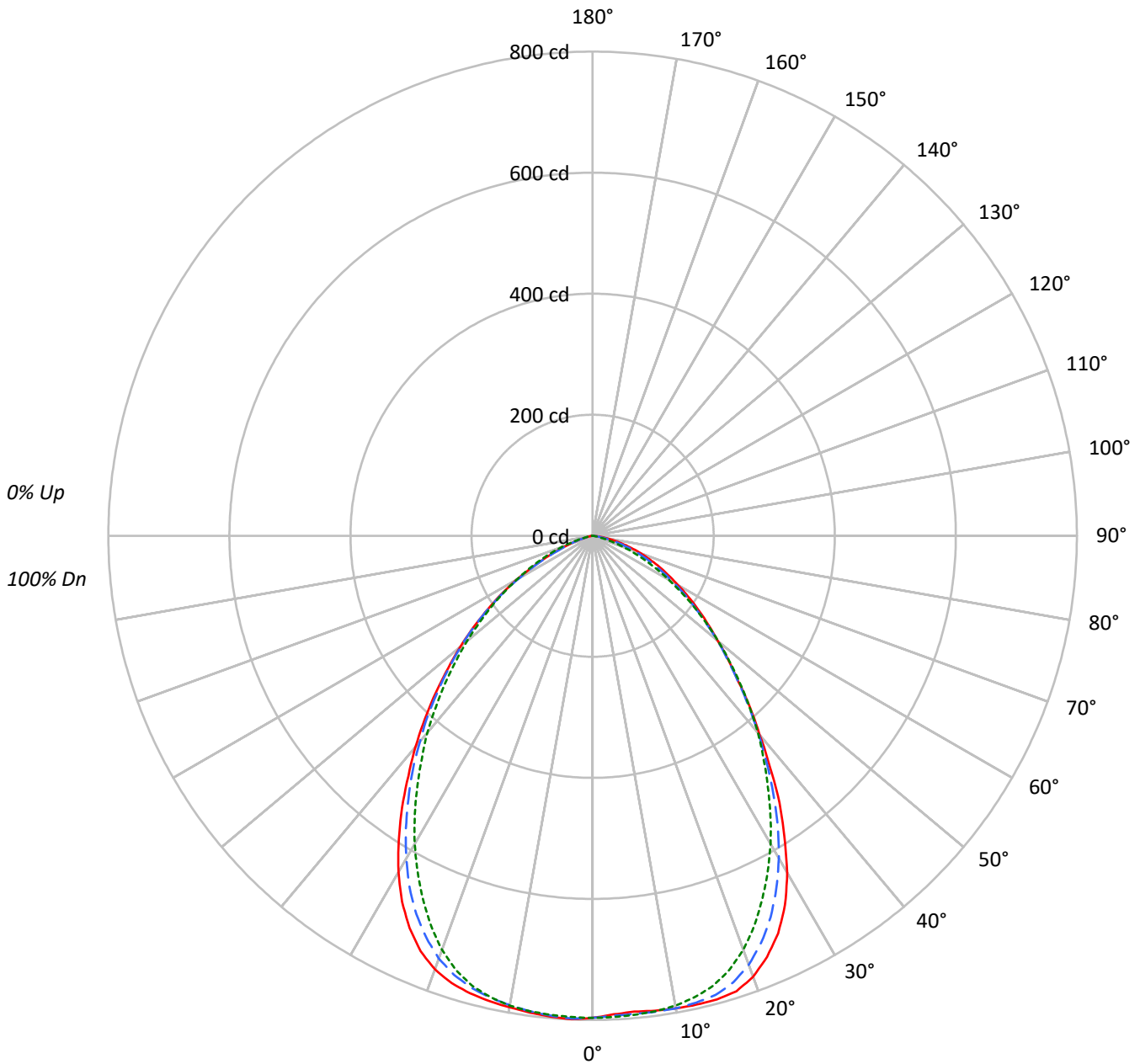
Lumens per Lamp: N/A
Luminaire Lumens: 1527.2 lumens
Efficiency: N/A
Efficacy: 70.1 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.12 / 1.18
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

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	109	105	102	99	101	99	96	97	95	93	94	92	91	89																			
2	103	96	91	86	101	95	89	85	91	87	83	88	84	81	85	82	80	78																			
3	95	87	80	74	93	85	79	74	82	77	72	80	75	71	77	73	70	68																			
4	88	78	71	65	86	77	70	65	75	69	64	72	67	63	70	66	62	60																			
5	82	71	63	57	80	70	63	57	68	61	57	66	60	56	64	59	55	54																			
6	76	65	57	51	75	64	56	51	62	56	51	61	55	50	59	54	50	48																			
7	71	59	51	46	70	59	51	46	57	50	46	56	50	45	54	49	45	43																			
8	67	55	47	42	65	54	47	42	53	46	41	52	46	41	50	45	41	39																			
9	63	51	43	38	61	50	43	38	49	42	38	48	42	38	47	41	37	36																			
10	59	47	40	35	58	46	39	35	45	39	35	45	39	35	44	38	34	33																			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	97865	97865	97865
5°	97314	97980	98350
10°	98926	98339	98701
15°	100860	97883	99524
20°	101374	95151	99675
25°	98249	89859	96921
30°	91187	83385	91031
35°	80747	75648	82277
40°	68848	68111	72970
45°	59159	59819	63554
50°	51623	51757	54471
55°	45622	43694	45172
60°	40001	35652	35505
65°	35378	27645	24593
70°	30209	19038	14619
75°	24398	10253	6693
80°	16697	2547	1698
85°	5075	846	846



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	75.7	5.0
10°-20°	219.2	14.4
20°-30°	316.7	20.7
30°-40°	327.4	21.4
40°-50°	270.5	17.7
50°-60°	186.7	12.2
60°-70°	97.7	6.4
70°-80°	30.8	2.0
80°-90°	2.6	0.2
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°	611.5	40.0
0°-40°	938.9	61.5
0°-60°	1396.1	91.4
0°-90°	1527.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1527.2	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	797	797	797	797	797	
5°	789	793	794	796	798	76
15°	793	786	770	773	782	224
25°	725	696	663	690	715	331
35°	538	520	504	531	549	334
45°	340	339	344	360	366	265
55°	213	206	204	210	211	191
65°	122	110	95	79	85	121
75°	51	40	22	15	14	55
85°	4	2	1	1	1	7
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°	796.6	796.6	796.6	796.6	796.6	796.6	796.6	796.6	796.6	796.6	796.6
2.5°	791.5	791.9	791.9	792.4	792.4	792.4	792.7	792.7	793.0	793.3	793.6
5°	789.1	789.1	789.7	790.1	790.6	790.9	791.5	791.9	792.4	792.7	793.0
7.5°	791.5	791.5	791.9	792.1	792.1	792.4	792.4	792.7	793.0	793.3	793.3
10°	793.0	793.0	793.0	793.0	793.3	793.3	793.3	793.0	793.0	793.0	792.7
12.5°	793.6	793.6	793.3	793.0	793.3	793.0	793.0	792.1	791.5	790.9	790.1
15°	793.0	793.0	792.7	792.4	792.1	791.5	791.2	789.7	788.6	786.8	785.5
17.5°	789.1	788.6	787.9	787.3	786.1	785.2	784.7	781.9	779.8	776.8	773.6
20°	775.4	774.7	773.9	772.4	770.9	769.6	767.8	764.0	761.9	757.4	754.1
22.5°	752.9	752.3	752.6	750.0	746.9	745.1	743.9	740.7	737.1	731.4	727.8
25°	724.8	723.0	723.0	718.9	717.3	716.1	714.6	710.7	705.3	700.3	695.5
27.5°	688.3	685.9	684.7	684.1	680.5	677.8	675.7	672.8	668.3	663.8	657.2
30°	642.8	642.5	641.0	638.4	635.6	634.5	632.0	627.0	622.8	619.6	615.3
32.5°	589.3	589.0	589.0	589.0	587.2	586.9	583.3	580.6	577.4	572.3	569.5
35°	538.4	538.1	538.4	534.0	532.7	531.9	531.6	529.8	525.3	522.9	520.5
37.5°	481.0	481.9	481.3	480.1	481.6	478.9	481.0	477.1	475.3	474.8	472.0
40°	429.3	431.6	429.3	429.6	431.1	428.3	428.3	427.8	426.5	426.0	425.4
42.5°	385.0	382.0	383.8	382.3	383.8	382.9	381.4	382.3	382.5	381.4	381.1
45°	340.5	341.0	341.6	340.7	340.7	339.8	342.3	340.7	340.7	341.0	339.0
47.5°	304.2	303.3	304.0	303.3	303.6	303.0	303.6	304.0	303.3	303.3	301.5
50°	270.1	269.5	271.6	269.8	269.8	269.5	269.8	269.3	268.3	268.3	269.0
52.5°	240.5	239.3	239.0	240.5	238.4	238.4	238.7	238.1	236.9	236.3	234.8
55°	213.0	212.7	213.0	211.7	211.2	211.2	209.7	209.1	208.8	207.3	206.5
57.5°	187.3	186.4	186.7	186.4	185.2	184.9	183.7	183.7	182.4	181.3	179.8
60°	162.8	162.8	163.6	162.5	161.5	161.0	160.3	159.7	157.7	155.6	153.8
62.5°	140.9	141.2	140.9	140.0	139.4	138.8	138.2	136.4	134.6	133.4	131.4
65°	121.7	121.4	120.6	119.9	118.5	118.5	117.3	116.3	114.2	112.4	110.4
67.5°	102.0	101.4	101.4	101.4	99.6	99.3	98.7	96.9	95.1	92.8	91.0
70°	84.1	84.6	83.8	82.8	82.0	81.6	80.8	79.0	76.9	74.5	73.0
72.5°	67.1	67.6	66.7	66.4	64.6	64.0	63.7	62.2	59.9	58.4	55.9
75°	51.4	51.7	51.2	50.6	49.4	49.1	47.6	46.3	44.8	42.5	40.4
77.5°	37.1	36.5	36.5	35.3	34.1	34.1	33.8	32.0	29.9	28.1	26.3
80°	23.6	23.4	22.4	21.8	20.9	20.6	20.3	18.8	17.3	16.2	14.9
82.5°	12.0	11.6	11.3	11.1	10.5	9.8	10.2	9.0	8.4	7.2	6.2
85°	3.6	3.9	3.9	3.6	3.3	3.3	3.3	3.0	2.4	2.1	1.8
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):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	796.6	796.6	796.6	796.6	796.6	796.6	796.6	796.6	796.6	796.6	796.6
2.5°	793.9	794.2	794.5	794.8	794.8	795.1	795.4	795.7	796.0	796.0	796.3
5°	793.3	793.9	793.9	794.2	794.2	794.2	794.5	794.5	794.5	794.5	794.8
7.5°	793.6	793.6	793.6	793.3	793.3	793.0	793.0	793.0	792.4	792.4	792.4
10°	792.1	791.9	791.5	790.9	790.6	790.3	789.7	789.1	788.6	788.3	787.6
12.5°	789.1	787.9	786.8	785.5	785.0	784.7	783.4	782.5	781.6	780.7	780.1
15°	783.2	781.4	779.3	776.8	776.3	775.7	773.6	771.8	770.6	769.6	768.2
17.5°	771.1	767.6	765.2	761.6	760.1	759.5	756.2	754.4	752.3	751.8	750.5
20°	750.0	746.7	742.1	738.9	737.1	735.3	732.6	730.2	727.8	727.8	726.3
22.5°	723.3	719.1	713.5	709.2	708.9	705.3	703.0	700.3	699.4	697.6	697.6
25°	689.8	686.2	680.0	676.4	674.6	673.6	669.8	666.2	664.4	662.9	664.1
27.5°	652.7	647.4	642.5	638.1	636.6	634.8	631.2	629.7	626.4	626.1	625.8
30°	610.3	604.9	600.1	598.0	595.0	593.4	590.8	589.0	587.8	587.8	587.2
32.5°	565.6	560.9	558.5	554.0	552.5	550.4	548.6	546.8	547.4	546.8	547.1
35°	517.5	516.3	511.8	509.1	509.1	508.8	505.9	504.6	504.1	504.4	505.9
37.5°	471.7	468.1	465.1	463.3	464.8	463.0	462.7	462.7	464.5	463.3	465.8
40°	422.9	422.6	421.5	422.1	422.4	420.3	420.8	421.1	422.4	424.7	425.1
42.5°	380.5	380.2	380.2	380.2	379.6	378.4	379.6	381.7	381.4	383.2	384.7
45°	339.5	339.0	340.1	339.2	341.0	341.6	340.7	341.3	343.1	344.3	346.7
47.5°	302.2	302.2	302.4	303.0	301.2	302.7	303.3	304.5	305.4	306.0	307.2
50°	267.5	267.5	266.8	266.8	266.8	267.7	266.5	268.0	268.3	270.8	272.2
52.5°	235.4	233.9	234.8	234.3	233.0	232.5	233.0	233.3	235.1	235.7	237.5
55°	204.9	204.9	202.5	201.9	202.9	202.5	202.2	202.2	203.1	204.0	205.5
57.5°	178.0	176.2	174.4	174.1	173.2	173.5	173.5	173.2	172.6	172.9	173.2
60°	152.5	151.3	148.7	148.7	148.4	148.1	146.6	146.3	144.8	145.1	143.8
62.5°	129.2	128.6	125.0	123.8	123.8	122.9	121.4	121.1	119.1	119.1	117.8
65°	108.3	106.5	104.4	102.3	102.3	101.1	100.2	97.5	96.0	95.1	93.3
67.5°	89.2	86.4	84.4	82.6	81.3	81.0	79.0	77.2	74.8	73.3	70.5
70°	70.5	68.5	66.4	64.6	63.5	62.2	60.1	57.4	55.6	53.0	51.2
72.5°	53.2	51.4	49.7	47.3	45.8	44.8	42.7	40.4	37.4	35.6	33.2
75°	38.3	36.2	33.8	31.7	30.8	29.9	27.5	25.7	23.6	21.6	19.1
77.5°	24.9	22.4	20.6	18.3	18.0	17.3	14.9	13.1	11.6	10.5	9.0
80°	13.1	12.0	10.5	9.0	8.4	7.5	6.2	5.4	4.4	3.6	3.0
82.5°	5.7	4.8	3.9	3.3	3.0	2.6	2.1	1.8	1.5	1.5	1.2
85°	1.5	1.2	1.2	0.8	0.6	0.6	0.6	0.6	0.6	0.6	0.6
87.5°	0.0	0.0	0.0	0.0	0.3	0.3	0.3	0.0	0.3	0.3	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°	796.6	796.6	796.6	796.6	796.6	796.6	796.6	796.6	796.6	796.6	796.6
2.5°	796.6	796.9	797.2	797.2	797.5	797.8	797.8	798.1	798.4	798.7	798.7
5°	795.1	795.1	795.1	795.4	795.4	795.4	795.4	796.0	796.0	796.3	796.6
7.5°	792.1	792.1	792.1	792.1	791.9	792.1	791.9	791.9	792.4	792.7	793.0
10°	787.3	787.0	787.0	786.8	786.8	786.8	787.0	787.3	787.6	787.9	788.8
12.5°	779.8	779.6	779.6	779.3	779.3	779.6	779.8	780.4	781.6	782.2	783.4
15°	767.8	767.6	767.8	768.2	768.8	769.6	770.6	771.4	773.2	774.7	776.3
17.5°	750.5	750.8	751.1	751.8	752.6	753.8	756.2	758.6	760.7	763.1	765.5
20°	726.6	727.8	728.1	730.2	730.8	733.5	736.2	739.7	743.1	746.1	749.3
22.5°	697.9	698.8	699.9	702.4	703.9	707.5	710.7	715.0	718.6	722.4	727.2
25°	665.3	665.6	669.2	669.2	672.8	675.7	679.6	684.1	689.5	694.5	697.9
27.5°	628.2	629.7	632.4	633.5	636.3	641.0	644.3	649.7	655.1	659.5	663.1
30°	589.3	590.5	595.0	595.6	597.7	601.9	606.3	611.4	615.6	620.7	624.0
32.5°	548.3	551.6	554.3	556.4	556.9	563.3	565.6	569.2	574.1	579.2	582.4
35°	508.5	510.0	513.9	515.1	516.9	520.5	525.3	528.3	530.6	534.0	537.8
37.5°	466.3	470.9	471.7	475.3	475.9	479.2	481.6	485.2	488.2	491.2	491.8
40°	427.2	428.7	431.9	432.9	433.4	438.0	440.9	441.8	443.4	446.0	449.6
42.5°	387.4	388.9	392.5	391.5	394.3	396.4	397.9	401.5	403.0	403.8	403.8
45°	348.2	348.8	351.1	352.4	353.9	355.0	357.8	359.6	360.1	362.9	363.7
47.5°	310.8	311.4	313.2	315.3	314.6	316.2	319.2	320.0	320.4	322.2	323.1
50°	274.0	275.5	277.9	277.3	279.1	280.0	282.7	283.2	283.2	283.6	283.9
52.5°	239.7	240.8	241.4	242.0	242.9	244.4	245.6	244.9	246.2	247.4	246.5
55°	205.5	206.5	207.9	208.5	208.5	208.8	208.2	210.9	209.7	209.4	209.7
57.5°	174.4	173.2	172.9	174.4	175.0	174.7	173.8	175.0	175.0	174.4	173.5
60°	144.2	143.3	143.0	143.3	142.0	141.2	141.8	141.2	139.7	139.1	139.4
62.5°	116.7	115.8	113.4	113.4	112.7	112.4	110.1	110.4	109.1	107.3	108.0
65°	91.3	88.8	87.7	87.4	85.2	83.4	82.8	80.8	79.0	78.7	79.0
67.5°	68.5	65.8	63.7	62.8	61.7	60.1	58.1	56.3	56.8	56.6	57.7
70°	47.6	45.8	43.7	42.2	42.7	40.9	39.8	39.8	40.1	40.4	40.9
72.5°	31.7	29.3	28.5	27.5	27.0	25.7	26.3	26.3	26.0	26.3	25.7
75°	18.0	16.7	15.9	15.5	14.9	14.9	14.9	14.9	14.7	14.4	14.4
77.5°	8.0	7.5	7.2	6.9	6.9	6.9	6.6	6.2	6.2	6.2	6.0
80°	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
82.5°	1.2	1.2	1.5	1.5	1.5	1.2	1.5	1.5	1.2	1.2	1.5
85°	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
87.5°	0.3	0.3	0.3	0.0	0.3	0.3	0.3	0.3	0.0	0.3	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°	796.6	796.6	796.6	796.6	796.6	796.6	796.6	796.6
2.5°	799.0	799.3	799.3	799.3	799.6	799.6	799.6	799.6
5°	796.9	797.2	797.2	797.2	797.5	797.5	797.5	797.5
7.5°	793.3	793.6	793.6	793.9	793.9	794.2	794.2	794.5
10°	789.1	789.7	790.1	790.3	790.6	790.9	790.9	791.2
12.5°	784.7	785.2	785.5	786.1	786.8	787.0	787.3	787.6
15°	778.1	779.3	779.8	780.1	781.4	781.9	782.2	782.5
17.5°	767.6	770.0	770.9	771.4	772.7	773.9	774.7	775.0
20°	752.6	755.4	756.5	758.0	759.8	761.3	761.9	762.4
22.5°	731.7	734.6	736.4	738.2	739.7	741.3	743.6	742.8
25°	701.7	706.8	708.9	709.9	713.2	715.0	716.1	715.0
27.5°	668.3	671.3	673.1	675.2	677.5	679.3	680.0	681.8
30°	627.9	633.0	632.7	634.8	637.8	639.6	640.2	641.7
32.5°	586.0	588.4	590.2	589.8	591.1	594.4	593.2	595.9
35°	541.4	541.7	544.7	544.5	546.8	546.8	546.8	548.6
37.5°	493.9	497.5	495.9	499.5	498.4	499.3	499.3	499.8
40°	450.4	451.7	451.7	452.9	453.8	452.9	453.5	455.0
42.5°	405.6	406.9	407.1	406.6	407.4	410.2	408.0	409.8
45°	363.7	364.7	365.8	365.0	366.5	365.5	366.5	365.8
47.5°	324.3	324.0	323.6	326.1	324.0	324.3	325.4	323.3
50°	283.9	285.7	284.5	285.3	286.0	286.0	285.0	285.0
52.5°	248.0	247.7	246.7	247.7	247.1	247.4	248.0	247.4
55°	210.9	212.1	211.5	211.2	211.5	211.5	213.3	210.9
57.5°	174.4	173.8	174.7	176.8	174.7	176.2	177.0	177.4
60°	139.7	139.7	141.5	140.6	142.4	143.8	145.1	144.5
62.5°	106.5	108.0	108.6	108.9	110.6	111.9	111.9	111.6
65°	79.0	81.0	81.0	82.3	82.8	82.8	83.4	84.6
67.5°	58.4	58.4	58.6	59.2	58.9	58.9	59.5	59.9
70°	40.7	40.1	40.9	40.7	40.7	40.4	40.7	40.7
72.5°	25.7	25.7	26.0	25.7	25.2	25.4	25.4	26.0
75°	13.7	14.4	13.7	13.7	14.1	13.4	13.7	14.1
77.5°	5.7	5.7	5.7	5.7	5.7	5.4	5.4	5.4
80°	2.6	2.6	2.6	2.6	2.6	2.6	2.4	2.4
82.5°	1.2	1.5	1.2	1.5	1.2	1.2	1.2	1.2
85°	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
87.5°	0.0	0.3	0.0	0.3	0.0	0.0	0.0	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)