

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: P843482

Luminaire Tested: **LD4C20DE010B2750 EU4C20B50 4LBLWWH**

Issue Date: 5/7/2024



Test Information

Test Method: LM-79-08
Report Number: P843482
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 EU4C20B50 4LBLWWH
Description: 4in Downlight with BioUp LEDs
Light Source: -
Ballast/Driver:

Summary

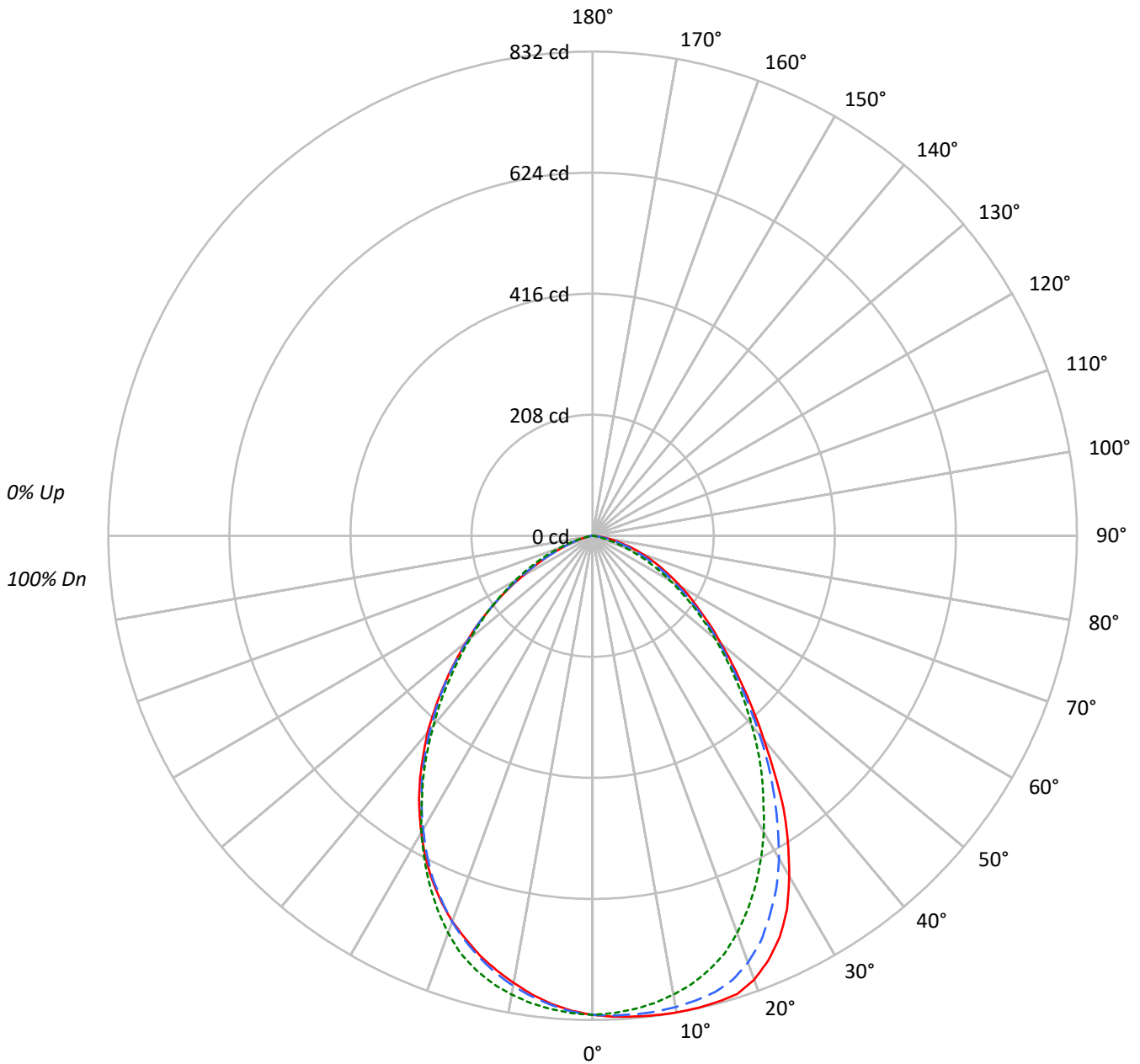
Lumens per Lamp: N/A
Luminaire Lumens: 1551.6 lumens
Efficiency: N/A
Efficacy: 71.2 lumens/watt
Spacing Criteria (0/90/45): 1.15 / 1.09 / 1.17
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

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

TEST NUMBER: P843482

CATALOG NUMBER: LD4C20DE010B2750 EU4C20B50 4LBLWWH

Luminous Intensity Polar Plot





TEST NUMBER: P843482

CATALOG NUMBER: LD4C20DE010B2750 EU4C20B50 4LBLWWH

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20				
RC	80				70				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			100
1	111	107	104	101	108	105	102	99	101	98	96	97	95	93	94	92	90	88			88
2	103	96	90	86	100	94	89	85	91	86	83	88	84	81	85	82	79	77			77
3	95	86	79	74	93	85	78	73	82	76	72	79	75	71	77	73	70	68			68
4	88	78	70	64	86	77	69	64	74	68	63	72	67	62	70	65	62	60			60
5	82	71	63	57	80	69	62	57	67	61	56	66	60	55	64	59	55	53			53
6	76	64	56	51	74	63	56	50	62	55	50	60	54	50	59	53	49	47			47
7	71	59	51	46	69	58	51	45	57	50	45	55	49	45	54	49	44	43			43
8	67	54	47	41	65	54	46	41	52	46	41	51	45	41	50	45	40	39			39
9	62	50	43	38	61	50	42	37	48	42	37	47	41	37	47	41	37	35			35
10	59	47	39	34	58	46	39	34	45	39	34	44	38	34	43	38	34	32			32

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	101145	101145	101145
5°	102272	100705	99620
10°	103766	99861	97329
15°	105476	98265	95009
20°	106133	94929	92196
25°	103089	89791	88422
30°	95812	83470	83512
35°	85772	76068	77688
40°	73419	68207	70693
45°	63207	60132	62390
50°	54968	52349	53936
55°	48364	45044	44637
60°	43023	37569	34620
65°	37761	30087	25029
70°	32400	21265	16954
75°	26297	12341	9921
80°	18748	5377	4952
85°	7189	2255	2255



TEST NUMBER: P843482

CATALOG NUMBER: LD4C20DE010B2750 EU4C20B50 4LBLWWH

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	77.6	5.0
10°-20°	219.6	14.2
20°-30°	313.6	20.2
30°-40°	328.1	21.1
40°-50°	274.9	17.7
50°-60°	192.4	12.4
60°-70°	104.8	6.8
70°-80°	36.4	2.3
80°-90°	4.2	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°	610.9	39.4
0°-40°	938.9	60.5
0°-60°	1406.2	90.6
0°-90°	1551.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1551.6	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	823	823	823	823	823	
5°	829	826	817	810	808	79
15°	829	812	773	750	747	234
25°	760	720	662	650	652	347
35°	572	544	507	511	518	355
45°	364	356	346	358	359	283
55°	226	218	210	210	208	204
65°	130	118	104	87	86	129
75°	55	45	26	21	21	60
85°	5	3	2	2	2	9
90°	0	0	0	0	0	



TEST NUMBER: P843482

CATALOG NUMBER: LD4C20DE010B2750 EU4C20B50 4LBLWWH

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	823.3	823.3	823.3	823.3	823.3	823.3	823.3	823.3	823.3	823.3	823.3
2.5°	827.1	826.1	826.4	826.4	826.4	826.1	826.4	826.1	826.1	825.8	825.2
5°	829.3	828.7	828.7	828.7	828.3	828.0	828.0	827.7	827.1	826.8	825.5
7.5°	830.9	830.2	830.2	829.9	829.6	829.3	829.0	828.0	827.1	826.4	824.8
10°	831.8	830.9	830.9	830.2	829.6	829.3	828.7	827.4	826.1	824.5	822.3
12.5°	831.2	830.2	829.9	829.3	828.0	827.4	826.8	825.2	822.9	820.7	817.9
15°	829.3	828.7	828.0	827.1	825.5	824.5	823.9	821.4	818.5	815.3	811.8
17.5°	825.5	824.5	823.3	822.0	819.8	818.8	817.2	814.1	810.0	805.6	800.2
20°	811.8	811.2	810.0	807.8	804.3	803.1	800.8	796.7	791.3	785.9	780.2
22.5°	789.4	788.5	786.6	784.7	781.5	779.3	777.4	771.6	765.6	759.9	754.6
25°	760.5	759.6	757.2	754.6	751.4	747.6	745.7	741.3	735.3	728.0	720.0
27.5°	723.5	720.4	719.4	716.5	711.8	710.5	707.7	702.1	696.3	690.0	683.3
30°	675.4	675.4	673.5	672.2	667.8	666.5	663.3	657.3	654.1	645.4	640.3
32.5°	624.4	623.8	622.2	621.3	618.7	616.5	613.3	610.1	603.2	598.8	591.9
35°	571.9	568.1	568.7	566.8	565.2	562.7	562.3	558.9	552.5	550.0	543.7
37.5°	512.0	510.4	512.6	509.8	508.2	508.5	506.0	503.8	501.2	496.9	495.6
40°	457.8	459.1	458.8	456.3	457.5	455.9	453.4	451.2	449.9	447.1	446.1
42.5°	409.4	407.5	406.9	406.9	407.2	407.2	405.9	404.3	404.3	401.5	398.6
45°	363.8	363.8	363.2	365.1	362.2	362.2	361.3	361.0	359.7	359.1	355.6
47.5°	324.6	324.3	324.0	323.6	323.3	323.3	321.4	319.8	319.5	317.6	315.7
50°	287.6	289.4	288.7	287.3	286.6	286.9	285.7	284.7	284.4	281.2	281.5
52.5°	256.5	256.2	256.8	255.8	254.3	254.6	253.3	252.0	250.8	249.2	247.9
55°	225.8	227.4	226.8	225.8	225.5	224.9	223.9	222.3	222.0	218.5	218.2
57.5°	200.1	199.8	199.2	197.6	197.2	196.3	196.3	195.0	193.1	191.2	189.6
60°	175.1	175.1	174.2	173.9	172.6	172.3	172.0	170.7	168.5	166.9	164.4
62.5°	151.0	151.7	151.0	150.1	149.1	147.9	147.2	146.3	144.4	142.8	140.6
65°	129.9	129.6	129.2	128.0	127.7	126.4	126.1	124.2	122.3	121.0	118.5
67.5°	109.6	108.6	108.6	108.0	107.3	106.4	105.8	103.9	101.6	100.4	97.8
70°	90.2	89.6	89.6	89.6	88.0	87.0	86.7	85.8	82.6	81.3	78.8
72.5°	72.6	72.2	71.9	71.0	70.0	70.0	68.7	66.8	65.3	63.7	61.8
75°	55.4	56.1	55.4	54.2	53.8	53.2	52.2	50.7	49.1	47.2	44.9
77.5°	40.5	39.9	39.2	39.2	38.6	37.3	37.0	35.7	33.8	32.6	30.4
80°	26.5	26.2	25.7	25.1	24.7	24.4	24.1	22.8	20.9	20.0	18.1
82.5°	14.6	14.3	14.3	14.0	13.0	13.0	12.7	11.4	10.5	9.8	8.9
85°	5.1	5.1	5.1	4.8	4.8	4.8	4.4	4.1	3.8	3.5	2.9
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



TEST NUMBER: P843482

CATALOG NUMBER: LD4C20DE010B2750 EU4C20B50 4LBLWWH

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	823.3	823.3	823.3	823.3	823.3	823.3	823.3	823.3	823.3	823.3	823.3
2.5°	824.5	823.9	823.6	823.3	822.9	822.6	822.3	821.7	821.4	821.0	820.4
5°	824.5	823.3	822.6	821.7	821.0	820.4	819.5	818.5	817.6	816.6	815.6
7.5°	823.3	821.4	820.1	818.2	817.6	816.6	814.7	813.4	811.8	810.0	807.8
10°	820.1	817.9	815.3	812.8	811.8	810.4	807.8	805.6	803.1	800.5	798.3
12.5°	815.0	811.5	808.5	805.0	803.1	801.5	798.0	794.8	791.6	788.8	785.0
15°	807.5	803.4	799.3	794.5	792.3	790.4	785.3	781.5	776.4	772.6	768.8
17.5°	795.1	788.8	783.7	777.7	774.5	772.3	767.8	761.8	757.2	753.0	748.6
20°	773.9	767.8	760.9	754.3	750.8	748.0	741.6	735.3	730.5	726.1	721.3
22.5°	746.1	738.4	733.4	725.1	722.3	718.8	711.2	705.5	700.2	695.7	691.3
25°	712.1	705.5	698.6	691.0	687.5	683.3	677.0	671.0	667.5	662.4	657.0
27.5°	673.2	667.8	659.2	652.7	649.2	646.0	640.0	634.6	629.5	626.0	620.9
30°	632.0	625.7	618.1	611.1	609.2	605.4	600.1	596.0	590.6	588.4	586.1
32.5°	586.8	579.5	573.8	569.3	565.5	562.3	559.5	552.8	551.9	546.3	545.6
35°	537.4	534.2	528.8	525.0	521.8	519.6	514.9	511.7	508.2	507.2	505.0
37.5°	490.8	487.0	482.0	478.5	476.3	475.9	472.4	470.5	468.0	466.7	464.2
40°	442.1	440.5	436.1	435.4	431.9	431.6	429.7	427.5	425.3	425.3	425.6
42.5°	397.0	395.1	393.2	391.1	389.2	389.2	388.3	387.6	387.0	386.0	387.6
45°	354.9	352.4	351.1	348.9	349.9	348.0	347.3	347.3	346.4	346.1	348.3
47.5°	315.7	312.8	311.6	310.9	310.9	311.3	308.4	309.4	309.0	309.7	310.6
50°	280.0	277.4	275.5	275.5	275.8	274.6	273.3	274.2	273.3	273.9	276.1
52.5°	246.6	244.1	243.1	243.1	241.2	240.9	241.6	240.3	240.6	240.9	242.2
55°	216.0	214.4	212.8	211.2	211.5	210.9	209.6	209.3	209.9	210.3	211.8
57.5°	188.4	186.1	183.9	183.3	182.8	182.8	181.2	180.9	181.5	179.9	179.9
60°	162.1	160.9	158.0	157.1	157.1	155.5	154.2	154.8	153.3	152.9	153.3
62.5°	137.7	136.8	134.8	132.9	132.3	131.7	130.2	129.6	128.9	127.7	125.8
65°	116.6	114.3	112.1	110.8	109.9	108.3	107.3	106.1	104.2	103.5	101.6
67.5°	95.3	93.1	90.9	89.9	88.9	88.0	86.4	84.8	82.6	80.1	77.9
70°	76.7	73.8	72.6	70.0	69.4	68.1	65.9	64.3	62.1	59.2	57.0
72.5°	58.6	56.7	54.8	52.6	51.0	50.0	48.1	45.6	43.0	41.5	39.2
75°	42.1	41.1	38.6	36.1	35.4	34.2	31.9	30.4	28.5	26.0	24.1
77.5°	28.5	26.5	25.1	22.8	22.2	20.9	19.7	18.1	16.8	15.2	14.0
80°	16.8	15.2	14.3	12.7	12.1	11.4	10.5	9.2	8.2	7.6	7.3
82.5°	8.2	7.0	6.7	5.7	5.4	5.1	4.4	4.1	3.5	3.5	3.5
85°	2.9	2.2	2.2	1.9	1.6	1.6	1.6	1.6	1.6	1.6	1.6
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



TEST NUMBER: P843482

CATALOG NUMBER: LD4C20DE010B2750 EU4C20B50 4LBLWWH

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	823.3	823.3	823.3	823.3	823.3	823.3	823.3	823.3	823.3	823.3	823.3
2.5°	820.1	819.8	819.5	819.1	819.1	818.8	818.8	818.5	818.5	818.2	818.2
5°	814.4	813.4	812.8	812.2	812.2	811.2	810.7	810.0	809.7	809.7	809.1
7.5°	806.6	805.3	804.0	803.1	802.7	801.2	799.9	799.9	798.6	798.0	797.4
10°	796.1	793.9	792.0	791.0	789.7	788.8	787.2	786.2	785.3	783.7	783.4
12.5°	781.8	780.2	777.4	776.1	775.5	773.6	771.0	769.7	769.4	768.2	767.2
15°	765.6	762.1	759.6	758.1	758.1	754.9	753.7	751.8	750.5	749.5	749.2
17.5°	744.8	741.3	738.8	736.5	735.9	733.4	731.5	730.8	729.2	729.9	728.3
20°	717.8	715.0	713.1	710.2	710.2	708.6	708.0	706.4	705.9	705.2	705.9
22.5°	689.0	685.6	682.4	682.1	682.1	679.8	679.5	679.2	677.9	678.9	678.6
25°	655.1	652.7	650.8	650.4	650.4	649.2	647.9	648.5	649.5	649.2	650.1
27.5°	620.0	617.4	616.8	616.5	615.9	615.5	616.2	616.2	617.1	618.4	619.7
30°	582.0	581.4	580.4	580.1	579.5	581.1	581.7	582.7	582.3	584.2	585.5
32.5°	544.0	542.8	542.5	543.1	544.0	543.7	545.6	546.3	546.9	549.1	550.0
35°	505.7	505.3	504.7	504.7	505.0	507.6	507.6	509.8	511.0	511.7	514.2
37.5°	464.5	465.8	466.4	467.4	467.7	468.6	469.3	471.5	472.8	474.0	475.3
40°	426.9	426.2	429.1	427.2	427.8	430.7	431.9	431.6	433.5	435.4	436.7
42.5°	386.7	387.6	388.3	388.9	390.5	390.8	392.3	394.5	395.1	397.4	398.0
45°	347.6	348.0	349.2	350.5	351.5	354.0	354.6	355.6	357.5	357.5	358.4
47.5°	310.9	312.2	312.2	314.1	315.7	315.4	317.6	318.2	317.9	319.5	320.1
50°	275.8	277.7	277.4	278.7	279.3	279.6	281.5	282.2	280.9	282.5	282.8
52.5°	242.2	243.1	244.4	244.7	244.1	245.7	245.1	246.3	246.0	247.3	246.0
55°	211.5	211.2	211.2	211.8	211.2	211.8	212.5	211.2	210.3	211.5	211.2
57.5°	180.9	180.9	180.2	181.2	180.2	179.3	179.0	178.0	177.0	177.0	176.7
60°	152.0	151.3	150.1	149.8	149.8	148.2	147.5	146.3	146.3	145.0	143.7
62.5°	125.1	123.5	122.6	122.6	121.9	120.4	117.5	115.6	115.0	113.1	112.7
65°	99.7	98.1	97.2	95.3	93.7	93.1	90.2	88.0	87.0	85.1	85.5
67.5°	76.7	74.1	71.3	70.0	69.1	66.8	65.9	64.3	63.4	63.4	63.4
70°	55.1	52.9	50.0	49.1	48.4	46.5	45.6	45.3	46.2	45.9	46.2
72.5°	37.0	34.8	33.5	32.9	32.3	31.3	31.9	32.3	31.6	31.9	32.3
75°	22.5	21.9	20.9	20.6	20.6	20.9	20.6	20.6	20.9	20.9	21.3
77.5°	13.0	12.4	12.4	12.1	12.7	12.4	12.4	12.4	12.7	12.7	12.7
80°	7.0	7.0	7.0	7.0	7.3	7.0	7.3	7.3	7.3	7.3	7.3
82.5°	3.5	3.5	3.5	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.5
85°	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
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



TEST NUMBER: P843482

CATALOG NUMBER: LD4C20DE010B2750 EU4C20B50 4LBLWWH

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	823.3	823.3	823.3	823.3	823.3	823.3	823.3	823.3
2.5°	817.6	817.6	817.6	816.9	817.2	817.2	816.9	816.9
5°	808.8	808.5	807.8	807.8	807.2	807.8	807.5	807.8
7.5°	796.7	796.7	795.8	795.8	795.4	795.1	794.8	795.1
10°	782.4	782.4	781.8	781.5	781.8	780.5	780.5	780.2
12.5°	766.6	765.9	765.3	765.6	765.3	764.4	764.0	764.4
15°	748.3	747.3	747.6	746.7	746.7	746.4	747.0	747.0
17.5°	728.0	727.3	726.7	727.0	726.4	726.7	726.4	726.1
20°	705.5	705.2	705.2	704.0	704.3	704.0	704.3	705.2
22.5°	679.5	679.2	679.5	678.6	679.2	679.2	680.2	680.2
25°	651.1	650.8	651.4	651.7	652.0	653.0	652.0	652.3
27.5°	619.4	620.3	621.3	621.6	622.8	621.9	621.3	622.2
30°	587.4	587.4	587.1	588.4	589.3	590.3	588.7	588.7
32.5°	550.6	552.2	552.2	552.5	553.5	553.5	553.5	554.7
35°	515.5	516.4	516.8	515.5	516.1	515.8	518.0	518.0
37.5°	476.3	476.3	476.6	478.8	478.8	477.8	478.5	478.5
40°	438.9	439.2	438.0	438.6	440.2	439.6	440.2	440.8
42.5°	398.0	400.2	398.9	399.6	399.3	399.6	399.9	399.9
45°	359.1	359.7	359.7	360.0	360.7	361.3	359.4	359.1
47.5°	321.1	321.4	322.4	320.8	322.7	320.8	322.7	320.5
50°	282.8	284.1	283.1	283.8	282.8	282.8	282.5	282.2
52.5°	246.3	246.0	246.0	245.7	245.7	246.3	245.7	246.6
55°	209.9	210.3	209.6	209.3	209.0	209.9	209.0	208.4
57.5°	175.5	176.1	174.8	175.5	173.2	174.2	174.5	174.8
60°	143.4	142.5	142.5	141.2	141.2	142.1	140.9	140.9
62.5°	111.2	111.8	110.8	112.1	112.1	113.4	112.7	113.4
65°	85.1	85.5	85.8	85.8	85.8	87.7	87.0	86.1
67.5°	64.3	64.6	64.9	64.6	65.6	64.9	64.9	65.3
70°	46.5	46.9	47.2	47.2	46.9	47.2	47.2	47.2
72.5°	32.3	32.6	32.3	32.6	32.9	32.6	32.6	32.9
75°	21.3	21.3	20.9	20.9	20.9	20.9	21.3	20.9
77.5°	12.4	12.7	12.4	12.7	12.7	12.7	12.7	12.7
80°	7.3	7.3	7.3	7.0	7.3	7.3	7.3	7.0
82.5°	3.8	3.8	3.5	3.5	3.8	3.8	3.8	3.8
85°	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
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



Report Generated By 670246072 / DESKTOP-50001EG





— 0°-180° - - 45°-225° - - - - 90°-270°













(END OF REPORT)