

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: P583590

Luminaire Tested: **HC807D010-HM80520830-81WWBB**

Issue Date: 10/21/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P583590  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2109-368-17)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 10/21/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO COMMERCIAL  
Catalog Number: HC807D010-HM80520830-81WWBB  
Description: HALO COMMERCIAL 8" ROUND, NEW CONSTRUCTION FRAME, WITH 8" WALLWASH DISTRIBUTION, WHITE BAFFLE TRIM  
Light Source: (1) HIGH LUMEN LED 80CRI / 3000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 775.6 lumens  
Efficiency: N/A  
Efficacy: 96.9 lumens/watt  
Spacing Criteria (0/90/45): 1.15 / 1.07 / 1.16  
Luminous Opening: Circular (Dia: 0.67' x H: 0')  
CIE Type: Direct

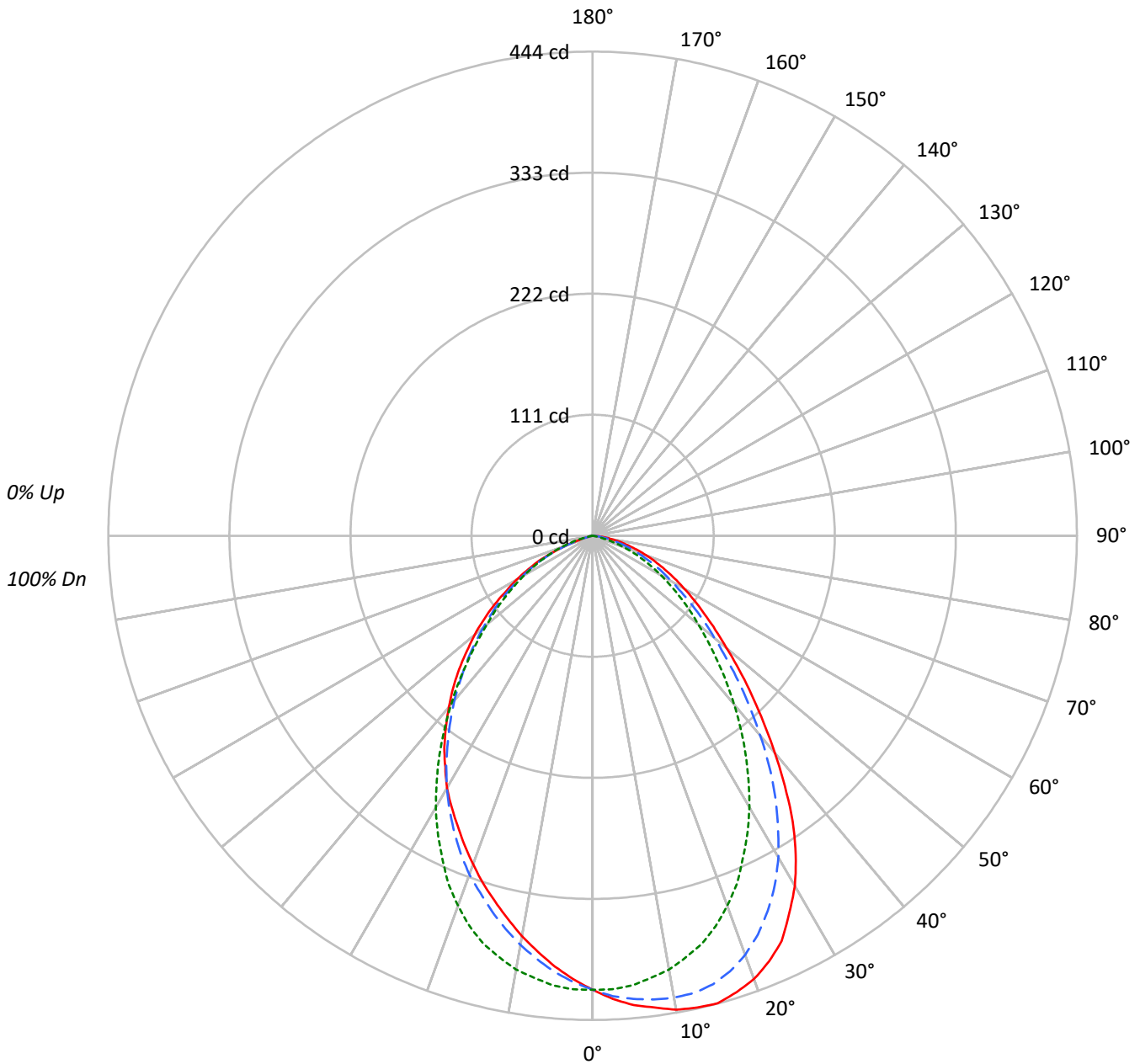
Input Watts (W): 8  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### 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	86	100	94	89	85	91	86	83	88	84	81	85	82	79	77																			
3	95	86	79	74	93	85	78	73	82	76	72	79	74	71	77	73	69	67																			
4	88	78	70	64	86	76	69	64	74	68	63	72	66	62	70	65	61	59																			
5	82	70	63	57	80	69	62	56	67	61	56	65	60	55	64	59	55	53																			
6	76	64	56	51	74	63	56	50	62	55	50	60	54	50	58	53	49	47																			
7	71	59	51	45	69	58	51	45	57	50	45	55	49	45	54	49	44	43																			
8	66	54	46	41	65	53	46	41	52	46	41	51	45	41	50	44	40	39																			
9	62	50	43	37	61	50	42	37	48	42	37	47	41	37	46	41	37	35																			
10	59	47	39	34	57	46	39	34	45	39	34	44	38	34	43	38	34	32																			

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

	0°	90°	180°
0°	12837	12837	12837
5°	13372	12812	12273
10°	13818	12647	11673
15°	14168	12361	11068
20°	14196	11846	10517
25°	13953	11095	9972
30°	13207	10237	9507
35°	12042	9208	8925
40°	10474	8119	8244
45°	8983	7030	7544
50°	7676	6059	6774
55°	6726	5226	5892
60°	5995	4453	4952
65°	5312	3634	3947
70°	4715	2696	2245
75°	3932	1406	667
80°	3090	444	107
85°	2194	212	0



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	39.2	5.1
10°-20°	110.0	14.2
20°-30°	155.6	20.1
30°-40°	162.8	21.0
40°-50°	135.8	17.5
50°-60°	96.3	12.4
60°-70°	55.5	7.2
70°-80°	17.8	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°	304.8	39.3
0°-40°	467.7	60.3
0°-60°	699.8	90.2
0°-90°	775.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	775.6	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	416	416	416	416	416	
5°	432	426	414	401	396	41
15°	444	426	387	357	347	125
25°	410	380	326	300	293	187
35°	320	292	245	232	237	198
45°	206	189	161	163	173	160
55°	125	112	97	102	110	113
65°	73	61	50	50	54	73
75°	33	24	12	6	6	36
85°	6	3	1	0	0	8
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	416.3	416.3	416.3	416.3	416.3	416.3	416.3	416.3	416.3	416.3	416.3
2.5°	425.1	424.5	423.9	424.5	423.9	424.5	423.9	423.9	423.3	422.6	422.6
5°	432.0	431.3	431.3	431.3	430.7	430.1	430.1	429.5	428.2	427.6	426.4
7.5°	436.3	436.9	436.9	436.9	435.7	435.7	434.4	433.2	432.0	430.7	428.9
10°	441.3	441.3	440.7	440.0	438.8	438.2	437.5	436.3	434.4	432.0	430.1
12.5°	443.1	443.1	442.5	441.3	440.7	440.0	439.4	437.5	435.1	432.0	429.5
15°	443.8	442.5	441.9	441.3	440.0	438.2	438.2	435.7	432.6	428.9	425.8
17.5°	438.8	439.4	438.2	436.9	435.1	433.8	432.0	430.1	426.4	422.0	418.8
20°	432.6	432.0	431.3	429.5	427.0	426.4	424.5	421.4	418.2	413.2	408.9
22.5°	422.6	422.0	420.8	419.4	417.1	415.7	413.9	410.1	405.8	400.8	395.9
25°	410.1	408.9	407.0	404.5	402.7	401.4	399.0	395.2	390.3	384.7	379.7
27.5°	390.3	392.1	390.9	387.2	385.3	382.8	382.2	377.1	372.8	367.2	361.6
30°	370.9	370.9	369.1	367.2	364.1	362.2	359.7	356.0	351.7	344.8	340.5
32.5°	346.7	346.1	343.6	343.0	340.5	336.8	336.2	331.1	326.7	321.8	316.2
35°	319.9	318.7	316.2	314.3	313.1	311.2	309.4	305.0	300.7	295.6	291.9
37.5°	289.4	289.4	288.8	285.7	284.4	283.2	281.3	277.0	274.5	269.5	265.8
40°	260.2	259.6	257.6	257.0	255.8	253.9	252.7	250.2	246.5	242.7	239.0
42.5°	231.6	232.2	229.7	230.3	227.8	226.6	226.0	222.2	220.4	216.7	213.4
45°	206.0	205.4	204.1	203.5	202.3	201.0	199.8	197.9	194.8	191.1	189.2
47.5°	182.4	180.4	180.4	179.8	179.2	176.7	176.1	174.2	172.4	168.6	166.2
50°	160.0	160.0	160.0	159.3	157.5	156.9	155.6	153.7	151.9	149.4	145.7
52.5°	142.0	142.0	142.0	141.2	138.7	138.1	137.5	135.0	132.5	130.7	128.2
55°	125.1	125.7	125.1	123.8	122.0	122.0	120.1	118.9	116.4	114.5	112.1
57.5°	110.8	110.8	109.6	108.9	107.7	107.1	105.8	104.6	101.5	99.5	96.4
60°	97.2	96.4	96.4	95.2	93.9	92.7	92.1	90.2	89.0	85.9	83.4
62.5°	84.6	84.6	83.4	83.4	80.9	80.9	80.3	78.4	76.6	73.5	72.2
65°	72.8	72.8	72.2	71.6	69.7	69.1	68.5	66.6	64.8	62.9	60.9
67.5°	62.3	62.3	60.9	60.3	59.2	58.6	57.2	56.0	54.1	52.3	50.4
70°	52.3	51.6	51.0	50.4	49.1	48.5	47.3	46.0	44.2	42.9	41.1
72.5°	42.3	42.3	41.7	40.5	39.8	39.2	38.6	37.4	35.5	33.6	32.4
75°	33.0	33.0	33.0	31.8	30.5	29.9	29.9	28.7	27.4	25.6	24.3
77.5°	25.6	24.9	24.3	24.3	23.1	22.5	21.7	21.2	19.2	18.6	17.4
80°	17.4	18.0	17.4	16.8	16.1	15.5	15.5	14.3	13.7	12.4	11.2
82.5°	11.8	11.2	11.2	10.6	10.6	9.9	9.9	8.7	8.1	7.5	6.8
85°	6.2	6.2	5.6	5.6	5.6	5.0	5.0	4.3	4.3	3.7	3.1
87.5°	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	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



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**CANDELA DISTRIBUTION (continued):**

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	416.3	416.3	416.3	416.3	416.3	416.3	416.3	416.3	416.3	416.3	416.3
2.5°	422.0	420.8	420.2	420.2	419.4	418.8	418.2	417.7	416.3	416.3	415.1
5°	425.1	423.9	423.3	421.4	420.2	420.2	417.7	417.1	415.1	413.9	412.6
7.5°	427.6	425.1	423.3	421.4	420.2	418.8	416.3	413.9	411.4	408.9	407.6
10°	427.6	425.1	422.0	418.8	417.7	416.3	413.2	409.5	406.4	403.9	400.8
12.5°	426.4	422.6	418.8	416.3	413.9	412.0	408.3	404.5	400.8	395.9	393.4
15°	422.6	417.7	413.9	409.5	407.6	404.5	401.4	395.9	391.5	387.2	384.1
17.5°	415.1	408.9	404.5	400.2	397.1	395.2	390.3	385.3	380.2	375.3	371.5
20°	403.9	398.3	393.4	387.8	385.3	382.8	376.5	371.5	366.6	361.0	357.3
22.5°	390.3	384.7	377.7	373.4	369.7	366.6	361.0	355.4	350.4	345.5	340.5
25°	373.4	367.8	361.6	354.8	352.3	349.2	343.0	337.3	331.7	326.1	321.8
27.5°	355.4	347.9	343.0	335.4	332.9	329.8	323.0	316.8	311.8	307.5	302.5
30°	333.6	328.0	321.2	314.3	311.8	308.7	303.1	297.6	292.5	287.5	282.6
32.5°	310.0	304.4	297.6	292.5	288.8	286.3	280.7	275.7	270.8	265.8	261.5
35°	285.0	278.8	273.9	268.9	265.8	262.7	257.0	252.7	248.9	244.6	240.2
37.5°	259.6	255.1	250.2	244.6	241.5	239.0	234.7	229.7	226.6	222.9	219.8
40°	234.7	229.7	225.3	220.4	217.8	215.9	211.6	207.9	204.8	201.7	199.8
42.5°	209.1	204.8	200.4	197.3	195.4	193.6	190.5	186.1	184.3	181.2	179.2
45°	185.5	181.8	178.7	174.2	173.0	171.8	168.0	164.9	163.1	161.2	160.0
47.5°	163.1	160.6	156.9	154.4	152.5	151.3	148.8	146.3	144.4	143.2	142.0
50°	143.8	140.7	138.1	135.6	134.4	132.5	130.1	128.8	127.6	126.3	126.3
52.5°	125.7	122.6	120.1	118.3	117.0	115.8	113.9	113.3	112.1	112.1	111.4
55°	108.9	107.1	104.6	102.1	101.5	100.9	99.5	98.3	97.8	97.2	97.8
57.5°	94.6	92.7	90.2	88.4	87.7	87.1	86.5	85.3	84.6	84.6	84.6
60°	81.5	79.7	77.8	75.9	75.9	74.7	74.1	73.5	72.8	72.2	72.2
62.5°	69.7	67.9	66.0	64.8	64.1	63.5	62.3	61.7	60.9	60.9	60.3
65°	59.2	56.6	56.0	54.1	53.5	52.9	52.3	51.0	50.4	49.8	49.1
67.5°	48.5	47.3	45.4	44.2	43.6	42.9	42.3	41.1	40.5	39.8	38.6
70°	39.2	38.0	36.7	35.5	34.9	34.2	33.0	31.8	31.1	29.9	28.0
72.5°	30.5	29.3	28.0	26.8	26.2	25.6	24.3	23.1	21.7	20.6	19.2
75°	23.1	21.7	20.0	18.6	18.0	18.0	16.1	14.9	13.7	11.8	10.6
77.5°	16.1	14.3	13.7	12.4	11.8	10.6	9.3	8.1	6.8	6.2	5.0
80°	10.6	9.3	8.1	7.5	6.8	6.2	5.6	4.3	3.1	2.5	1.9
82.5°	6.2	5.6	5.0	4.3	3.7	3.1	2.5	2.5	1.9	1.2	0.6
85°	3.1	2.5	1.9	1.9	1.2	1.2	1.2	0.6	0.6	0.6	0.6
87.5°	1.2	0.6	0.6	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



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**CANDELA DISTRIBUTION (continued):**

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	416.3	416.3	416.3	416.3	416.3	416.3	416.3	416.3	416.3	416.3	416.3
2.5°	414.5	413.9	413.2	412.6	412.6	411.4	411.4	410.8	409.5	408.9	408.9
5°	410.8	408.9	407.6	407.0	406.4	404.5	403.9	402.7	401.4	400.2	399.6
7.5°	405.2	402.1	400.8	400.2	398.3	396.5	395.2	393.4	391.5	389.6	389.0
10°	398.3	395.2	392.1	390.9	389.0	387.8	385.3	382.8	381.0	379.1	377.1
12.5°	389.6	385.9	382.8	381.6	379.7	377.1	373.4	372.2	369.1	367.8	365.3
15°	379.7	375.3	372.2	370.3	368.4	364.7	362.2	359.7	356.6	355.4	352.9
17.5°	367.2	362.2	359.1	357.3	356.0	352.9	349.2	346.1	343.0	341.7	339.9
20°	352.3	349.2	344.8	343.0	341.7	337.9	334.2	332.9	330.5	328.0	326.1
22.5°	335.4	332.3	328.0	326.1	325.5	322.4	319.3	317.4	315.6	313.7	311.8
25°	318.0	314.3	310.6	309.4	308.1	305.6	303.1	301.9	299.9	298.8	297.6
27.5°	299.3	295.6	292.5	290.6	289.4	287.5	286.3	285.0	283.8	282.6	281.9
30°	279.5	275.7	273.2	272.0	270.8	270.1	268.3	267.7	267.0	265.8	266.4
32.5°	259.6	256.4	253.9	252.0	252.0	250.8	250.2	250.2	249.6	249.6	249.6
35°	237.8	235.9	234.0	233.4	232.8	232.2	231.6	232.2	231.6	232.2	232.8
37.5°	217.8	215.9	214.7	214.1	213.4	214.1	213.4	213.4	214.1	215.3	215.9
40°	197.3	196.1	194.8	195.4	194.8	194.8	194.8	196.7	197.3	197.9	198.5
42.5°	178.1	176.7	176.1	176.1	176.7	176.1	177.3	178.1	179.2	181.2	182.4
45°	159.3	158.7	158.7	159.3	158.7	160.0	160.0	161.2	163.1	164.3	165.5
47.5°	142.0	142.0	142.0	142.6	142.6	143.2	144.4	145.1	146.3	147.5	148.8
50°	125.7	126.3	127.0	127.0	127.0	128.2	129.4	130.1	130.7	131.3	133.2
52.5°	111.4	112.1	112.1	112.7	113.3	113.9	114.5	115.8	116.4	117.6	118.3
55°	97.8	97.8	98.9	99.5	99.5	99.5	100.9	100.9	102.1	102.7	104.0
57.5°	84.6	85.3	85.3	85.9	85.9	86.5	87.1	87.7	88.4	89.0	89.6
60°	72.2	72.2	72.2	72.8	73.5	74.1	73.5	74.7	74.7	75.9	76.6
62.5°	60.3	60.9	60.9	60.9	60.9	60.9	60.9	61.7	62.3	62.9	63.5
65°	49.1	49.1	49.1	48.5	49.1	48.5	49.1	49.8	49.8	50.4	51.0
67.5°	38.0	38.0	36.7	36.7	37.4	37.4	37.4	37.4	36.7	38.0	38.0
70°	27.4	26.8	26.2	25.6	25.6	24.9	24.9	24.3	24.3	24.3	24.3
72.5°	18.0	16.8	15.5	14.9	14.3	14.3	13.0	12.4	13.0	13.0	13.0
75°	9.3	8.1	7.5	6.8	6.2	6.2	5.6	5.6	5.6	5.6	5.6
77.5°	3.7	3.1	2.5	2.5	1.9	1.9	1.9	1.9	1.9	1.9	1.9
80°	1.2	1.2	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	0.6	0.6	0.6	0.6	0.6	0.6	0.6
85°	0.6	0.0	0.0	0.6	0.0	0.6	0.6	0.6	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





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**CANDELA DISTRIBUTION (continued):**

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	416.3	416.3	416.3	416.3	416.3	416.3	416.3	416.3
2.5°	408.3	408.3	407.6	408.3	407.0	407.6	407.0	407.0
5°	399.0	397.7	397.7	397.7	397.1	397.1	396.5	396.5
7.5°	387.8	387.2	386.5	385.9	385.3	384.7	384.7	384.7
10°	376.5	375.3	375.3	374.6	373.4	372.8	372.8	372.8
12.5°	363.5	362.8	362.2	362.2	359.7	360.4	359.7	359.7
15°	351.1	350.4	350.4	348.6	347.3	347.3	347.3	346.7
17.5°	337.9	337.3	336.8	335.4	334.2	334.2	333.6	334.2
20°	324.3	323.6	322.4	322.4	321.8	321.2	319.9	320.5
22.5°	310.6	309.4	308.7	308.7	308.1	308.1	306.9	306.9
25°	296.2	295.6	295.0	295.6	294.4	294.4	293.1	293.1
27.5°	281.3	280.7	280.7	280.7	280.1	280.7	280.1	280.1
30°	266.4	266.4	265.8	265.8	266.4	265.8	266.4	267.0
32.5°	250.2	250.2	250.8	250.8	251.4	251.4	251.4	251.4
35°	233.4	234.7	234.7	235.3	235.9	236.5	236.5	237.1
37.5°	217.8	218.4	219.0	219.8	221.0	221.0	221.0	221.0
40°	201.0	201.7	202.9	202.3	204.8	205.4	204.8	204.8
42.5°	183.6	184.9	185.5	186.8	187.4	188.6	189.2	189.2
45°	167.4	168.0	169.3	170.5	171.1	173.0	173.0	173.0
47.5°	150.6	151.9	152.5	153.7	154.4	156.2	156.9	156.2
50°	134.4	135.6	136.9	136.9	138.7	139.5	140.7	141.2
52.5°	118.9	119.5	120.7	121.4	122.6	123.8	124.5	125.1
55°	104.0	104.6	105.8	105.8	107.7	108.3	109.6	109.6
57.5°	90.2	90.8	92.1	91.5	92.7	93.9	93.9	93.3
60°	77.2	77.2	77.2	78.4	79.0	79.7	80.3	80.3
62.5°	63.5	64.8	65.4	65.4	66.0	66.6	66.6	66.0
65°	51.0	52.3	52.9	52.9	53.5	53.5	53.5	54.1
67.5°	38.6	38.6	38.6	39.2	38.6	38.6	38.6	38.6
70°	24.3	24.3	24.3	24.3	23.7	24.3	24.3	24.9
72.5°	13.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0
75°	5.6	5.6	5.6	6.2	5.6	5.6	5.6	5.6
77.5°	2.5	1.9	2.5	2.5	1.9	1.9	1.9	1.9
80°	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	0.6	0.6	0.6	0.6
85°	0.0	0.6	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)