

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: P583914

Luminaire Tested: **HC815D010-HM80520927-81WWW**

Issue Date: 10/21/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P583914  
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-HM80520927-81WWW  
Description: HALO COMMERCIAL 8" ROUND, NEW CONSTRUCTION FRAME, WITH 8" WALLWASH DISTRIBUTION, WHITE TRIM  
Light Source: (1) HIGH LUMEN LED 90CRI / 2700K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1180.4 lumens  
Efficiency: N/A  
Efficacy: 84.3 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

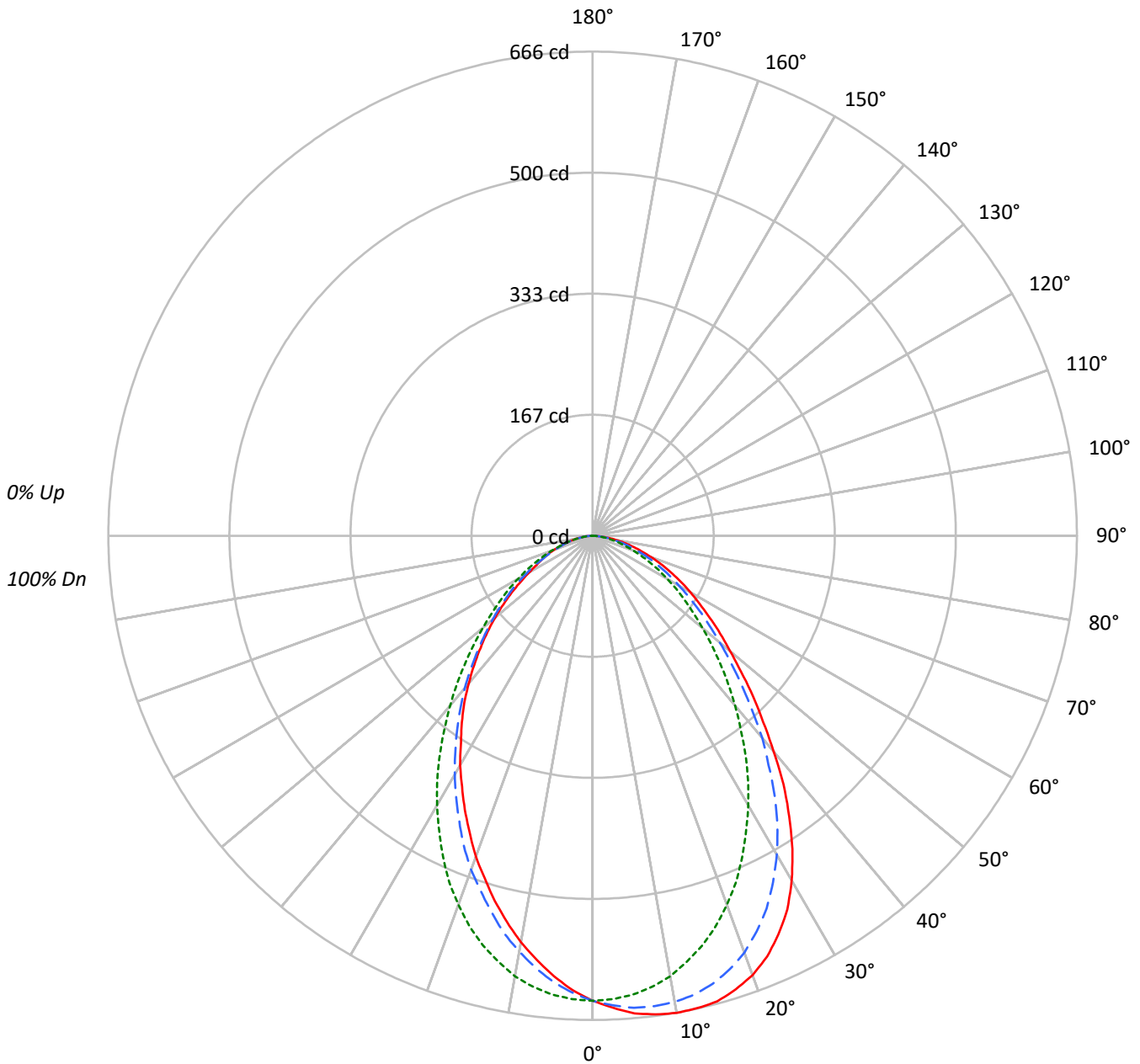
Input Watts (W): 14  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P583914

CATALOG NUMBER: HC815D010-HM80520927-81WWW

### Luminous Intensity Polar Plot





TEST NUMBER: P583914

CATALOG NUMBER: HC815D010-HM80520927-81WWW

**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								
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°	19723	19723	19723
5°	20417	19613	18832
10°	20869	19266	17773
15°	21166	18618	16594
20°	21104	17714	15407
25°	20581	16563	14144
30°	19502	15236	12979
35°	17742	13785	11794
40°	15578	12261	10655
45°	13589	10789	9502
50°	11820	9451	8371
55°	10548	8306	7279
60°	9578	7277	6204
65°	8610	6333	5633
70°	7673	5401	5085
75°	6720	4551	4337
80°	5700	3694	3853
85°	4316	2760	3078



TEST NUMBER: P583914

CATALOG NUMBER: HC815D010-HM80520927-81WWW

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	59.9	5.1
10°-20°	165.1	14.0
20°-30°	229.1	19.4
30°-40°	236.9	20.1
40°-50°	198.3	16.8
50°-60°	144.0	12.2
60°-70°	90.9	7.7
70°-80°	45.0	3.8
80°-90°	11.2	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°	454.1	38.5
0°-40°	691.0	58.5
0°-60°	1033.3	87.5
0°-90°	1180.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1180.4	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	640	640	640	640	640	
5°	660	652	634	616	608	63
15°	663	638	583	536	520	187
25°	605	566	487	434	416	277
35°	471	437	366	325	313	293
45°	312	289	247	223	218	241
55°	196	179	154	142	135	177
65°	118	103	87	76	77	118
75°	56	47	38	36	36	60
85°	12	10	8	9	9	15
90°	0	0	0	0	0	



TEST NUMBER: P583914

CATALOG NUMBER: HC815D010-HM80520927-81WWW

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	639.6	639.6	639.6	639.6	639.6	639.6	639.6	639.6	639.6	639.6	639.6
2.5°	650.0	650.0	650.9	650.0	650.0	650.0	649.1	649.1	648.3	648.3	646.6
5°	659.6	657.8	659.6	657.8	657.8	657.8	657.0	655.3	654.3	652.6	651.8
7.5°	664.0	663.0	663.0	662.1	662.1	661.3	660.5	659.6	656.1	655.3	652.6
10°	666.5	665.6	665.6	664.8	663.0	663.0	661.3	660.5	656.1	654.3	650.9
12.5°	665.6	665.6	665.6	664.8	662.1	661.3	659.6	657.0	653.5	650.0	646.6
15°	663.0	663.0	661.3	660.5	657.8	656.1	655.3	650.9	647.4	643.1	637.9
17.5°	654.3	654.3	653.5	651.8	649.1	647.4	645.6	641.3	637.9	630.9	625.8
20°	643.1	642.3	641.3	638.8	636.1	635.3	632.6	626.6	622.3	617.1	610.1
22.5°	626.6	625.8	624.8	623.1	618.8	617.1	615.3	610.9	603.1	597.9	589.2
25°	604.9	604.9	603.1	600.6	596.2	594.4	591.9	587.6	580.6	572.7	565.9
27.5°	579.7	578.9	576.2	574.5	571.0	568.4	564.1	558.9	552.0	545.9	537.2
30°	547.7	547.7	545.9	543.2	538.9	537.2	533.7	527.7	520.7	512.8	506.8
32.5°	511.2	511.2	508.5	506.8	504.2	499.8	499.0	492.1	486.0	480.0	473.0
35°	471.3	472.1	470.4	466.9	462.6	462.6	460.8	454.8	447.8	441.8	436.6
37.5°	431.3	428.7	427.9	426.1	423.6	420.1	418.3	415.7	409.6	405.2	397.5
40°	387.0	387.9	386.2	384.5	383.6	381.0	380.2	375.7	371.4	366.2	362.7
42.5°	347.2	347.2	347.2	345.4	343.7	341.0	340.2	337.6	332.3	329.0	323.7
45°	311.6	309.0	309.0	308.1	307.3	305.5	302.9	301.1	297.6	295.1	289.0
47.5°	276.8	277.8	276.8	275.9	273.4	272.5	271.6	268.1	264.7	262.1	257.7
50°	246.4	248.2	246.4	246.4	244.7	243.9	242.1	239.6	236.9	232.6	228.2
52.5°	221.4	221.4	220.4	219.6	217.0	215.2	214.4	213.5	209.2	205.7	202.2
55°	196.2	197.0	197.0	194.4	193.5	191.8	190.9	188.3	186.5	181.4	178.8
57.5°	174.5	173.5	174.5	172.7	171.0	169.2	168.3	166.7	164.0	160.5	157.1
60°	155.3	153.6	153.6	152.8	151.0	150.1	148.5	145.8	143.2	139.8	137.1
62.5°	136.3	135.4	134.5	133.6	131.9	131.1	130.1	127.6	125.0	122.3	119.8
65°	118.0	118.0	117.1	115.4	114.6	113.6	112.8	111.1	107.6	105.9	103.3
67.5°	101.6	100.6	100.6	98.9	97.2	96.3	96.3	94.6	91.9	89.4	87.6
70°	85.1	85.9	85.1	84.2	82.4	82.4	80.7	79.9	76.4	75.6	72.9
72.5°	70.3	70.3	69.4	69.4	67.7	66.9	66.9	65.1	63.4	61.6	59.9
75°	56.4	56.4	56.4	55.6	54.7	52.9	52.9	52.1	50.4	48.6	46.9
77.5°	44.2	43.4	43.4	42.5	41.7	40.7	40.7	39.9	38.2	37.4	35.5
80°	32.1	31.2	31.2	31.2	29.5	30.4	29.5	28.7	27.7	26.9	26.0
82.5°	20.8	21.7	21.7	20.8	20.0	20.0	20.0	19.0	19.0	18.2	17.4
85°	12.2	12.2	12.2	12.2	11.3	11.3	11.3	10.4	10.4	10.4	9.5
87.5°	5.2	5.2	5.2	5.2	5.2	5.2	4.3	4.3	4.3	4.3	4.3
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: P583914

CATALOG NUMBER: HC815D010-HM80520927-81WWW

**CANDELA DISTRIBUTION (continued):**

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	639.6	639.6	639.6	639.6	639.6	639.6	639.6	639.6	639.6	639.6	639.6
2.5°	646.6	644.8	644.0	643.1	643.1	642.3	641.3	639.6	639.6	637.9	637.0
5°	650.0	647.4	645.6	644.0	643.1	641.3	639.6	637.0	636.1	633.6	630.9
7.5°	650.9	646.6	644.8	641.3	639.6	637.9	634.4	631.8	628.3	625.8	622.3
10°	647.4	644.0	639.6	635.3	634.4	631.8	626.6	623.1	618.8	615.3	610.1
12.5°	642.3	637.0	632.6	627.4	624.8	622.3	617.1	611.8	605.8	599.7	594.4
15°	633.6	627.4	621.4	615.3	611.8	609.2	603.1	597.1	591.1	583.2	578.0
17.5°	620.5	613.6	607.4	599.7	596.2	593.6	585.8	578.9	571.0	563.2	558.0
20°	604.1	595.4	588.4	579.7	577.1	572.7	565.0	557.2	548.5	539.8	533.7
22.5°	582.4	573.7	565.9	557.2	552.9	548.5	540.7	531.2	522.5	515.5	509.5
25°	557.2	549.4	539.8	532.0	526.8	521.5	512.8	505.1	497.3	486.8	480.8
27.5°	529.4	519.8	512.8	502.5	497.3	493.8	484.3	473.8	466.9	457.3	450.4
30°	498.1	489.5	481.6	471.3	466.1	462.6	453.9	444.3	437.4	427.9	420.9
32.5°	465.1	455.6	446.1	439.1	433.1	429.6	420.1	413.9	405.2	397.5	389.7
35°	429.6	420.1	413.1	403.6	400.1	396.6	388.9	381.0	373.2	366.2	360.2
37.5°	391.4	384.5	376.7	369.7	367.0	363.7	354.0	347.2	341.0	334.1	329.0
40°	354.0	348.0	342.8	335.8	331.5	329.0	322.0	316.0	309.0	304.6	299.4
42.5°	320.3	313.3	308.1	302.9	298.6	295.9	289.8	285.5	280.3	275.9	269.9
45°	284.6	281.1	275.1	270.8	268.1	264.7	260.4	255.1	250.8	247.4	243.0
47.5°	253.4	249.9	245.6	240.4	238.7	236.1	231.7	228.2	224.7	221.4	217.0
50°	224.7	220.4	217.0	213.5	211.7	209.2	204.8	203.0	200.5	197.0	194.4
52.5°	198.7	195.2	191.8	187.5	186.5	184.8	182.2	178.8	176.2	174.5	172.7
55°	175.3	171.8	169.2	165.8	164.8	163.2	159.7	158.0	156.2	154.5	152.8
57.5°	154.5	151.0	147.5	145.8	144.1	142.3	141.5	138.8	137.1	136.3	134.5
60°	135.4	131.9	129.3	126.8	125.8	125.0	123.3	121.5	119.8	118.0	117.1
62.5°	117.1	113.6	111.9	110.3	108.4	108.4	106.8	105.0	103.3	102.4	100.6
65°	100.6	98.9	96.3	93.7	92.9	92.9	90.3	89.4	88.6	86.8	85.1
67.5°	85.1	83.3	80.7	79.9	78.9	78.1	77.2	75.6	73.7	72.9	71.2
70°	71.2	69.4	67.7	66.9	65.9	65.1	63.4	62.5	60.7	59.9	59.0
72.5°	57.2	56.4	54.7	53.9	52.9	52.1	51.2	50.4	48.6	47.7	46.9
75°	46.0	45.2	43.4	42.5	41.7	41.7	40.7	39.0	38.2	38.2	37.4
77.5°	34.7	33.9	33.0	32.1	31.2	31.2	30.4	29.5	28.7	28.7	27.7
80°	25.2	24.3	23.4	23.4	23.4	22.5	21.7	21.7	20.8	20.8	20.0
82.5°	16.5	16.5	15.7	15.7	15.7	14.7	14.7	13.9	13.9	13.9	13.9
85°	9.5	9.5	9.5	8.7	8.7	8.7	8.7	8.7	8.7	7.8	8.7
87.5°	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	3.5	3.5	3.5
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: P583914

CATALOG NUMBER: HC815D010-HM80520927-81WWW

**CANDELA DISTRIBUTION (continued):**

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	639.6	639.6	639.6	639.6	639.6	639.6	639.6	639.6	639.6	639.6	639.6
2.5°	636.1	635.3	633.6	633.6	631.8	631.8	630.9	630.1	629.3	628.3	627.4
5°	630.1	626.6	624.8	623.9	622.3	621.4	618.8	617.1	616.1	614.4	612.7
7.5°	618.8	615.3	611.8	610.9	610.1	606.6	604.1	601.4	599.7	597.9	596.2
10°	605.8	602.3	597.9	596.2	594.4	590.1	586.7	584.1	580.6	577.1	576.2
12.5°	590.1	584.9	579.7	578.0	575.4	571.0	567.6	563.2	560.7	556.3	555.4
15°	571.9	565.9	561.5	557.2	555.4	551.0	545.0	541.5	536.3	534.5	530.2
17.5°	550.2	544.2	538.0	536.3	533.7	527.7	521.5	517.2	512.0	509.5	506.8
20°	527.7	519.8	513.8	512.0	508.5	503.3	497.3	493.0	488.6	483.4	480.8
22.5°	501.6	493.0	487.8	483.4	482.5	476.5	469.5	466.1	462.6	458.3	454.8
25°	473.0	465.1	459.1	455.6	453.9	448.6	443.4	439.1	433.9	431.3	426.9
27.5°	443.4	438.3	430.4	426.9	424.4	420.1	413.9	411.4	406.2	402.7	400.1
30°	414.9	407.0	402.7	398.4	395.7	391.4	386.2	383.6	379.2	375.7	373.2
32.5°	383.6	378.4	372.3	370.5	367.0	362.7	359.3	355.0	351.5	348.0	347.2
35°	355.0	348.0	342.0	340.2	337.6	333.3	331.5	329.0	324.6	323.7	320.3
37.5°	323.7	320.3	313.3	310.6	309.8	306.3	302.9	301.1	298.6	295.9	295.1
40°	294.3	289.8	286.4	283.8	282.1	279.4	275.9	275.1	273.4	269.9	269.1
42.5°	266.4	262.1	258.6	257.7	255.1	252.6	250.8	248.2	247.4	246.4	244.7
45°	239.6	236.9	233.4	232.6	231.7	228.2	226.5	224.7	223.0	222.2	220.4
47.5°	215.2	212.7	210.0	209.2	207.4	206.5	203.9	203.0	200.5	199.5	198.7
50°	191.8	190.0	188.3	187.5	185.7	184.8	183.2	181.4	179.7	178.8	177.9
52.5°	171.0	169.2	167.5	166.7	165.8	164.0	162.3	160.5	159.7	158.8	158.0
55°	151.0	149.3	148.5	147.5	146.6	145.8	143.2	142.3	141.5	140.6	138.8
57.5°	132.8	131.1	129.3	129.3	128.5	127.6	125.8	124.1	124.1	122.3	120.6
60°	116.3	114.6	112.8	111.9	111.1	109.3	108.4	107.6	106.8	105.9	104.1
62.5°	98.9	98.1	96.3	96.3	94.6	93.7	92.9	91.9	91.1	89.4	88.6
65°	84.2	83.3	81.6	80.7	80.7	79.9	78.1	77.2	76.4	76.4	75.6
67.5°	70.3	69.4	67.7	66.9	66.9	65.9	65.1	65.1	64.2	63.4	64.2
70°	58.2	56.4	56.4	55.6	55.6	54.7	53.9	53.9	53.9	54.7	54.7
72.5°	46.0	45.2	44.2	44.2	44.2	44.2	43.4	43.4	44.2	45.2	45.2
75°	36.4	35.5	35.5	35.5	34.7	34.7	35.5	35.5	36.4	36.4	36.4
77.5°	26.9	26.9	26.9	26.9	26.9	26.9	27.7	27.7	28.7	28.7	28.7
80°	20.0	20.0	20.0	20.0	20.0	20.8	20.8	20.8	20.8	20.8	21.7
82.5°	13.9	13.9	13.9	13.9	13.9	13.9	13.9	14.7	14.7	14.7	14.7
85°	7.8	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7
87.5°	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
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: P583914

CATALOG NUMBER: HC815D010-HM80520927-81WWW

**CANDELA DISTRIBUTION (continued):**

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	639.6	639.6	639.6	639.6	639.6	639.6	639.6	639.6
2.5°	626.6	626.6	626.6	627.4	625.8	625.8	625.8	625.8
5°	611.8	610.9	610.1	610.9	609.2	609.2	608.4	608.4
7.5°	593.6	592.7	591.9	591.9	590.1	590.1	589.2	588.4
10°	573.7	571.9	572.7	571.0	570.2	569.4	568.4	567.6
12.5°	552.0	550.2	549.4	547.7	545.9	545.0	545.9	544.2
15°	528.5	525.9	525.0	523.3	521.5	520.7	520.7	519.8
17.5°	502.5	500.8	499.8	498.1	497.3	495.5	494.7	493.8
20°	478.1	473.8	474.8	473.0	472.1	468.6	468.6	469.5
22.5°	451.3	448.6	446.9	445.2	444.3	442.6	442.6	441.8
25°	424.4	421.8	420.9	419.2	418.3	416.6	415.7	415.7
27.5°	398.4	394.9	394.9	393.2	391.4	390.5	389.7	388.9
30°	370.5	368.0	367.0	367.0	366.2	366.2	363.7	364.5
32.5°	344.5	342.8	342.0	340.2	340.2	339.3	339.3	336.7
35°	318.5	316.0	316.8	315.0	314.1	313.3	314.1	313.3
37.5°	293.3	291.6	291.6	289.8	289.8	289.0	288.1	289.8
40°	268.1	267.3	266.4	265.6	266.4	265.6	263.8	264.7
42.5°	243.0	243.0	242.1	242.1	241.2	241.2	241.2	241.2
45°	220.4	219.6	219.6	218.7	218.7	218.7	218.7	217.9
47.5°	197.9	197.0	197.0	197.0	196.2	196.2	195.2	196.2
50°	176.2	176.2	175.3	175.3	176.2	175.3	174.5	174.5
52.5°	156.2	156.2	155.3	155.3	154.5	153.6	154.5	154.5
55°	138.0	137.1	136.3	136.3	135.4	134.5	134.5	135.4
57.5°	120.6	119.8	118.9	118.9	117.1	116.3	116.3	116.3
60°	104.1	102.4	102.4	101.6	101.6	100.6	100.6	100.6
62.5°	88.6	87.6	87.6	87.6	87.6	86.8	86.8	86.8
65°	75.6	75.6	75.6	76.4	76.4	77.2	77.2	77.2
67.5°	65.1	65.9	65.9	65.9	66.9	66.9	66.9	65.9
70°	55.6	55.6	55.6	56.4	56.4	56.4	56.4	56.4
72.5°	46.0	46.0	46.0	46.0	46.0	46.0	46.0	46.0
75°	36.4	37.4	37.4	37.4	36.4	37.4	37.4	36.4
77.5°	28.7	28.7	28.7	28.7	28.7	28.7	28.7	28.7
80°	21.7	21.7	21.7	21.7	21.7	21.7	21.7	21.7
82.5°	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7
85°	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7
87.5°	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
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)