

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: P858295

Luminaire Tested: **LD4C10W2N2050D010 4LBSWNL1_2000K**

Issue Date: 11/9/2023



Test Information

Test Method: LM-79-08
Report Number: P858295
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P251556)
Test Lab: INNOVATION CENTER(G1)
Issue Date: 11/9/2023
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: PORTFOLIO
Catalog Number: LD4C10W2N2050D010 4LBSWNL_2000K
Description: 4 INCH 1000 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 2000K, W2N2050 LEDS AND 4LBSWNL TRIM WITH FINISH

Light Source: -
Ballast/Driver: -

Summary

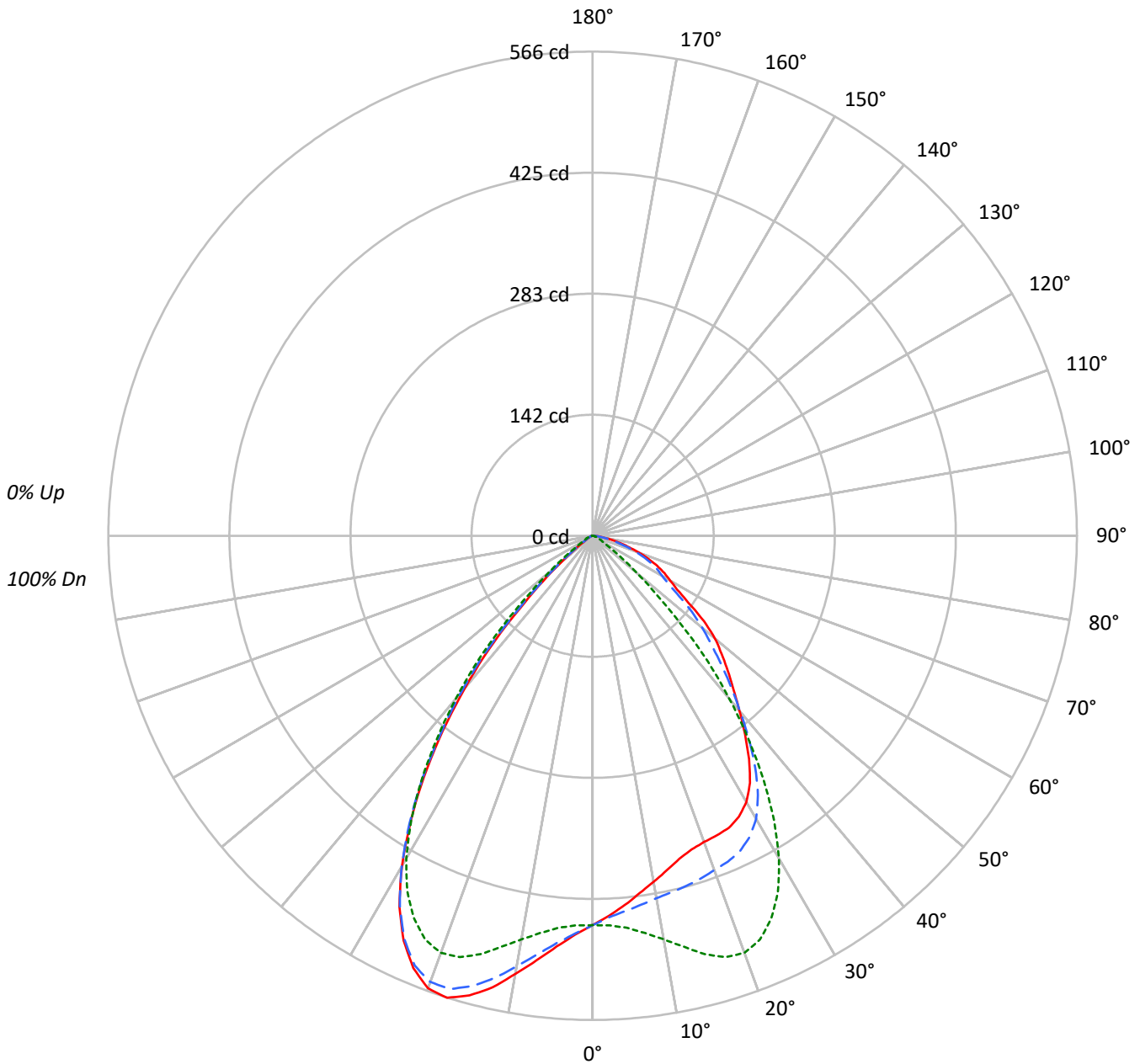
Lumens per Lamp: N/A
Luminaire Lumens: 840.0 lumens
Efficiency: N/A
Efficacy: 64.6 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.3 / 1.19
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 13
Input Voltage (V): NR
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: P858295

CATALOG NUMBER: LD4C10W2N2050D010 4LBSWNL1_2000K

Luminous Intensity Polar Plot





TEST NUMBER: P858295

CATALOG NUMBER: LD4C10W2N2050D010 4LBSWNL1_2000K

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°	55923	55923	55923
5°	53423	56728	59429
10°	51222	59755	64869
15°	49730	64395	70742
20°	49798	67827	73579
25°	51063	66936	70800
30°	50998	61794	63227
35°	47767	52222	51517
40°	42788	39837	37175
45°	38814	25297	20745
50°	35664	12825	8868
55°	29280	5740	2934
60°	25701	3219	1597
65°	24186	2413	1221
70°	20690	1940	1078
75°	15806	1424	854
80°	11320	849	424
85°	8317	0	0



TEST NUMBER: P858295

CATALOG NUMBER: LD4C10W2N2050D010 4LBSWNL1_2000K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	44.2	5.3
10°-20°	137.8	16.4
20°-30°	213.2	25.4
30°-40°	210.1	25.0
40°-50°	129.0	15.4
50°-60°	57.4	6.8
60°-70°	32.0	3.8
70°-80°	13.9	1.7
80°-90°	2.5	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°	395.2	47.0
0°-40°	605.3	72.1
0°-60°	791.6	94.2
0°-90°	840.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	840.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	455	455	455	455	455	
5°	433	440	460	478	482	41
15°	391	424	506	545	556	111
25°	377	407	494	521	522	173
35°	318	332	348	347	344	198
45°	223	212	146	127	119	173
55°	137	124	27	16	14	126
65°	83	75	8	5	4	81
75°	33	28	3	2	2	37
85°	6	5	0	0	0	7
90°	0	0	0	0	0	



TEST NUMBER: P858295

CATALOG NUMBER: LD4C10W2N2050D010 4LBSWNL1_2000K

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	455.2	455.2	455.2	455.2	455.2	455.2	455.2	455.2	455.2	455.2	455.2
2.5°	444.5	444.5	444.5	444.5	445.7	443.9	445.7	445.7	447.5	448.1	446.3
5°	433.2	432.6	433.2	433.2	434.4	433.8	435.6	436.8	439.2	440.3	440.3
7.5°	421.3	421.3	421.3	422.5	424.3	423.7	425.5	427.3	430.8	433.2	435.0
10°	410.6	410.0	411.8	412.4	414.2	414.2	417.2	419.0	423.1	427.9	430.2
12.5°	400.5	399.9	401.1	402.9	405.9	405.9	408.2	411.2	417.2	422.5	426.7
15°	391.0	391.6	393.4	394.6	398.1	398.1	401.1	404.7	411.2	417.8	423.7
17.5°	384.5	385.1	386.3	388.0	391.6	391.6	394.6	398.7	405.9	413.0	420.1
20°	380.9	381.5	382.7	384.5	387.5	388.0	390.4	395.2	401.7	409.4	416.0
22.5°	379.1	380.3	381.5	382.7	385.7	385.7	388.6	392.2	398.7	406.5	412.4
25°	376.7	377.9	378.5	380.3	382.7	382.7	384.5	388.6	394.6	401.1	407.1
27.5°	370.2	371.4	372.0	373.8	376.2	375.6	377.9	380.9	386.3	392.2	397.0
30°	359.5	360.1	361.3	361.9	363.7	363.7	365.5	368.4	372.0	377.3	382.1
32.5°	342.3	343.5	344.1	344.7	346.5	345.8	346.5	348.2	351.8	356.6	359.5
35°	318.5	320.9	320.9	322.1	322.7	322.1	322.1	324.5	326.2	329.8	331.6
37.5°	292.4	294.2	293.6	294.7	295.3	293.6	294.7	295.3	297.7	299.5	300.1
40°	266.8	267.4	267.4	267.4	267.4	266.8	267.4	268.0	269.8	269.8	268.0
42.5°	243.6	244.2	244.2	243.0	244.2	243.6	243.6	243.6	243.6	241.3	239.5
45°	223.4	224.0	224.0	223.4	223.4	222.2	221.7	221.1	219.3	216.3	212.1
47.5°	204.4	205.6	206.2	205.0	204.4	203.2	203.2	199.7	197.3	193.7	187.8
50°	186.6	187.8	187.8	186.6	186.6	184.8	183.0	181.8	178.3	174.1	167.0
52.5°	164.0	165.8	165.8	165.2	165.2	162.8	162.2	159.9	156.9	152.1	146.2
55°	136.7	139.1	138.5	137.9	136.7	136.7	136.7	134.9	133.1	129.5	123.6
57.5°	117.1	117.7	117.7	117.1	117.1	115.9	115.9	114.1	113.5	109.9	105.2
60°	104.6	104.6	105.2	104.6	104.0	103.4	102.8	101.6	99.8	97.5	93.9
62.5°	94.5	95.1	95.1	94.5	93.9	93.3	92.7	91.5	90.3	88.5	85.0
65°	83.2	84.4	83.8	83.2	82.6	82.0	82.0	80.8	79.6	78.4	74.9
67.5°	70.7	71.3	71.9	70.7	70.7	70.1	70.1	68.9	68.3	66.0	63.6
70°	57.6	58.2	58.2	57.6	57.6	57.0	57.0	56.5	55.9	54.1	51.7
72.5°	45.2	45.7	45.2	44.6	44.6	44.6	44.0	43.4	42.8	41.6	39.8
75°	33.3	33.3	33.9	33.3	32.7	32.7	32.1	32.1	30.9	30.3	28.5
77.5°	23.8	24.4	23.8	23.8	23.2	22.6	22.6	22.0	22.0	21.4	20.2
80°	16.0	16.0	16.6	16.0	15.5	16.0	15.5	14.9	14.9	14.3	13.1
82.5°	10.1	10.7	10.1	10.1	10.1	10.1	10.1	9.5	9.5	8.9	8.3
85°	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.4	5.4	5.4	4.7
87.5°	3.0	3.0	2.4	2.4	3.0	3.0	3.0	2.4	2.4	2.4	2.4
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: P858295

CATALOG NUMBER: LD4C10W2N2050D010 4LBSWNL1_2000K

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	455.2	455.2	455.2	455.2	455.2	455.2	455.2	455.2	455.2	455.2	455.2
2.5°	448.7	449.2	450.4	452.2	452.2	451.0	454.0	454.0	455.2	455.8	458.2
5°	443.9	445.1	447.5	450.4	451.0	450.4	454.6	456.4	458.2	460.0	463.5
7.5°	439.7	442.1	446.3	450.4	452.2	452.2	458.8	461.1	464.7	468.3	472.4
10°	437.4	440.9	446.9	453.4	455.2	457.0	464.7	469.4	474.2	479.0	484.9
12.5°	434.4	440.9	448.7	457.0	460.5	462.9	473.6	479.6	486.1	492.0	499.8
15°	433.8	441.5	451.6	462.3	467.1	470.6	482.5	490.8	498.6	506.3	514.0
17.5°	431.4	440.9	453.4	465.3	471.2	476.0	489.7	499.8	508.7	516.4	525.3
20°	428.5	439.2	452.8	465.9	472.4	477.2	492.0	501.6	511.6	518.8	527.1
22.5°	424.3	435.0	448.7	461.7	467.7	471.8	486.7	495.0	503.9	511.1	518.8
25°	417.2	427.3	439.2	449.8	455.8	459.3	472.4	480.2	486.7	493.8	500.9
27.5°	407.1	414.8	424.9	432.6	436.2	439.7	450.4	457.0	462.9	468.9	473.6
30°	389.2	395.2	402.3	408.8	412.4	413.0	423.1	426.7	431.4	435.6	439.2
32.5°	365.5	370.2	374.4	377.9	380.3	380.9	388.6	389.8	394.6	394.6	399.9
35°	335.2	337.5	340.5	340.5	342.3	340.5	345.8	347.0	347.6	348.2	352.4
37.5°	300.7	301.9	303.7	300.1	300.1	298.3	300.1	301.3	298.9	298.9	301.9
40°	268.0	265.6	263.2	259.7	257.9	254.3	254.3	251.4	249.6	248.4	249.0
42.5°	236.5	231.2	225.8	218.1	214.5	211.0	207.4	203.2	202.0	199.1	197.3
45°	206.2	198.5	191.4	178.9	171.7	168.2	160.5	152.1	146.8	145.6	140.8
47.5°	180.6	169.3	157.5	142.6	135.5	129.0	117.7	110.5	103.4	99.8	96.9
50°	158.1	148.0	132.5	116.5	107.6	101.0	88.5	80.2	72.5	67.1	63.6
52.5°	138.5	127.2	112.9	94.5	85.6	78.4	64.8	55.3	48.7	43.4	39.2
55°	116.5	107.6	93.3	76.1	67.1	58.8	46.9	36.9	30.3	26.8	23.8
57.5°	100.4	92.7	79.0	62.4	54.1	46.4	34.5	26.1	20.8	17.2	15.5
60°	89.7	82.6	70.7	54.7	46.9	39.8	28.5	20.8	16.0	13.1	11.9
62.5°	80.8	73.7	63.0	48.1	41.6	34.5	24.4	17.2	13.1	10.7	8.9
65°	70.7	64.2	54.7	41.6	35.6	29.7	20.8	14.3	10.7	8.3	7.1
67.5°	60.0	54.1	45.7	34.5	29.7	25.0	16.6	11.9	8.9	7.1	5.9
70°	48.7	44.0	36.2	27.9	23.8	19.6	13.7	9.5	6.5	5.4	4.7
72.5°	37.4	33.3	27.9	21.4	17.8	14.9	10.1	7.1	5.4	4.2	3.6
75°	26.8	23.8	19.6	15.5	13.1	10.7	7.7	5.4	3.6	3.0	2.4
77.5°	18.4	16.6	13.7	10.7	8.9	7.7	5.4	3.6	3.0	2.4	1.8
80°	11.9	10.7	8.9	6.5	5.4	4.7	3.0	2.4	1.8	1.2	1.2
82.5°	7.1	6.5	5.4	3.6	3.0	2.4	1.8	1.2	1.2	0.6	0.6
85°	4.2	3.6	2.4	1.8	1.8	1.2	1.2	0.6	0.6	0.0	0.0
87.5°	1.8	1.2	1.2	0.6	0.6	0.6	0.6	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: P858295

CATALOG NUMBER: LD4C10W2N2050D010 4LBSWNLI_2000K

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	455.2	455.2	455.2	455.2	455.2	455.2	455.2	455.2	455.2	455.2	455.2
2.5°	457.0	460.0	459.3	461.1	460.5	460.5	463.5	462.3	465.3	465.3	465.9
5°	463.5	467.7	467.7	470.6	470.1	471.2	474.2	474.2	477.8	479.0	479.0
7.5°	473.0	478.4	479.6	482.5	483.1	485.5	487.9	488.5	493.2	494.4	495.0
10°	486.1	492.6	494.4	497.4	498.6	500.9	503.9	505.1	511.1	511.6	514.0
12.5°	502.1	509.3	511.1	514.6	515.2	518.2	522.3	523.5	529.5	531.3	533.0
15°	517.6	524.1	527.1	530.7	531.3	534.8	538.4	539.6	544.9	547.3	549.1
17.5°	528.3	536.0	537.8	542.6	542.6	545.5	549.1	550.3	555.6	557.4	558.6
20°	530.7	537.8	540.2	543.7	544.3	546.1	549.1	550.3	555.0	555.6	557.4
22.5°	521.7	528.9	530.1	533.6	534.2	536.0	538.4	537.8	543.7	543.1	543.7
25°	502.7	509.3	509.3	513.4	512.8	514.6	515.8	515.2	520.6	520.6	520.6
27.5°	475.4	481.3	481.9	484.9	483.1	483.7	484.9	484.3	487.9	487.9	487.9
30°	441.5	446.3	444.5	446.9	445.7	446.9	445.7	445.1	446.3	447.5	446.9
32.5°	399.3	402.9	402.9	403.5	403.5	399.9	398.7	398.7	398.1	397.6	397.6
35°	350.6	353.6	352.4	352.4	351.8	348.2	346.5	345.3	347.0	343.5	345.8
37.5°	300.7	301.3	299.5	298.9	295.9	295.9	293.0	290.6	291.8	291.2	288.8
40°	246.0	248.4	244.8	243.6	245.4	243.0	240.1	237.1	239.5	236.5	237.7
42.5°	192.5	191.9	190.7	190.7	190.7	187.2	186.6	186.0	186.6	184.2	182.4
45°	139.1	137.3	135.5	135.5	133.1	131.9	131.9	130.1	127.2	127.2	123.6
47.5°	93.9	89.7	88.5	88.0	86.8	86.8	85.6	84.4	83.8	80.8	80.8
50°	61.2	57.0	55.9	55.3	55.9	54.7	53.5	52.3	51.1	50.5	49.3
52.5°	36.9	35.1	33.9	33.3	32.1	31.5	30.9	29.7	29.1	29.1	28.5
55°	22.0	20.2	17.8	17.8	17.8	17.2	16.6	16.0	15.5	15.5	14.9
57.5°	13.7	12.5	11.3	10.7	10.7	10.7	10.1	10.1	10.1	10.1	9.5
60°	10.1	8.9	8.3	8.3	8.3	7.7	7.7	7.7	7.7	7.1	7.1
62.5°	7.7	7.1	6.5	6.5	5.9	5.9	5.9	5.9	5.9	5.9	5.4
65°	6.5	5.4	5.4	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7
67.5°	4.7	4.2	4.2	4.2	4.2	3.6	3.6	3.6	3.6	3.6	3.6
70°	3.6	3.6	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
72.5°	3.0	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
75°	2.4	2.4	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
77.5°	1.8	1.8	1.8	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
80°	1.2	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
82.5°	0.6	0.6	0.6	0.6	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: P858295

CATALOG NUMBER: LD4C10W2N2050D010 4LBSWNL1_2000K

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	455.2	455.2	455.2	455.2	455.2	455.2	455.2	455.2
2.5°	465.9	468.9	465.9	465.9	467.7	467.1	468.3	466.5
5°	479.6	483.7	480.7	480.2	483.1	482.5	483.1	481.9
7.5°	496.2	500.4	497.4	497.4	500.4	499.8	501.6	500.4
10°	515.2	520.0	515.8	516.4	520.6	520.0	520.0	520.0
12.5°	534.8	539.6	537.2	537.2	540.2	540.8	541.4	540.8
15°	550.9	555.6	552.7	552.7	556.8	556.2	556.8	556.2
17.5°	560.4	565.1	561.6	561.6	565.1	565.1	565.7	566.3
20°	558.0	563.3	560.4	559.2	563.3	563.3	562.8	562.8
22.5°	544.3	549.1	546.7	545.5	548.5	547.3	546.7	547.3
25°	520.6	525.3	520.6	520.6	522.9	522.3	522.9	522.3
27.5°	488.5	492.0	487.3	486.7	489.1	487.9	487.3	489.1
30°	445.7	449.2	446.9	445.1	448.1	446.3	445.1	445.7
32.5°	397.0	399.3	398.1	395.2	397.0	395.8	395.2	395.8
35°	343.5	346.5	341.7	341.1	344.1	341.7	340.5	343.5
37.5°	288.2	291.8	287.6	288.2	286.4	287.0	285.8	287.6
40°	235.9	235.3	234.1	233.5	234.1	232.3	233.5	231.8
42.5°	179.5	180.6	180.1	179.5	180.1	177.7	176.5	178.9
45°	124.8	124.2	123.0	121.8	121.8	121.2	121.2	119.4
47.5°	80.2	79.6	77.2	77.9	79.0	77.9	76.1	78.4
50°	48.7	48.1	48.1	47.5	48.7	47.5	46.4	46.4
52.5°	27.3	27.3	26.8	26.8	26.8	26.8	26.1	25.6
55°	14.9	14.3	14.3	14.3	13.7	13.7	13.7	13.7
57.5°	9.5	9.5	9.5	9.5	9.5	9.5	8.9	8.9
60°	7.1	7.1	7.1	7.1	6.5	7.1	6.5	6.5
62.5°	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4
65°	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2
67.5°	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
70°	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
72.5°	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
75°	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
77.5°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
80°	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
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)