

Scaled data based on original data using

LM-41-14 Approved Method for Photometric Testing Of Indoor Fluorescent Luminaires

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: HALO COMMERCIAL

Report Number: P583931

Luminaire Tested: **HC815D010-HM80520930-81WWW**

Issue Date: 10/21/2021

Test Information

Test Method: LM-41-14
Report Number: P583931
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2109-368-16)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 10/21/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO COMMERCIAL
Catalog Number: HC815D010-HM80520930-81WWW
Description: HALO COMMERCIAL 8" ROUND, NEW CONSTRUCTION FRAME, WITH 8" WALLWASH DISTRIBUTION, WHITE TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 3000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1307.3 lumens
Efficiency: N/A
Efficacy: 93.4 lumens/watt
Spacing Criteria (0/90/45): 1.09 / 1.04 / 1.13
Luminous Opening: Circular (Dia: 0.67' x H: 0')
CIE Type: Direct

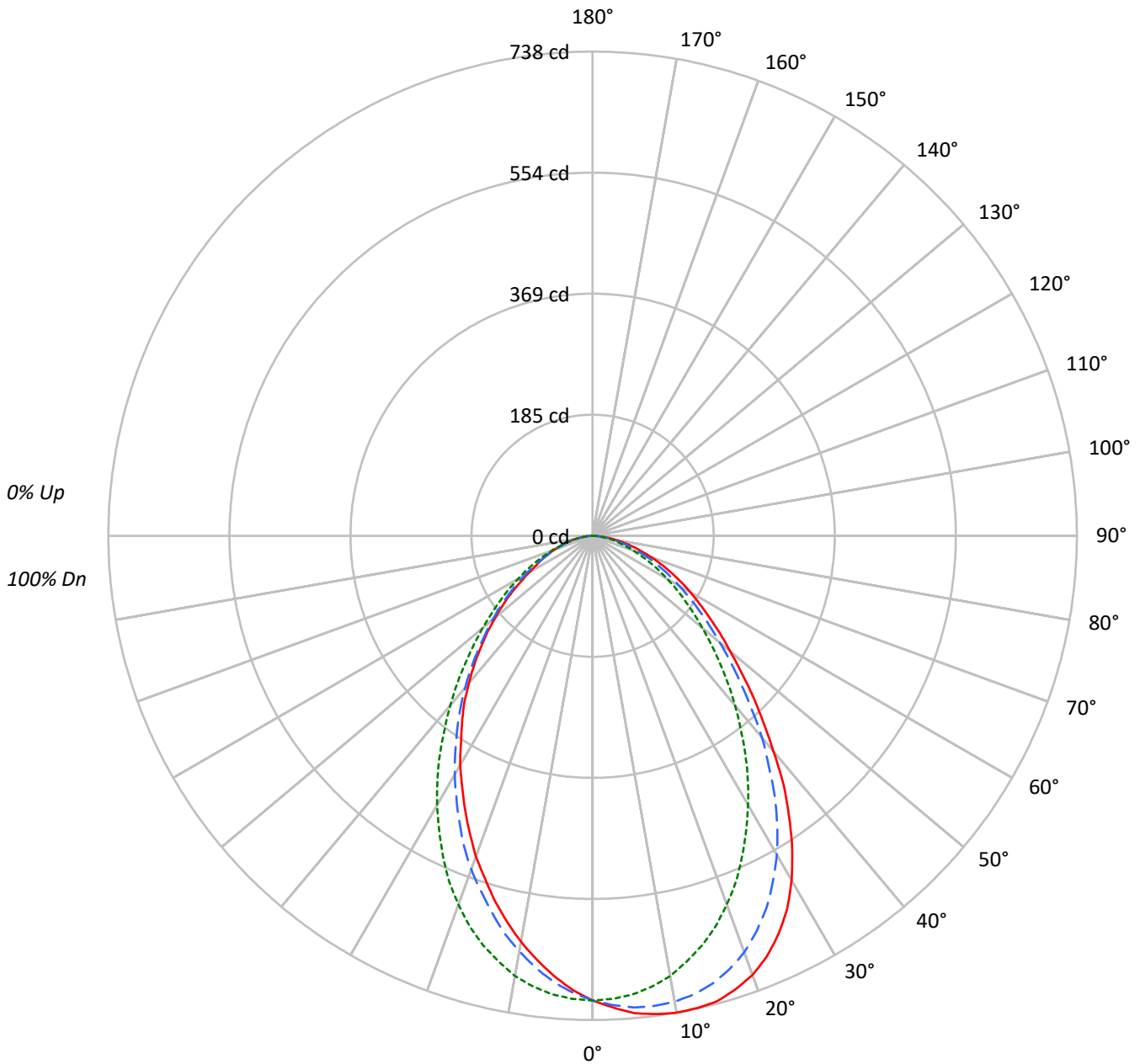
Input Watts (W): 14
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P583931

CATALOG NUMBER: HC815D010-HM80520930-81WWW

Luminous Intensity Polar Plot





TEST NUMBER: P583931

CATALOG NUMBER: HC815D010-HM80520930-81WWW

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	110	106	103	99	108	104	101	98	100	97	95	96	94	92	93	91	89	87																			
2	102	95	89	84	99	93	88	83	90	85	81	86	83	79	83	80	78	76																			
3	94	85	78	72	92	83	77	71	81	75	70	78	73	69	75	71	68	66																			
4	87	76	69	63	85	75	68	62	73	67	62	71	65	61	68	64	60	58																			
5	81	69	61	55	79	68	61	55	66	60	54	64	59	54	63	57	53	51																			
6	75	63	55	49	73	62	55	49	61	54	49	59	53	48	57	52	48	46																			
7	70	58	50	44	69	57	50	44	56	49	44	54	48	44	53	48	43	41																			
8	66	53	46	40	64	53	45	40	51	45	40	50	44	40	49	44	39	38																			
9	62	49	42	37	60	49	42	37	48	41	36	47	41	36	46	40	36	34																			
10	58	46	39	34	57	45	38	34	44	38	33	44	38	33	43	37	33	32																			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	21841	21841	21841
5°	22612	21720	20854
10°	23115	21336	19680
15°	23442	20620	18379
20°	23371	19617	17064
25°	22793	18346	15665
30°	21595	16870	14374
35°	19647	15268	13059
40°	17253	13582	11802
45°	15045	11945	10519
50°	13092	10468	9268
55°	11682	9199	8059
60°	10614	8061	6876
65°	9537	7019	6246
70°	8493	5978	5626
75°	7434	5040	4813
80°	6304	4084	4262
85°	4776	3078	3397



TEST NUMBER: P583931

CATALOG NUMBER: HC815D010-HM80520930-81WWW

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	66.3	5.1
10°-20°	182.8	14.0
20°-30°	253.8	19.4
30°-40°	262.4	20.1
40°-50°	219.7	16.8
50°-60°	159.5	12.2
60°-70°	100.6	7.7
70°-80°	49.8	3.8
80°-90°	12.4	0.9
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°	502.9	38.5
0°-40°	765.3	58.5
0°-60°	1144.4	87.5
0°-90°	1307.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1307.3	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	708	708	708	708	708	
5°	730	722	702	682	674	70
15°	734	706	646	594	576	207
25°	670	627	539	481	460	307
35°	522	483	406	360	347	325
45°	345	320	274	247	241	267
55°	217	198	171	157	150	196
65°	131	114	96	85	86	130
75°	62	52	42	40	40	67
85°	14	11	9	10	10	16
90°	0	0	0	0	0	



TEST NUMBER: P583931

CATALOG NUMBER: HC815D010-HM80520930-81WWW

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	708.3	708.3	708.3	708.3	708.3	708.3	708.3	708.3	708.3	708.3	708.3
2.5°	719.9	719.9	720.8	719.9	719.9	719.9	718.9	718.9	717.9	717.9	716.0
5°	730.5	728.5	730.5	728.5	728.5	728.5	727.6	725.7	724.7	722.8	721.8
7.5°	735.3	734.3	734.3	733.4	733.4	732.4	731.4	730.5	726.6	725.7	722.8
10°	738.2	737.2	737.2	736.3	734.3	734.3	732.4	731.4	726.6	724.7	720.8
12.5°	737.2	737.2	737.2	736.3	733.4	732.4	730.5	727.6	723.7	719.9	716.0
15°	734.3	734.3	732.4	731.4	728.5	726.6	725.7	720.8	717.0	712.2	706.4
17.5°	724.7	724.7	723.7	721.8	718.9	717.0	715.0	710.2	706.4	698.8	693.0
20°	712.2	711.2	710.2	707.3	704.6	703.6	700.7	694.0	689.1	683.4	675.6
22.5°	694.0	693.0	692.0	690.1	685.3	683.4	681.4	676.6	667.9	662.3	652.6
25°	669.9	669.9	667.9	665.0	660.3	658.4	655.5	650.7	643.0	634.3	626.6
27.5°	642.0	641.1	638.2	636.2	632.4	629.5	624.7	619.0	611.3	604.5	594.9
30°	606.5	606.5	604.5	601.7	596.8	594.9	591.1	584.3	576.7	568.0	561.3
32.5°	566.1	566.1	563.2	561.3	558.4	553.6	552.6	544.9	538.3	531.5	523.8
35°	521.9	522.8	520.9	517.1	512.2	512.2	510.3	503.6	496.0	489.2	483.4
37.5°	477.7	474.8	473.8	471.9	469.0	465.1	463.2	460.4	453.7	448.9	440.2
40°	428.6	429.6	427.7	425.7	424.8	422.0	421.0	416.2	411.4	405.6	401.7
42.5°	384.4	384.4	384.4	382.5	380.7	377.8	376.8	373.9	368.1	364.3	358.5
45°	345.0	342.2	342.2	341.3	340.3	338.4	335.5	333.5	329.7	326.8	320.0
47.5°	306.6	307.5	306.6	305.6	302.7	301.9	300.9	297.0	293.2	290.3	285.5
50°	272.9	274.9	272.9	272.9	271.0	270.0	268.1	265.2	262.3	257.6	252.8
52.5°	245.1	245.1	244.1	243.2	240.3	238.3	237.4	236.4	231.6	227.7	223.9
55°	217.3	218.2	218.2	215.3	214.4	212.4	211.5	208.6	206.7	200.9	198.0
57.5°	193.2	192.2	193.2	191.2	189.3	187.4	186.4	184.5	181.6	177.9	174.0
60°	172.1	170.1	170.1	169.2	167.3	166.3	164.4	161.5	158.6	154.7	151.8
62.5°	150.9	149.9	148.9	148.0	146.0	145.1	144.1	141.2	138.5	135.6	132.7
65°	130.7	130.7	129.8	127.9	126.9	125.9	125.0	123.0	119.2	117.2	114.4
67.5°	112.4	111.5	111.5	109.5	107.6	106.6	106.6	104.7	101.8	99.1	97.1
70°	94.2	95.2	94.2	93.3	91.3	91.3	89.4	88.4	84.6	83.6	80.7
72.5°	77.8	77.8	76.9	76.9	75.0	74.0	74.0	72.1	70.1	68.2	66.3
75°	62.4	62.4	62.4	61.5	60.5	58.7	58.7	57.7	55.8	53.9	51.9
77.5°	49.0	48.1	48.1	47.1	46.2	45.2	45.2	44.2	42.3	41.3	39.4
80°	35.5	34.6	34.6	34.6	32.7	33.6	32.7	31.7	30.7	29.8	28.8
82.5°	23.0	24.0	24.0	23.0	22.1	22.1	22.1	21.1	21.1	20.1	19.3
85°	13.5	13.5	13.5	13.5	12.5	12.5	12.5	11.6	11.6	11.6	10.6
87.5°	5.8	5.8	5.8	5.8	5.8	5.8	4.8	4.8	4.8	4.8	4.8
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: P583931

CATALOG NUMBER: HC815D010-HM80520930-81WWW

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	708.3	708.3	708.3	708.3	708.3	708.3	708.3	708.3	708.3	708.3	708.3
2.5°	716.0	714.1	713.1	712.2	712.2	711.2	710.2	708.3	708.3	706.4	705.4
5°	719.9	717.0	715.0	713.1	712.2	710.2	708.3	705.4	704.6	701.7	698.8
7.5°	720.8	716.0	714.1	710.2	708.3	706.4	702.6	699.7	695.9	693.0	689.1
10°	717.0	713.1	708.3	703.6	702.6	699.7	694.0	690.1	685.3	681.4	675.6
12.5°	711.2	705.4	700.7	694.9	692.0	689.1	683.4	677.6	670.8	664.2	658.4
15°	701.7	694.9	688.2	681.4	677.6	674.7	667.9	661.3	654.6	645.9	640.1
17.5°	687.2	679.5	672.8	664.2	660.3	657.4	648.8	641.1	632.4	623.8	618.0
20°	668.9	659.4	651.7	642.0	639.1	634.3	625.6	617.1	607.4	597.8	591.1
22.5°	644.9	635.3	626.6	617.1	612.3	607.4	598.8	588.2	578.6	570.9	564.2
25°	617.1	608.4	597.8	589.1	583.5	577.7	568.0	559.4	550.7	539.2	532.5
27.5°	586.2	575.7	568.0	556.5	550.7	546.8	536.3	524.8	517.1	506.5	498.9
30°	551.6	542.1	533.5	521.9	516.1	512.2	502.7	492.1	484.4	473.8	466.1
32.5°	515.1	504.5	494.0	486.3	479.6	475.7	465.1	458.5	448.9	440.2	431.5
35°	475.7	465.1	457.5	446.9	443.1	439.2	430.5	422.0	413.3	405.6	398.9
37.5°	433.4	425.7	417.2	409.5	406.6	402.7	392.1	384.4	377.8	370.1	364.3
40°	392.1	385.4	379.7	372.0	367.2	364.3	356.6	349.8	342.2	337.4	331.6
42.5°	354.6	346.9	341.3	335.5	330.7	327.8	321.0	316.2	310.4	305.6	299.0
45°	315.2	311.4	304.6	299.9	297.0	293.2	288.4	282.6	277.8	273.9	269.1
47.5°	280.6	276.8	272.0	266.2	264.3	261.5	256.7	252.8	249.0	245.1	240.3
50°	249.0	244.1	240.3	236.4	234.5	231.6	226.8	224.9	222.0	218.2	215.3
52.5°	220.2	216.3	212.4	207.6	206.7	204.7	201.8	198.0	195.1	193.2	191.2
55°	194.1	190.3	187.4	183.5	182.6	180.8	176.9	175.0	173.0	171.1	169.2
57.5°	171.1	167.3	163.4	161.5	159.5	157.6	156.6	153.8	151.8	150.9	148.9
60°	149.9	146.0	143.2	140.4	139.4	138.5	136.5	134.6	132.7	130.7	129.8
62.5°	129.8	125.9	124.0	122.1	120.1	120.1	118.2	116.3	114.4	113.4	111.5
65°	111.5	109.5	106.6	103.8	102.8	102.8	100.0	99.1	98.1	96.2	94.2
67.5°	94.2	92.3	89.4	88.4	87.5	86.5	85.6	83.6	81.7	80.7	78.8
70°	78.8	76.9	75.0	74.0	73.0	72.1	70.1	69.2	67.2	66.3	65.3
72.5°	63.4	62.4	60.5	59.6	58.7	57.7	56.8	55.8	53.9	52.9	51.9
75°	51.0	50.0	48.1	47.1	46.2	46.2	45.2	43.3	42.3	42.3	41.3
77.5°	38.4	37.5	36.5	35.5	34.6	34.6	33.6	32.7	31.7	31.7	30.7
80°	27.8	26.9	25.9	25.9	25.9	24.9	24.0	24.0	23.0	23.0	22.1
82.5°	18.3	18.3	17.4	17.4	17.4	16.4	16.4	15.4	15.4	15.4	15.4
85°	10.6	10.6	10.6	9.6	9.6	9.6	9.6	9.6	9.6	8.7	9.6
87.5°	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	3.9	3.9	3.9
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: P583931

CATALOG NUMBER: HC815D010-HM80520930-81WWW

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	708.3	708.3	708.3	708.3	708.3	708.3	708.3	708.3	708.3	708.3	708.3
2.5°	704.6	703.6	701.7	701.7	699.7	699.7	698.8	697.8	696.9	695.9	694.9
5°	697.8	694.0	692.0	691.1	689.1	688.2	685.3	683.4	682.4	680.5	678.5
7.5°	685.3	681.4	677.6	676.6	675.6	671.8	668.9	666.0	664.2	662.3	660.3
10°	670.8	667.0	662.3	660.3	658.4	653.6	649.7	646.8	643.0	639.1	638.2
12.5°	653.6	647.8	642.0	640.1	637.2	632.4	628.5	623.8	620.9	616.1	615.2
15°	633.3	626.6	621.9	617.1	615.2	610.3	603.6	599.7	593.9	592.0	587.2
17.5°	609.4	602.6	595.9	593.9	591.1	584.3	577.7	572.9	567.1	564.2	561.3
20°	584.3	575.7	569.0	567.1	563.2	557.4	550.7	545.9	541.2	535.4	532.5
22.5°	555.5	545.9	540.2	535.4	534.4	527.7	520.0	516.1	512.2	507.4	503.6
25°	523.8	515.1	508.4	504.5	502.7	496.9	491.2	486.3	480.6	477.7	472.8
27.5°	491.2	485.4	476.7	472.8	470.0	465.1	458.5	455.6	449.8	446.0	443.1
30°	459.5	450.8	446.0	441.2	438.3	433.4	427.7	424.8	420.1	416.2	413.3
32.5°	424.8	419.1	412.4	410.4	406.6	401.7	397.9	393.1	389.2	385.4	384.4
35°	393.1	385.4	378.7	376.8	373.9	369.1	367.2	364.3	359.5	358.5	354.6
37.5°	358.5	354.6	346.9	344.0	343.1	339.3	335.5	333.5	330.7	327.8	326.8
40°	325.8	321.0	317.2	314.3	312.3	309.4	305.6	304.6	302.7	299.0	298.0
42.5°	295.1	290.3	286.4	285.5	282.6	279.7	277.8	274.9	273.9	272.9	271.0
45°	265.2	262.3	258.6	257.6	256.7	252.8	250.9	249.0	247.0	246.1	244.1
47.5°	238.3	235.5	232.6	231.6	229.7	228.7	225.8	224.9	222.0	221.1	220.2
50°	212.4	210.5	208.6	207.6	205.7	204.7	202.8	200.9	198.9	198.0	197.0
52.5°	189.3	187.4	185.4	184.5	183.5	181.6	179.8	177.9	176.9	175.9	175.0
55°	167.3	165.3	164.4	163.4	162.4	161.5	158.6	157.6	156.6	155.7	153.8
57.5°	147.0	145.1	143.2	143.2	142.2	141.2	139.4	137.5	137.5	135.6	133.6
60°	128.8	126.9	125.0	124.0	123.0	121.1	120.1	119.2	118.2	117.2	115.3
62.5°	109.5	108.6	106.6	106.6	104.7	103.8	102.8	101.8	100.9	99.1	98.1
65°	93.3	92.3	90.4	89.4	89.4	88.4	86.5	85.6	84.6	84.6	83.6
67.5°	77.8	76.9	75.0	74.0	74.0	73.0	72.1	72.1	71.1	70.1	71.1
70°	64.3	62.4	62.4	61.5	61.5	60.5	59.6	59.6	59.6	60.5	60.5
72.5°	51.0	50.0	49.0	49.0	49.0	49.0	48.1	48.1	49.0	50.0	50.0
75°	40.4	39.4	39.4	39.4	38.4	38.4	39.4	39.4	40.4	40.4	40.4
77.5°	29.8	29.8	29.8	29.8	29.8	29.8	30.7	30.7	31.7	31.7	31.7
80°	22.1	22.1	22.1	22.1	22.1	23.0	23.0	23.0	23.0	23.0	24.0
82.5°	15.4	15.4	15.4	15.4	15.4	15.4	15.4	16.4	16.4	16.4	16.4
85°	8.7	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6
87.5°	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9
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: P583931

CATALOG NUMBER: HC815D010-HM80520930-81WWW

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	708.3	708.3	708.3	708.3	708.3	708.3	708.3	708.3
2.5°	694.0	694.0	694.0	694.9	693.0	693.0	693.0	693.0
5°	677.6	676.6	675.6	676.6	674.7	674.7	673.7	673.7
7.5°	657.4	656.5	655.5	655.5	653.6	653.6	652.6	651.7
10°	635.3	633.3	634.3	632.4	631.4	630.5	629.5	628.5
12.5°	611.3	609.4	608.4	606.5	604.5	603.6	604.5	602.6
15°	585.3	582.5	581.5	579.6	577.7	576.7	576.7	575.7
17.5°	556.5	554.5	553.6	551.6	550.7	548.8	547.8	546.8
20°	529.6	524.8	525.7	523.8	522.8	519.0	519.0	520.0
22.5°	499.8	496.9	495.0	493.1	492.1	490.2	490.2	489.2
25°	470.0	467.1	466.1	464.2	463.2	461.4	460.4	460.4
27.5°	441.2	437.3	437.3	435.4	433.4	432.5	431.5	430.5
30°	410.4	407.5	406.6	406.6	405.6	405.6	402.7	403.7
32.5°	381.6	379.7	378.7	376.8	376.8	375.8	375.8	372.9
35°	352.7	349.8	350.8	348.8	347.9	346.9	347.9	346.9
37.5°	324.9	322.9	322.9	321.0	321.0	320.0	319.1	321.0
40°	297.0	296.1	295.1	294.1	295.1	294.1	292.2	293.2
42.5°	269.1	269.1	268.1	268.1	267.1	267.1	267.1	267.1
45°	244.1	243.2	243.2	242.2	242.2	242.2	242.2	241.2
47.5°	219.2	218.2	218.2	218.2	217.3	217.3	216.3	217.3
50°	195.1	195.1	194.1	194.1	195.1	194.1	193.2	193.2
52.5°	173.0	173.0	172.1	172.1	171.1	170.1	171.1	171.1
55°	152.8	151.8	150.9	150.9	149.9	148.9	148.9	149.9
57.5°	133.6	132.7	131.7	131.7	129.8	128.8	128.8	128.8
60°	115.3	113.4	113.4	112.4	112.4	111.5	111.5	111.5
62.5°	98.1	97.1	97.1	97.1	97.1	96.2	96.2	96.2
65°	83.6	83.6	83.6	84.6	84.6	85.6	85.6	85.6
67.5°	72.1	73.0	73.0	73.0	74.0	74.0	74.0	73.0
70°	61.5	61.5	61.5	62.4	62.4	62.4	62.4	62.4
72.5°	51.0	51.0	51.0	51.0	51.0	51.0	51.0	51.0
75°	40.4	41.3	41.3	41.3	40.4	41.3	41.3	40.4
77.5°	31.7	31.7	31.7	31.7	31.7	31.7	31.7	31.7
80°	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0
82.5°	16.4	16.4	16.4	16.4	16.4	16.4	16.4	16.4
85°	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6
87.5°	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



Report Generated By 670245859 / DESKTOP-HRDQ47P





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













(END OF REPORT)