

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: P843293

Luminaire Tested: **LD4C10DE010B2750 EU4C10B27 4LBSWLI**

Issue Date: 5/7/2024



Test Information

Test Method: LM-79-08
Report Number: P843293
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: LD4C10DE010B2750 EU4C10B27 4LBSWLI
Description: 4in Downlight with BioUp LEDs
Light Source: -
Ballast/Driver:

Summary

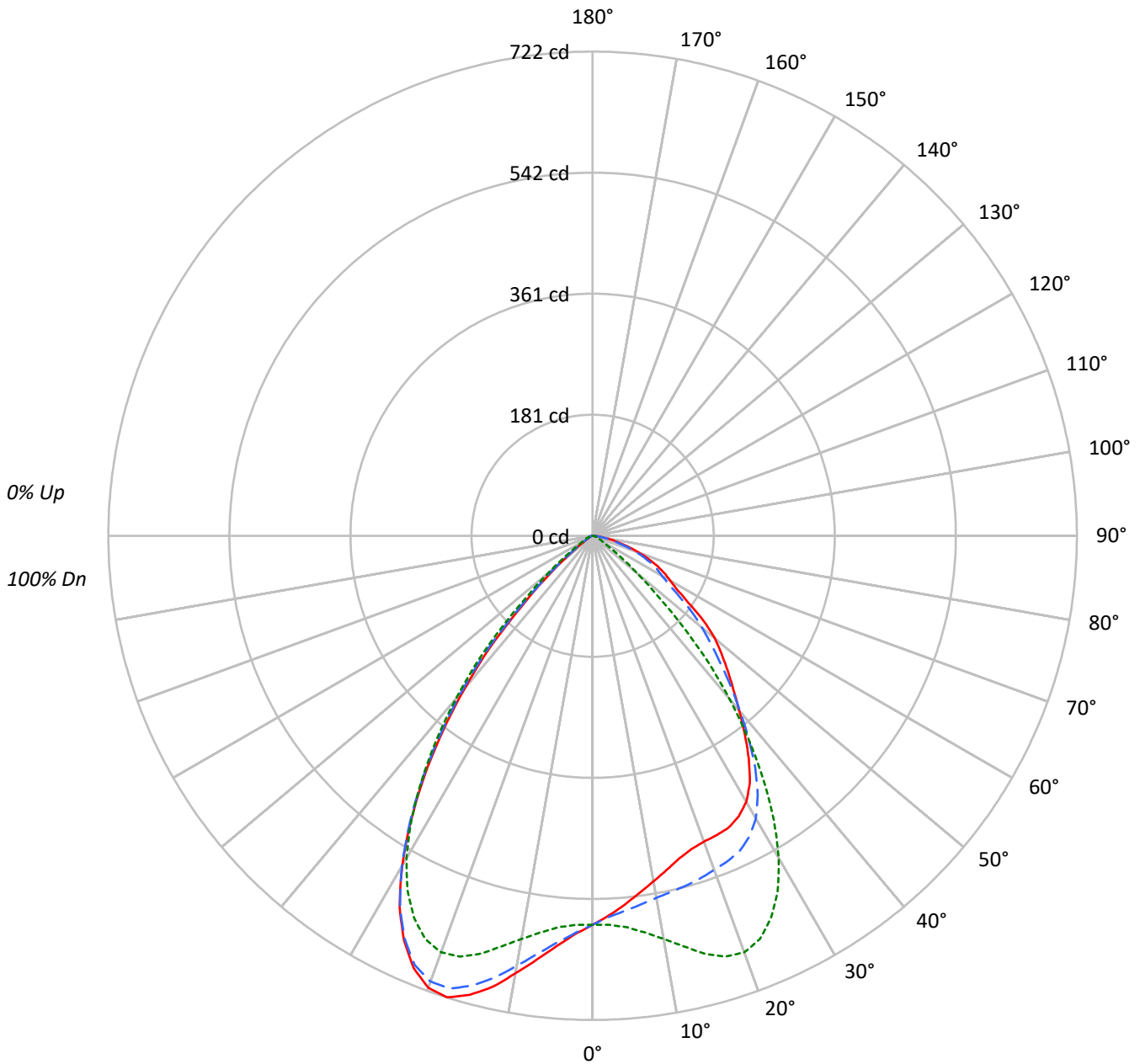
Lumens per Lamp: N/A
Luminaire Lumens: 1070.3 lumens
Efficiency: N/A
Efficacy: 80.5 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.3 / 1.19
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 13.3
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: P843293

CATALOG NUMBER: LD4C10DE010B2750 EU4C10B27 4LBSWLI

Luminous Intensity Polar Plot





TEST NUMBER: P843293

CATALOG NUMBER: LD4C10DE010B2750 EU4C10B27 4LBSWLI

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°	71255	71255	71255
5°	68074	72267	75733
10°	65269	76134	82646
15°	63377	82061	90138
20°	63447	86418	93752
25°	65079	85290	90225
30°	64986	78732	80548
35°	60860	66545	65630
40°	54511	50758	47358
45°	49464	32229	26443
50°	45450	16360	11276
55°	37312	7304	3748
60°	32753	4103	2064
65°	30814	3081	1541
70°	26365	2478	1365
75°	20126	1804	1092
80°	14433	1061	495
85°	10713	0	0



TEST NUMBER: P843293

CATALOG NUMBER: LD4C10DE010B2750 EU4C10B27 4LBSWLI

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	56.3	5.3
10°-20°	175.6	16.4
20°-30°	271.7	25.4
30°-40°	267.7	25.0
40°-50°	164.4	15.4
50°-60°	73.1	6.8
60°-70°	40.8	3.8
70°-80°	17.7	1.7
80°-90°	3.2	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°	503.6	47.0
0°-40°	771.2	72.1
0°-60°	1008.7	94.2
0°-90°	1070.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1070.3	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	580	580	580	580	580	
5°	552	561	586	609	614	52
15°	498	540	645	694	709	141
25°	480	519	629	663	666	220
35°	406	422	444	442	438	252
45°	285	270	186	162	152	221
55°	174	158	34	20	18	160
65°	106	95	11	6	5	104
75°	42	36	4	2	2	47
85°	8	6	0	0	0	9
90°	0	0	0	0	0	



TEST NUMBER: P843293

CATALOG NUMBER: LD4C10DE010B2750 EU4C10B27 4LBSWLI

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	580.0	580.0	580.0	580.0	580.0	580.0	580.0	580.0	580.0	580.0	580.0
2.5°	566.4	566.4	566.4	566.4	567.8	565.6	567.8	567.8	570.2	570.9	568.7
5°	552.0	551.2	552.0	552.0	553.5	552.7	555.0	556.5	559.6	561.1	561.1
7.5°	536.9	536.9	536.9	538.3	540.7	539.9	542.1	544.5	548.9	552.0	554.3
10°	523.2	522.5	524.7	525.5	527.8	527.8	531.6	533.8	539.1	545.2	548.2
12.5°	510.3	509.6	511.2	513.4	517.2	517.2	520.1	524.0	531.6	538.3	543.6
15°	498.3	499.0	501.2	502.8	507.3	507.3	511.2	515.6	524.0	532.3	539.9
17.5°	489.9	490.6	492.2	494.4	499.0	499.0	502.8	508.1	517.2	526.3	535.4
20°	485.3	486.1	487.7	489.9	493.7	494.4	497.5	503.5	511.9	521.7	530.0
22.5°	483.1	484.6	486.1	487.7	491.4	491.4	495.2	499.7	508.1	517.9	525.5
25°	480.1	481.5	482.3	484.6	487.7	487.7	489.9	495.2	502.8	511.2	518.7
27.5°	471.7	473.3	474.0	476.3	479.3	478.6	481.5	485.3	492.2	499.7	505.8
30°	458.1	458.9	460.4	461.1	463.3	463.3	465.7	469.5	474.0	480.8	486.8
32.5°	436.2	437.6	438.4	439.1	441.5	440.7	441.5	443.7	448.2	454.4	458.1
35°	405.8	408.9	408.9	410.4	411.2	410.4	410.4	413.4	415.7	420.2	422.5
37.5°	372.5	374.8	374.1	375.6	376.3	374.1	375.6	376.3	379.4	381.6	382.3
40°	339.9	340.8	340.8	340.8	340.8	339.9	340.8	341.5	343.7	343.7	341.5
42.5°	310.4	311.3	311.3	309.7	311.3	310.4	310.4	310.4	310.4	307.5	305.1
45°	284.7	285.5	285.5	284.7	284.7	283.2	282.5	281.6	279.4	275.6	270.3
47.5°	260.5	262.0	262.7	261.2	260.5	258.9	258.9	254.4	251.4	246.9	239.2
50°	237.8	239.2	239.2	237.8	237.8	235.5	233.2	231.7	227.2	221.9	212.8
52.5°	209.0	211.2	211.2	210.5	210.5	207.5	206.7	203.7	199.9	193.9	186.2
55°	174.2	177.2	176.4	175.7	174.2	174.2	174.2	171.9	169.6	165.1	157.5
57.5°	149.1	150.0	150.0	149.1	149.1	147.6	147.6	145.4	144.6	140.0	134.0
60°	133.3	133.3	134.0	133.3	132.5	131.8	131.0	129.5	127.2	124.2	119.6
62.5°	120.4	121.2	121.2	120.4	119.6	118.9	118.1	116.7	115.1	112.8	108.3
65°	106.0	107.5	106.7	106.0	105.2	104.5	104.5	103.0	101.4	99.9	95.4
67.5°	90.1	90.9	91.6	90.1	90.1	89.4	89.4	87.9	87.0	84.1	81.0
70°	73.4	74.1	74.1	73.4	73.4	72.7	72.7	71.9	71.2	69.0	65.9
72.5°	57.5	58.3	57.5	56.8	56.8	56.8	56.1	55.3	54.6	53.0	50.8
75°	42.4	42.4	43.2	42.4	41.7	41.7	40.9	40.9	39.3	38.6	36.4
77.5°	30.2	31.0	30.2	30.2	29.5	28.8	28.8	28.0	28.0	27.3	25.7
80°	20.4	20.4	21.3	20.4	19.7	20.4	19.7	18.9	18.9	18.2	16.7
82.5°	12.9	13.6	12.9	12.9	12.9	12.9	12.9	12.1	12.1	11.3	10.6
85°	7.6	7.6	7.6	7.6	7.6	7.6	7.6	6.9	6.9	6.9	6.0
87.5°	3.8	3.8	3.1	3.1	3.8	3.8	3.8	3.1	3.1	3.1	3.1
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: P843293

CATALOG NUMBER: LD4C10DE010B2750 EU4C10B27 4LBSWLI

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	580.0	580.0	580.0	580.0	580.0	580.0	580.0	580.0	580.0	580.0	580.0
2.5°	571.7	572.4	574.0	576.2	576.2	574.7	578.5	578.5	580.0	580.7	583.8
5°	565.6	567.1	570.2	574.0	574.7	574.0	579.3	581.5	583.8	586.0	590.6
7.5°	560.3	563.3	568.7	574.0	576.2	576.2	584.6	587.6	592.2	596.6	602.0
10°	557.3	561.8	569.4	577.7	580.0	582.2	592.2	598.2	604.2	610.3	617.9
12.5°	553.5	561.8	571.7	582.2	586.8	589.8	603.5	611.0	619.4	627.0	636.8
15°	552.7	562.6	575.5	589.1	595.1	599.7	614.8	625.5	635.3	645.2	655.0
17.5°	549.8	561.8	577.7	592.9	600.4	606.6	623.9	636.8	648.1	658.0	669.4
20°	546.0	559.6	576.9	593.6	602.0	608.0	627.0	639.1	651.9	661.0	671.6
22.5°	540.7	554.3	571.7	588.4	595.9	601.2	620.1	630.8	642.1	651.2	661.0
25°	531.6	544.5	559.6	573.2	580.7	585.3	602.0	611.8	620.1	629.2	638.3
27.5°	518.7	528.5	541.4	551.2	555.8	560.3	574.0	582.2	589.8	597.5	603.5
30°	495.9	503.5	512.6	521.0	525.5	526.3	539.1	543.6	549.8	555.0	559.6
32.5°	465.7	471.7	477.0	481.5	484.6	485.3	495.2	496.7	502.8	502.8	509.6
35°	427.1	430.1	433.8	433.8	436.2	433.8	440.7	442.2	442.9	443.7	449.0
37.5°	383.1	384.7	386.9	382.3	382.3	380.1	382.3	383.9	380.9	380.9	384.7
40°	341.5	338.4	335.4	330.9	328.6	324.1	324.1	320.3	318.0	316.5	317.3
42.5°	301.3	294.6	287.7	277.8	273.3	268.7	264.3	258.9	257.4	253.6	251.4
45°	262.7	252.9	243.8	227.9	218.8	214.3	204.4	193.9	187.0	185.5	179.5
47.5°	230.1	215.8	200.6	181.7	172.6	164.4	150.0	140.9	131.8	127.2	123.4
50°	201.4	188.6	168.9	148.4	137.1	128.7	112.8	102.3	92.3	85.6	81.0
52.5°	176.4	162.0	143.8	120.4	109.0	99.9	82.5	70.4	62.1	55.3	50.0
55°	148.4	137.1	118.9	96.9	85.6	75.0	59.8	47.0	38.6	34.1	30.2
57.5°	128.0	118.1	100.7	79.5	69.0	59.0	43.9	33.3	26.4	22.0	19.7
60°	114.3	105.2	90.1	69.7	59.8	50.8	36.4	26.4	20.4	16.7	15.1
62.5°	103.0	93.9	80.3	61.3	53.0	43.9	31.0	22.0	16.7	13.6	11.3
65°	90.1	81.8	69.7	53.0	45.4	37.9	26.4	18.2	13.6	10.6	9.1
67.5°	76.5	69.0	58.3	43.9	37.9	31.8	21.3	15.1	11.3	9.1	7.6
70°	62.1	56.1	46.2	35.6	30.2	25.0	17.5	12.1	8.4	6.9	6.0
72.5°	47.7	42.4	35.6	27.3	22.7	18.9	12.9	9.1	6.9	5.3	4.5
75°	34.1	30.2	25.0	19.7	16.7	13.6	9.8	6.9	4.5	3.8	3.1
77.5°	23.5	21.3	17.5	13.6	11.3	9.8	6.9	4.5	3.8	3.1	2.3
80°	15.1	13.6	11.3	8.4	6.9	6.0	3.8	3.1	2.3	1.5	1.5
82.5°	9.1	8.4	6.9	4.5	3.8	3.1	2.3	1.5	1.5	0.7	0.7
85°	5.3	4.5	3.1	2.3	2.3	1.5	1.5	0.7	0.7	0.0	0.0
87.5°	2.3	1.5	1.5	0.7	0.7	0.7	0.7	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



TEST NUMBER: P843293

CATALOG NUMBER: LD4C10DE010B2750 EU4C10B27 4LBSWLI

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	580.0	580.0	580.0	580.0	580.0	580.0	580.0	580.0	580.0	580.0	580.0
2.5°	582.2	586.0	585.3	587.6	586.8	586.8	590.6	589.1	592.9	592.9	593.6
5°	590.6	595.9	595.9	599.7	598.9	600.4	604.2	604.2	608.8	610.3	610.3
7.5°	602.7	609.5	611.0	614.8	615.5	618.6	621.7	622.4	628.4	629.9	630.8
10°	619.4	627.7	629.9	633.7	635.3	638.3	642.1	643.6	651.2	651.9	655.0
12.5°	639.9	648.9	651.2	655.7	656.5	660.3	665.6	667.0	674.7	676.9	679.2
15°	659.5	667.8	671.6	676.1	676.9	681.4	686.0	687.6	694.3	697.4	699.6
17.5°	673.2	683.0	685.2	691.3	691.3	695.1	699.6	701.2	708.0	710.2	711.8
20°	676.1	685.2	688.3	692.9	693.6	695.8	699.6	701.2	707.2	708.0	710.2
22.5°	664.8	673.9	675.4	680.0	680.7	683.0	686.0	685.2	692.9	692.0	692.9
25°	640.6	648.9	648.9	654.3	653.5	655.7	657.2	656.5	663.2	663.2	663.2
27.5°	605.7	613.3	614.1	617.9	615.5	616.4	617.9	617.1	621.7	621.7	621.7
30°	562.6	568.7	566.4	569.4	567.8	569.4	567.8	567.1	568.7	570.2	569.4
32.5°	508.8	513.4	513.4	514.1	514.1	509.6	508.1	508.1	507.3	506.6	506.6
35°	446.7	450.6	449.0	449.0	448.2	443.7	441.5	440.0	442.2	437.6	440.7
37.5°	383.1	383.9	381.6	380.9	377.0	377.0	373.3	370.3	371.8	371.0	368.0
40°	313.5	316.5	312.0	310.4	312.7	309.7	305.9	302.1	305.1	301.3	302.9
42.5°	245.4	244.5	243.0	243.0	243.0	238.5	237.8	237.0	237.8	234.7	232.5
45°	177.2	174.9	172.6	172.6	169.6	168.1	168.1	165.8	162.0	162.0	157.5
47.5°	119.6	114.3	112.8	112.1	110.5	110.5	109.0	107.5	106.7	103.0	103.0
50°	77.9	72.7	71.2	70.4	71.2	69.7	68.1	66.6	65.2	64.4	62.8
52.5°	47.0	44.6	43.2	42.4	40.9	40.1	39.3	37.9	37.1	37.1	36.4
55°	28.0	25.7	22.7	22.7	22.7	22.0	21.3	20.4	19.7	19.7	18.9
57.5°	17.5	15.9	14.4	13.6	13.6	13.6	12.9	12.9	12.9	12.9	12.1
60°	12.9	11.3	10.6	10.6	10.6	9.8	9.8	9.8	9.8	9.1	9.1
62.5°	9.8	9.1	8.4	8.4	7.6	7.6	7.6	7.6	7.6	7.6	6.9
65°	8.4	6.9	6.9	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
67.5°	6.0	5.3	5.3	5.3	5.3	4.5	4.5	4.5	4.5	4.5	4.5
70°	4.5	4.5	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8
72.5°	3.8	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
75°	3.1	3.1	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
77.5°	2.3	2.3	2.3	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
80°	1.5	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
82.5°	0.7	0.7	0.7	0.7	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



TEST NUMBER: P843293

CATALOG NUMBER: LD4C10DE010B2750 EU4C10B27 4LBSWLI

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	580.0	580.0	580.0	580.0	580.0	580.0	580.0	580.0
2.5°	593.6	597.5	593.6	593.6	595.9	595.1	596.6	594.4
5°	611.0	616.4	612.6	611.8	615.5	614.8	615.5	614.1
7.5°	632.3	637.5	633.7	633.7	637.5	636.8	639.1	637.5
10°	656.5	662.5	657.2	658.0	663.2	662.5	662.5	662.5
12.5°	681.4	687.6	684.5	684.5	688.3	689.0	689.8	689.0
15°	702.0	708.0	704.2	704.2	709.5	708.7	709.5	708.7
17.5°	714.0	720.1	715.6	715.6	720.1	720.1	720.9	721.6
20°	710.9	717.8	714.0	712.5	717.8	717.8	717.1	717.1
22.5°	693.6	699.6	696.6	695.1	698.9	697.4	696.6	697.4
25°	663.2	669.4	663.2	663.2	666.3	665.6	666.3	665.6
27.5°	622.4	627.0	620.9	620.1	623.2	621.7	620.9	623.2
30°	567.8	572.4	569.4	567.1	570.9	568.7	567.1	567.8
32.5°	505.8	508.8	507.3	503.5	505.8	504.3	503.5	504.3
35°	437.6	441.5	435.4	434.6	438.4	435.4	433.8	437.6
37.5°	367.2	371.8	366.5	367.2	365.0	365.7	364.2	366.5
40°	300.6	299.8	298.4	297.6	298.4	296.0	297.6	295.3
42.5°	228.7	230.1	229.4	228.7	229.4	226.4	224.9	227.9
45°	159.0	158.2	156.7	155.3	155.3	154.4	154.4	152.2
47.5°	102.3	101.4	98.5	99.2	100.7	99.2	96.9	99.9
50°	62.1	61.3	61.3	60.6	62.1	60.6	59.0	59.0
52.5°	34.8	34.8	34.1	34.1	34.1	34.1	33.3	32.6
55°	18.9	18.2	18.2	18.2	17.5	17.5	17.5	17.5
57.5°	12.1	12.1	12.1	12.1	12.1	12.1	11.3	11.3
60°	9.1	9.1	9.1	9.1	8.4	9.1	8.4	8.4
62.5°	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9
65°	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3
67.5°	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
70°	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8
72.5°	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
75°	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
77.5°	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
80°	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
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



Report Generated By 670246072 / DESKTOP-50001EG





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













(END OF REPORT)