

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: P583668

Luminaire Tested: **HC807D010-HM80520935-81RWWC**

Issue Date: 10/21/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P583668  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2109-368-14)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 10/21/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO COMMERCIAL  
Catalog Number: HC807D010-HM80520935-81RWWC  
Description: HALO COMMERCIAL 8" ROUND, NEW CONSTRUCTION FRAME, WITH 8" WALLWASH DISTRIBUTION, SPECULAR TRIM  
Light Source: (1) HIGH LUMEN LED 90CRI / 3500K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 846.3 lumens  
Efficiency: N/A  
Efficacy: 105.8 lumens/watt  
Spacing Criteria (0/90/45): 1.15 / 1.08 / 1.17  
Luminous Opening: Circular (Dia: 0.67' x H: 0')  
CIE Type: Direct

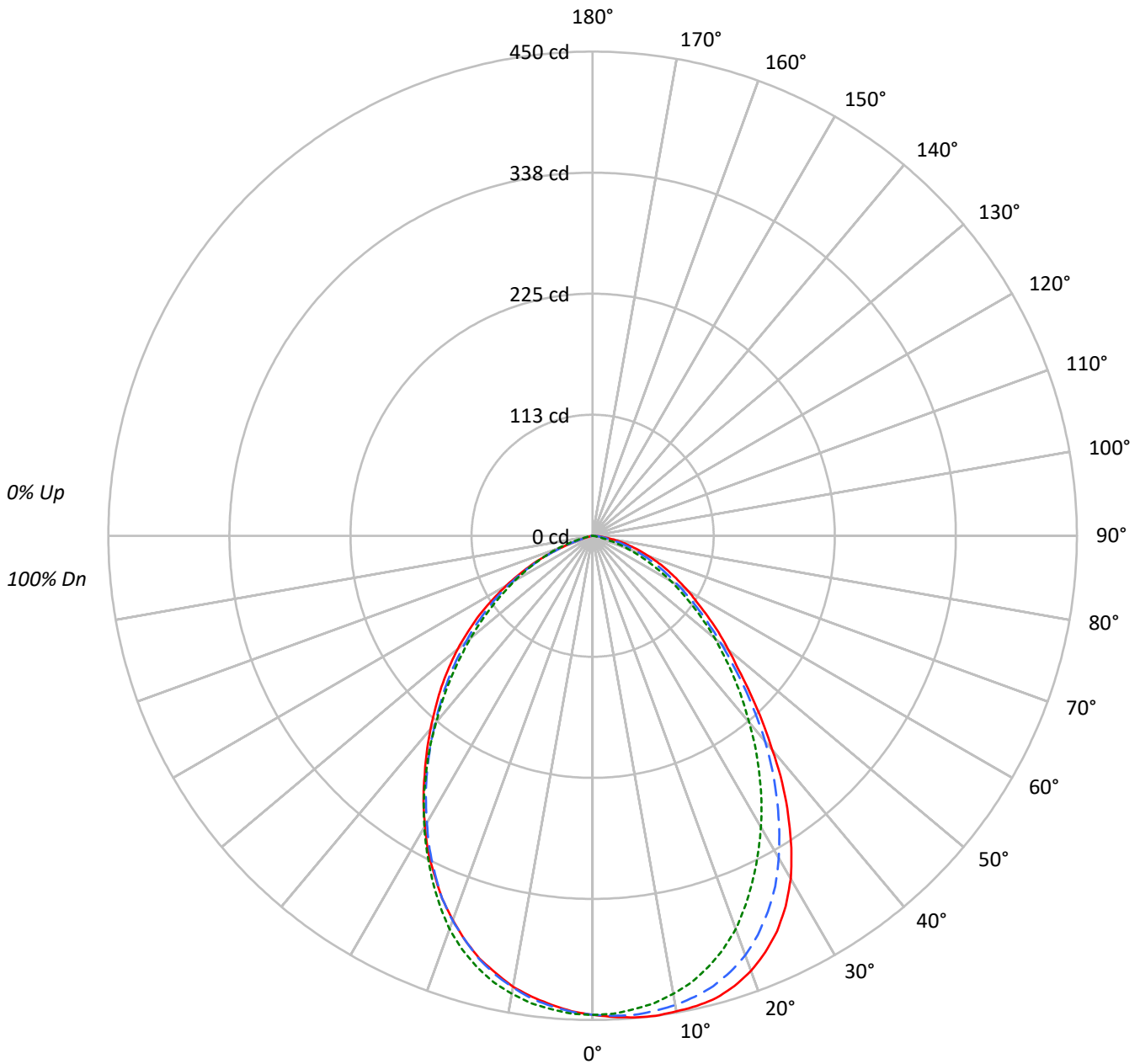
Input Watts (W): 8  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P583668

CATALOG NUMBER: HC807D010-HM80520935-81RWWC

### Luminous Intensity Polar Plot





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**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	111	107	104	101	108	105	102	99	101	98	96	97	95	93	93	92	90	88																			
2	103	96	90	85	100	94	89	84	91	86	82	87	84	81	84	82	79	77																			
3	95	86	79	73	93	84	78	73	82	76	72	79	74	70	76	73	69	67																			
4	88	77	70	64	86	76	69	64	74	68	63	72	66	62	69	65	61	59																			
5	81	70	62	56	80	69	62	56	67	61	56	65	59	55	63	58	54	52																			
6	76	64	56	50	74	63	55	50	61	55	50	60	54	49	58	53	49	47																			
7	71	59	51	45	69	58	50	45	56	50	45	55	49	44	54	48	44	42																			
8	66	54	46	41	65	53	46	41	52	45	40	51	45	40	50	44	40	38																			
9	62	50	42	37	61	49	42	37	48	42	37	47	41	37	46	41	37	35																			
10	58	46	39	34	57	46	39	34	45	38	34	44	38	34	43	38	34	32																			

**AVERAGE LUMINANCE (cd/sqm):**

	0°	90°	180°
0°	13731	13731	13731
5°	13911	13672	13546
10°	14053	13533	13330
15°	14197	13249	12984
20°	14124	12762	12467
25°	13797	11993	11830
30°	13107	11134	11091
35°	11929	10164	10251
40°	10458	9097	9427
45°	9023	8089	8661
50°	7901	7105	7844
55°	7005	6102	6908
60°	6309	5137	5717
65°	5684	4123	4378
70°	4986	3002	2416
75°	4253	1549	643
80°	3267	426	107
85°	2123	0	0



TEST NUMBER: P583668

CATALOG NUMBER: HC807D010-HM80520935-81RWWC

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	42.0	5.0
10°-20°	118.1	14.0
20°-30°	167.6	19.8
30°-40°	176.5	20.9
40°-50°	150.1	17.7
50°-60°	108.5	12.8
60°-70°	61.7	7.3
70°-80°	19.5	2.3
80°-90°	2.4	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°	327.7	38.7
0°-40°	504.2	59.6
0°-60°	762.8	90.1
0°-90°	846.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	846.3	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	445	445	445	445	445	
5°	449	447	442	439	438	43
15°	445	433	415	407	407	125
25°	406	385	352	347	348	186
35°	317	298	270	268	272	197
45°	207	199	186	190	199	161
55°	130	121	114	120	128	117
65°	78	67	56	56	60	77
75°	36	27	13	6	5	38
85°	6	4	0	0	0	8
90°	0	0	0	0	0	



TEST NUMBER: P583668

CATALOG NUMBER: HC807D010-HM80520935-81RWWC

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	445.3	445.3	445.3	445.3	445.3	445.3	445.3	445.3	445.3	445.3	445.3
2.5°	447.6	448.2	447.0	447.0	448.2	447.0	447.6	447.6	447.0	447.0	446.5
5°	449.4	448.8	448.8	448.8	449.4	448.2	447.6	448.2	447.0	447.0	447.0
7.5°	450.0	450.0	449.4	448.8	448.8	448.8	448.2	447.6	447.0	445.9	445.3
10°	448.8	448.8	449.4	448.2	448.2	447.0	447.0	445.9	445.9	444.7	442.9
12.5°	447.6	447.0	447.0	445.9	445.9	444.7	444.7	442.9	442.3	440.5	438.8
15°	444.7	444.1	442.9	442.3	441.7	441.1	440.0	439.4	437.6	435.2	433.4
17.5°	438.8	438.2	437.6	436.4	435.2	434.6	434.0	432.2	429.8	428.0	425.1
20°	430.4	429.8	429.8	428.0	427.5	425.7	425.1	422.7	420.9	417.3	415.0
22.5°	419.1	419.7	418.5	417.3	416.2	414.4	413.2	410.8	407.9	404.3	401.3
25°	405.5	406.1	404.9	403.7	401.9	400.7	399.5	395.9	392.9	388.9	385.3
27.5°	388.3	388.3	388.3	387.1	384.1	383.5	382.3	378.7	374.5	370.9	367.5
30°	368.1	367.5	367.5	365.7	364.5	362.1	360.3	357.3	354.3	350.1	346.0
32.5°	343.7	344.3	342.5	341.3	339.5	339.5	337.1	334.7	331.1	327.0	322.8
35°	316.9	317.5	316.3	315.7	312.7	312.1	311.5	308.5	306.2	303.2	298.4
37.5°	289.5	289.0	288.4	288.4	286.6	285.4	284.2	282.4	278.8	276.4	274.0
40°	259.8	259.8	259.8	259.2	258.6	257.4	256.8	255.6	253.2	250.8	249.2
42.5°	233.0	233.0	232.4	231.8	230.6	231.2	230.0	228.8	226.5	224.8	223.6
45°	206.9	206.9	206.9	207.5	206.3	204.5	204.5	203.3	202.2	201.0	199.2
47.5°	183.7	185.5	184.3	183.7	184.3	181.9	181.9	180.7	179.5	178.4	176.0
50°	164.7	164.7	164.7	163.5	162.9	162.9	161.1	159.9	159.3	158.1	155.7
52.5°	147.5	146.3	146.3	145.7	145.1	143.9	143.9	142.7	140.3	139.1	137.3
55°	130.3	130.3	129.7	129.1	128.5	127.9	127.3	125.5	124.3	122.5	120.7
57.5°	114.7	115.9	115.3	114.1	112.9	112.9	111.7	110.5	108.7	107.1	105.3
60°	102.3	101.7	101.7	101.1	99.9	99.3	98.7	96.9	95.1	93.3	91.5
62.5°	89.1	89.1	89.1	88.0	86.8	86.2	85.6	84.4	82.1	80.3	79.1
65°	77.9	77.3	76.7	76.1	75.5	74.3	73.7	72.5	70.7	69.0	67.2
67.5°	66.6	66.0	66.0	65.4	63.6	63.0	63.0	61.2	59.5	57.7	55.9
70°	55.3	55.3	55.3	54.1	53.5	52.9	52.3	51.1	49.4	47.6	45.8
72.5°	45.8	45.2	45.2	44.6	42.8	42.2	41.6	40.4	38.6	37.4	36.2
75°	35.7	35.7	35.1	34.5	33.9	33.3	32.7	31.5	29.8	28.0	27.4
77.5°	27.4	26.8	26.8	26.2	25.0	24.4	24.4	23.2	21.4	20.2	19.0
80°	18.4	19.0	18.4	17.8	17.2	16.6	16.0	15.4	14.2	13.0	12.0
82.5°	11.4	12.0	11.4	11.4	10.8	10.2	10.2	9.0	8.4	7.8	7.2
85°	6.0	6.0	6.0	6.0	5.4	5.4	5.4	4.8	4.2	3.6	3.6
87.5°	1.8	2.4	1.8	1.8	1.8	1.8	1.8	1.8	1.2	1.2	1.2
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: P583668

CATALOG NUMBER: HC807D010-HM80520935-81RWWC

**CANDELA DISTRIBUTION (continued):**

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	445.3	445.3	445.3	445.3	445.3	445.3	445.3	445.3	445.3	445.3	445.3
2.5°	447.0	446.5	445.9	445.9	445.9	445.9	445.9	445.3	444.7	444.7	444.7
5°	445.9	445.9	445.9	445.3	444.7	444.7	443.5	442.9	442.3	441.7	441.1
7.5°	444.7	443.5	442.9	442.3	441.7	441.7	440.5	439.4	439.4	438.2	437.0
10°	441.1	440.5	439.4	438.2	437.6	437.0	435.8	434.0	433.4	432.2	431.0
12.5°	437.0	435.8	434.6	432.2	431.6	431.0	428.6	426.9	425.7	425.1	422.1
15°	431.6	429.2	427.5	424.5	423.9	422.7	420.9	419.1	416.7	415.0	413.8
17.5°	422.1	419.7	416.7	413.8	412.6	412.6	409.6	407.3	404.3	403.1	400.7
20°	410.8	407.9	405.5	401.9	400.1	398.3	396.5	392.9	390.6	388.9	385.9
22.5°	397.7	393.5	390.6	387.1	384.1	382.3	379.3	376.3	373.3	371.5	369.1
25°	381.1	377.5	372.7	369.1	367.5	365.1	361.5	358.5	355.5	352.5	351.3
27.5°	362.7	357.9	353.7	349.5	347.7	346.0	341.9	338.3	335.9	332.9	331.7
30°	342.5	337.7	332.9	329.3	327.5	324.6	322.2	318.1	315.1	312.7	309.7
32.5°	319.3	315.7	311.5	306.2	305.0	302.6	299.0	297.3	293.7	291.9	289.5
35°	294.3	291.9	287.8	283.6	281.8	280.6	277.6	274.0	271.7	270.0	268.8
37.5°	270.5	267.6	263.4	260.4	259.2	257.4	253.8	252.0	249.8	248.6	246.2
40°	245.0	242.0	239.0	237.2	235.4	234.2	231.8	230.0	227.6	226.0	225.4
42.5°	220.0	218.2	215.8	213.4	212.8	211.0	209.8	208.0	206.3	205.7	203.9
45°	197.4	195.6	193.2	190.8	190.2	189.0	188.5	186.7	185.5	185.5	185.5
47.5°	174.8	173.0	170.6	169.5	170.0	167.7	167.7	167.1	165.9	165.9	166.5
50°	154.6	152.2	151.6	150.5	149.3	148.1	148.7	146.9	146.9	148.1	147.5
52.5°	135.5	133.1	132.5	131.3	130.9	130.9	130.3	130.3	129.7	130.3	130.3
55°	118.3	116.5	115.3	114.1	113.5	113.5	113.5	112.9	112.3	113.5	114.1
57.5°	102.9	102.3	101.1	99.3	98.7	98.1	97.5	97.5	97.5	97.5	98.1
60°	89.1	88.0	86.8	85.0	85.0	84.4	83.8	83.3	83.3	83.3	83.3
62.5°	77.3	75.5	73.7	72.5	71.9	71.3	70.7	69.5	69.5	69.5	69.5
65°	65.4	63.6	62.4	61.2	60.0	60.0	58.9	58.3	57.1	56.5	55.3
67.5°	54.1	52.9	51.7	50.0	49.4	48.8	47.6	47.0	45.2	44.6	44.0
70°	44.0	42.2	41.0	39.8	39.2	38.0	36.8	35.7	34.5	33.3	32.1
72.5°	34.5	32.7	31.5	30.4	29.2	29.2	27.4	26.2	24.4	23.2	21.4
75°	25.6	23.8	22.6	20.8	20.2	19.6	17.8	16.6	14.8	13.0	12.0
77.5°	17.2	16.0	14.8	13.0	12.0	12.0	10.2	9.0	7.8	6.0	5.4
80°	10.8	9.6	8.4	7.2	7.2	6.0	5.4	4.2	3.0	2.4	1.8
82.5°	6.0	5.4	4.8	3.6	3.6	3.0	2.4	1.8	1.2	0.6	0.6
85°	3.0	2.4	1.8	1.8	1.2	1.2	1.2	0.6	0.6	0.0	0.0
87.5°	1.2	0.6	0.6	0.6	0.6	0.6	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: P583668

CATALOG NUMBER: HC807D010-HM80520935-81RWWC

**CANDELA DISTRIBUTION (continued):**

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	445.3	445.3	445.3	445.3	445.3	445.3	445.3	445.3	445.3	445.3	445.3
2.5°	444.1	444.1	443.5	443.5	443.5	442.9	443.5	442.9	442.9	442.9	443.5
5°	441.7	440.5	440.5	440.0	440.0	439.4	440.0	439.4	438.8	438.2	438.8
7.5°	437.0	435.8	435.2	434.6	434.6	434.6	434.0	433.4	434.0	432.2	433.4
10°	430.4	429.8	428.6	428.0	427.5	428.0	427.5	426.3	426.3	426.3	425.7
12.5°	422.1	420.9	420.3	419.7	418.5	418.5	419.1	417.9	417.9	416.7	416.7
15°	412.0	410.8	409.6	409.6	408.5	408.5	407.9	407.9	407.3	406.7	406.7
17.5°	399.5	397.7	396.5	397.1	396.5	395.9	395.9	394.7	394.1	394.7	394.7
20°	384.7	383.5	382.3	382.9	381.7	381.1	381.7	379.9	380.5	380.5	380.5
22.5°	368.1	367.5	365.7	365.7	364.5	363.9	364.5	364.5	365.1	364.5	364.5
25°	349.5	348.3	347.1	347.1	346.6	346.0	346.6	347.1	346.6	347.1	347.1
27.5°	329.9	328.1	328.1	327.0	327.0	327.5	327.0	327.5	328.1	328.1	329.3
30°	308.5	308.0	307.4	306.8	306.8	307.4	307.4	307.4	308.0	309.1	309.1
32.5°	288.4	287.2	286.0	286.0	287.2	286.6	287.2	287.2	288.4	288.4	289.5
35°	266.4	266.4	265.2	265.8	265.8	265.8	265.8	267.0	268.2	268.8	270.0
37.5°	246.2	244.4	245.0	245.0	245.6	245.0	246.8	246.8	248.0	248.0	249.2
40°	224.2	224.2	224.8	224.2	224.8	224.8	226.0	227.0	227.6	228.8	229.4
42.5°	203.3	204.5	203.3	203.9	204.5	205.1	205.7	206.3	208.6	209.8	211.6
45°	184.3	184.9	185.5	186.1	185.5	186.7	187.3	188.5	190.2	190.8	191.4
47.5°	165.9	166.5	167.1	167.7	167.7	168.9	169.5	170.6	171.8	172.4	173.0
50°	148.1	149.3	149.9	149.9	150.5	151.6	152.8	152.8	154.0	155.7	156.3
52.5°	131.9	131.9	133.1	133.7	134.3	134.3	136.1	136.7	137.3	138.5	139.7
55°	114.1	115.9	116.5	116.5	117.7	118.9	119.5	120.1	120.1	122.5	122.5
57.5°	98.7	99.3	100.5	100.5	100.5	102.3	102.3	103.5	104.1	104.7	105.9
60°	83.3	84.4	84.4	85.0	84.4	85.6	86.2	87.4	88.0	88.5	89.1
62.5°	69.0	69.0	69.5	69.5	69.5	69.5	70.7	70.7	71.9	72.5	73.1
65°	55.3	55.3	55.3	55.3	55.3	55.3	55.3	55.3	55.9	55.9	57.1
67.5°	42.8	42.2	41.0	41.6	41.0	41.0	40.4	40.4	41.0	41.0	42.2
70°	31.0	30.4	29.2	29.2	28.6	28.0	27.4	26.8	26.2	26.2	26.2
72.5°	20.2	19.0	17.2	16.6	16.6	15.4	14.2	13.6	13.6	13.6	13.6
75°	10.2	9.0	7.8	7.2	7.2	6.0	6.6	6.0	6.0	6.0	6.0
77.5°	4.2	3.0	2.4	2.4	2.4	1.8	1.8	1.8	1.8	1.8	1.8
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	0.0	0.0	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	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: P583668

CATALOG NUMBER: HC807D010-HM80520935-81RWWC

**CANDELA DISTRIBUTION (continued):**

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	445.3	445.3	445.3	445.3	445.3	445.3	445.3	445.3
2.5°	442.9	442.9	441.7	442.3	442.3	442.3	442.3	442.3
5°	437.6	438.2	437.6	438.2	438.2	437.6	437.6	437.6
7.5°	432.2	432.8	432.2	432.8	432.8	432.8	432.2	432.2
10°	425.7	425.7	425.7	425.7	425.7	425.1	425.7	425.7
12.5°	416.7	416.7	416.7	417.3	417.3	416.7	416.7	416.2
15°	407.3	406.1	406.7	407.3	406.7	406.7	406.7	406.7
17.5°	394.1	394.7	394.1	394.1	394.1	394.1	394.7	394.1
20°	380.5	380.5	381.1	380.5	380.5	380.5	380.5	379.9
22.5°	365.1	364.5	364.5	365.1	365.1	364.5	365.1	365.1
25°	347.7	348.3	347.7	347.7	348.3	348.3	348.3	347.7
27.5°	329.3	329.9	330.5	329.9	329.9	329.9	330.5	331.1
30°	310.3	311.5	310.3	310.3	311.5	310.9	311.5	311.5
32.5°	290.1	291.9	290.7	291.9	291.9	292.5	291.9	292.5
35°	270.0	271.7	271.7	271.7	272.3	272.9	272.9	272.3
37.5°	250.8	251.4	251.4	252.6	253.2	253.8	253.8	253.2
40°	231.2	232.4	233.0	233.0	233.0	234.2	235.4	234.2
42.5°	212.2	212.8	213.4	213.4	214.6	215.2	215.8	215.8
45°	193.8	195.0	195.6	196.2	196.8	198.0	197.4	198.6
47.5°	174.8	176.6	177.2	177.8	178.9	179.5	180.1	180.7
50°	157.5	158.7	158.7	159.9	161.7	161.7	162.9	163.5
52.5°	140.3	140.9	141.5	142.1	143.3	144.5	144.5	145.7
55°	123.7	124.3	124.3	124.9	125.5	127.9	128.5	128.5
57.5°	106.5	106.5	107.6	108.1	108.7	109.9	109.9	109.9
60°	89.7	90.3	90.3	90.9	91.5	92.7	93.3	92.7
62.5°	73.1	73.7	73.7	74.3	75.5	76.1	75.5	75.5
65°	57.7	58.3	58.3	58.9	60.0	60.0	59.5	60.0
67.5°	42.2	42.2	42.2	42.2	42.2	42.2	42.2	42.2
70°	26.8	26.2	25.6	26.2	26.2	26.2	25.6	26.8
72.5°	13.0	13.6	13.6	13.6	13.6	13.6	13.6	13.0
75°	6.0	6.0	5.4	5.4	5.4	6.0	6.0	5.4
77.5°	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
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



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















(END OF REPORT)