

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: P583574

Luminaire Tested: **HC807D010-HM80520827-81WWW**

Issue Date: 10/21/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P583574  
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: HC807D010-HM80520827-81WWW  
Description: HALO COMMERCIAL 8" ROUND, NEW CONSTRUCTION FRAME, WITH 8" WALLWASH DISTRIBUTION, WHITE TRIM  
Light Source: (1) HIGH LUMEN LED 80CRI / 2700K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 851.2 lumens  
Efficiency: N/A  
Efficacy: 106.4 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

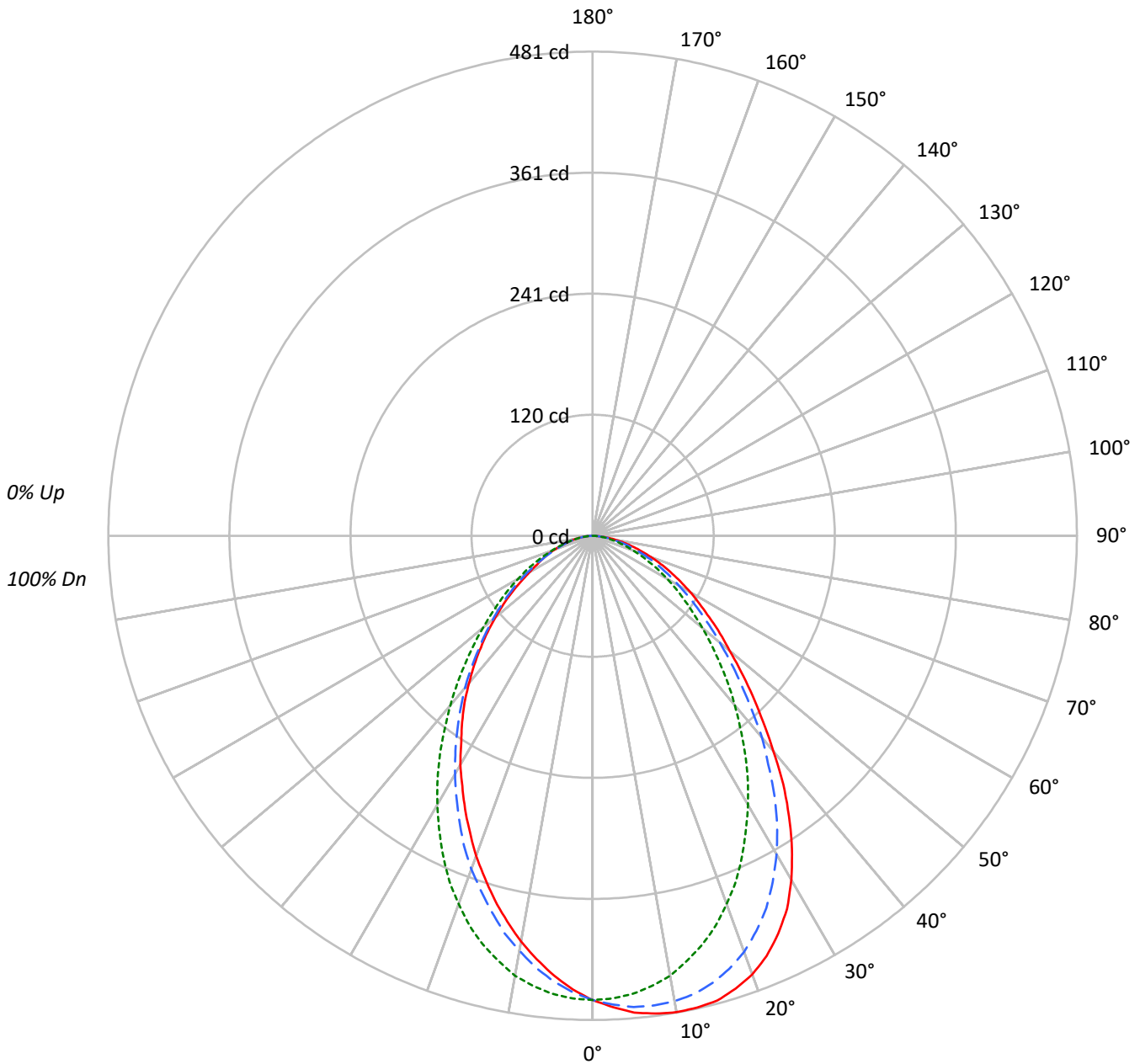
Input Watts (W): 8  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20					20					20					20					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				100				
1	110	106	103	99	108	104	101	98	100	97	95	96	94	92	93	91	89	87				87				
2	102	95	89	84	99	93	88	83	90	85	81	86	83	79	83	80	78	76				76				
3	94	85	78	72	92	83	77	71	81	75	70	78	73	69	75	71	68	66				66				
4	87	76	69	63	85	75	68	62	73	67	62	71	65	61	68	64	60	58				58				
5	81	69	61	55	79	68	61	55	66	60	54	64	59	54	63	57	53	51				51				
6	75	63	55	49	73	62	55	49	61	54	49	59	53	48	57	52	48	46				46				
7	70	58	50	44	69	57	50	44	56	49	44	54	48	44	53	48	43	41				41				
8	66	53	46	40	64	53	45	40	51	45	40	50	44	40	49	44	39	38				38				
9	62	49	42	37	60	49	42	37	48	41	36	47	41	36	46	40	36	34				34				
10	58	46	39	34	57	45	38	34	44	38	33	44	38	33	43	37	33	32				32				

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

	0°	90°	180°
0°	14222	14222	14222
5°	14722	14140	13580
10°	15049	13893	12816
15°	15263	13424	11968
20°	15216	12772	11108
25°	14841	11946	10197
30°	14058	10985	9357
35°	12795	9942	8504
40°	11239	8840	7680
45°	9799	7776	6847
50°	8525	6817	6035
55°	7607	5989	5247
60°	6907	5248	4471
65°	6209	4568	4064
70°	5527	3886	3660
75°	4837	3276	3133
80°	4120	2681	2788
85°	3078	1981	2194



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	43.2	5.1
10°-20°	119.0	14.0
20°-30°	165.2	19.4
30°-40°	170.8	20.1
40°-50°	143.0	16.8
50°-60°	103.8	12.2
60°-70°	65.5	7.7
70°-80°	32.5	3.8
80°-90°	8.0	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°	327.4	38.5
0°-40°	498.3	58.5
0°-60°	745.1	87.5
0°-90°	851.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	851.2	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	461	461	461	461	461	
5°	476	470	457	444	439	45
15°	478	460	420	387	375	135
25°	436	408	351	313	300	200
35°	340	315	264	234	226	212
45°	225	208	178	161	157	174
55°	142	129	111	102	98	128
65°	85	74	63	55	56	85
75°	41	34	28	26	26	44
85°	9	7	6	6	6	11
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°	461.2	461.2	461.2	461.2	461.2	461.2	461.2	461.2	461.2	461.2	461.2
2.5°	468.7	468.7	469.4	468.7	468.7	468.7	468.1	468.1	467.5	467.5	466.2
5°	475.6	474.3	475.6	474.3	474.3	474.3	473.7	472.5	471.8	470.6	470.0
7.5°	478.7	478.1	478.1	477.5	477.5	476.8	476.2	475.6	473.1	472.5	470.6
10°	480.6	480.0	480.0	479.3	478.1	478.1	476.8	476.2	473.1	471.8	469.4
12.5°	480.0	480.0	480.0	479.3	477.5	476.8	475.6	473.7	471.2	468.7	466.2
15°	478.1	478.1	476.8	476.2	474.3	473.1	472.5	469.4	466.9	463.7	460.0
17.5°	471.8	471.8	471.2	470.0	468.1	466.9	465.6	462.5	460.0	454.9	451.2
20°	463.7	463.1	462.5	460.6	458.8	458.0	456.3	451.8	448.7	444.9	439.9
22.5°	451.8	451.2	450.5	449.3	446.2	444.9	443.7	440.6	435.0	431.2	424.9
25°	436.2	436.2	435.0	433.1	430.0	428.6	426.7	423.6	418.6	413.0	408.0
27.5°	418.0	417.4	415.5	414.3	411.8	409.9	406.8	403.0	398.1	393.6	387.4
30°	394.8	394.8	393.6	391.7	388.6	387.4	384.9	380.5	375.5	369.9	365.4
32.5°	368.5	368.5	366.7	365.4	363.6	360.4	359.8	354.8	350.5	346.1	341.1
35°	339.9	340.5	339.1	336.6	333.5	333.5	332.3	327.9	322.9	318.5	314.8
37.5°	311.1	309.1	308.5	307.2	305.4	302.9	301.6	299.7	295.4	292.3	286.6
40°	279.2	279.7	278.4	277.2	276.6	274.7	274.1	271.0	267.8	264.1	261.6
42.5°	250.4	250.4	250.4	249.0	247.8	245.9	245.3	243.4	239.7	237.2	233.4
45°	224.7	222.7	222.7	222.2	221.6	220.2	218.4	217.1	214.6	212.7	208.4
47.5°	199.7	200.3	199.7	199.0	197.2	196.5	195.9	193.4	190.8	188.9	185.8
50°	177.7	179.0	177.7	177.7	176.5	175.9	174.6	172.7	170.9	167.7	164.6
52.5°	159.5	159.5	158.9	158.3	156.4	155.2	154.5	153.9	150.8	148.3	145.8
55°	141.5	142.1	142.1	140.2	139.6	138.3	137.7	135.8	134.6	130.7	128.9
57.5°	125.8	125.1	125.8	124.5	123.3	122.0	121.4	120.1	118.3	115.8	113.3
60°	112.0	110.8	110.8	110.2	108.9	108.3	107.0	105.2	103.2	100.7	98.8
62.5°	98.2	97.6	97.0	96.3	95.1	94.5	93.9	92.0	90.1	88.2	86.4
65°	85.1	85.1	84.5	83.2	82.6	82.0	81.4	80.1	77.6	76.4	74.4
67.5°	73.3	72.5	72.5	71.3	70.1	69.4	69.4	68.2	66.3	64.4	63.2
70°	61.3	61.9	61.3	60.7	59.4	59.4	58.2	57.6	55.1	54.5	52.6
72.5°	50.7	50.7	50.1	50.1	48.8	48.2	48.2	47.0	45.6	44.5	43.1
75°	40.6	40.6	40.6	40.0	39.4	38.1	38.1	37.5	36.3	35.0	33.8
77.5°	31.9	31.3	31.3	30.7	30.0	29.4	29.4	28.8	27.5	26.9	25.7
80°	23.2	22.6	22.6	22.6	21.3	21.9	21.3	20.7	20.1	19.4	18.8
82.5°	15.1	15.7	15.7	15.1	14.3	14.3	14.3	13.7	13.7	13.1	12.5
85°	8.7	8.7	8.7	8.7	8.1	8.1	8.1	7.5	7.5	7.5	6.9
87.5°	3.7	3.7	3.7	3.7	3.7	3.7	3.1	3.1	3.1	3.1	3.1
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°	461.2	461.2	461.2	461.2	461.2	461.2	461.2	461.2	461.2	461.2	461.2
2.5°	466.2	465.0	464.4	463.7	463.7	463.1	462.5	461.2	461.2	460.0	459.4
5°	468.7	466.9	465.6	464.4	463.7	462.5	461.2	459.4	458.8	456.8	454.9
7.5°	469.4	466.2	465.0	462.5	461.2	460.0	457.4	455.5	453.0	451.2	448.7
10°	466.9	464.4	461.2	458.0	457.4	455.5	451.8	449.3	446.2	443.7	439.9
12.5°	463.1	459.4	456.3	452.4	450.5	448.7	444.9	441.2	436.8	432.5	428.6
15°	456.8	452.4	448.0	443.7	441.2	439.3	435.0	430.6	426.1	420.5	416.8
17.5°	447.4	442.4	438.1	432.5	430.0	428.0	422.4	417.4	411.8	406.2	402.4
20°	435.6	429.2	424.3	418.0	416.1	413.0	407.4	401.8	395.5	389.2	384.9
22.5°	419.9	413.6	408.0	401.8	398.7	395.5	389.8	383.0	376.8	371.8	367.3
25°	401.8	396.1	389.2	383.6	379.9	376.1	369.9	364.2	358.6	351.1	346.7
27.5°	381.7	374.9	369.9	362.3	358.6	356.1	349.2	341.7	336.6	329.8	324.8
30°	359.2	353.0	347.3	339.9	336.0	333.5	327.3	320.4	315.4	308.5	303.5
32.5°	335.4	328.5	321.7	316.7	312.3	309.7	302.9	298.5	292.3	286.6	280.9
35°	309.7	302.9	297.9	291.0	288.5	286.0	280.3	274.7	269.1	264.1	259.7
37.5°	282.3	277.2	271.6	266.6	264.7	262.2	255.4	250.4	245.9	240.9	237.2
40°	255.4	251.0	247.2	242.2	239.0	237.2	232.2	227.8	222.7	219.6	215.9
42.5°	230.9	225.9	222.2	218.4	215.2	213.4	209.0	205.9	202.1	199.0	194.7
45°	205.3	202.8	198.4	195.3	193.4	190.8	187.7	184.0	180.8	178.3	175.2
47.5°	182.7	180.2	177.1	173.4	172.1	170.2	167.1	164.6	162.0	159.5	156.4
50°	162.0	158.9	156.4	153.9	152.7	150.8	147.7	146.4	144.6	142.1	140.2
52.5°	143.3	140.8	138.3	135.2	134.6	133.2	131.5	128.9	127.0	125.8	124.5
55°	126.4	123.9	122.0	119.5	118.9	117.7	115.2	113.9	112.7	111.4	110.2
57.5°	111.4	108.9	106.4	105.2	103.8	102.7	102.1	100.1	98.8	98.2	97.0
60°	97.6	95.1	93.2	91.4	90.7	90.1	88.9	87.6	86.4	85.1	84.5
62.5°	84.5	82.0	80.8	79.5	78.3	78.3	77.0	75.8	74.4	73.9	72.5
65°	72.5	71.3	69.4	67.6	66.9	66.9	65.1	64.4	63.8	62.6	61.3
67.5°	61.3	60.1	58.2	57.6	57.0	56.3	55.7	54.5	53.2	52.6	51.3
70°	51.3	50.1	48.8	48.2	47.6	47.0	45.6	45.1	43.9	43.1	42.5
72.5°	41.3	40.6	39.4	38.8	38.1	37.5	36.9	36.3	35.0	34.4	33.8
75°	33.2	32.5	31.3	30.7	30.0	30.0	29.4	28.2	27.5	27.5	26.9
77.5°	25.0	24.4	23.8	23.2	22.6	22.6	21.9	21.3	20.7	20.7	20.1
80°	18.2	17.6	16.8	16.8	16.8	16.3	15.7	15.7	15.1	15.1	14.3
82.5°	11.8	11.8	11.2	11.2	11.2	10.6	10.6	10.0	10.0	10.0	10.0
85°	6.9	6.9	6.9	6.2	6.2	6.2	6.2	6.2	6.2	5.6	6.2
87.5°	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	2.5	2.5	2.5
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°	461.2	461.2	461.2	461.2	461.2	461.2	461.2	461.2	461.2	461.2	461.2
2.5°	458.8	458.0	456.8	456.8	455.5	455.5	454.9	454.3	453.7	453.0	452.4
5°	454.3	451.8	450.5	449.9	448.7	448.0	446.2	444.9	444.3	443.1	441.8
7.5°	446.2	443.7	441.2	440.6	439.9	437.4	435.6	433.7	432.5	431.2	430.0
10°	436.8	434.3	431.2	430.0	428.6	425.5	423.0	421.1	418.6	416.1	415.5
12.5°	425.5	421.8	418.0	416.8	414.9	411.8	409.3	406.2	404.3	401.2	400.6
15°	412.4	408.0	404.9	401.8	400.6	397.3	393.0	390.5	386.7	385.5	382.4
17.5°	396.7	392.3	388.0	386.7	384.9	380.5	376.1	373.0	369.3	367.3	365.4
20°	380.5	374.9	370.5	369.3	366.7	362.9	358.6	355.4	352.3	348.6	346.7
22.5°	361.7	355.4	351.7	348.6	348.0	343.6	338.5	336.0	333.5	330.4	327.9
25°	341.1	335.4	331.0	328.5	327.3	323.5	319.8	316.7	312.9	311.1	307.8
27.5°	319.8	316.1	310.3	307.8	306.0	302.9	298.5	296.6	292.9	290.4	288.5
30°	299.1	293.5	290.4	287.3	285.4	282.3	278.4	276.6	273.4	271.0	269.1
32.5°	276.6	272.8	268.5	267.2	264.7	261.6	259.1	256.0	253.5	251.0	250.4
35°	256.0	251.0	246.5	245.3	243.4	240.3	239.0	237.2	234.1	233.4	230.9
37.5°	233.4	230.9	225.9	224.1	223.5	221.0	218.4	217.1	215.2	213.4	212.7
40°	212.1	209.0	206.5	204.6	203.4	201.5	199.0	198.4	197.2	194.7	193.9
42.5°	192.2	188.9	186.5	185.8	184.0	182.1	180.8	179.0	178.3	177.7	176.5
45°	172.7	170.9	168.4	167.7	167.1	164.6	163.4	162.0	160.8	160.2	158.9
47.5°	155.2	153.3	151.4	150.8	149.6	148.9	147.1	146.4	144.6	143.9	143.3
50°	138.3	137.1	135.8	135.2	134.0	133.2	132.0	130.7	129.5	128.9	128.3
52.5°	123.3	122.0	120.8	120.1	119.5	118.3	117.0	115.8	115.2	114.5	113.9
55°	108.9	107.7	107.0	106.4	105.8	105.2	103.2	102.7	102.1	101.3	100.1
57.5°	95.7	94.5	93.2	93.2	92.6	92.0	90.7	89.5	89.5	88.2	87.0
60°	83.9	82.6	81.4	80.8	80.1	78.9	78.3	77.6	77.0	76.4	75.0
62.5°	71.3	70.7	69.4	69.4	68.2	67.6	66.9	66.3	65.7	64.4	63.8
65°	60.7	60.1	58.8	58.2	58.2	57.6	56.3	55.7	55.1	55.1	54.5
67.5°	50.7	50.1	48.8	48.2	48.2	47.6	47.0	47.0	46.4	45.6	46.4
70°	41.9	40.6	40.6	40.0	40.0	39.4	38.8	38.8	38.8	39.4	39.4
72.5°	33.2	32.5	31.9	31.9	31.9	31.9	31.3	31.3	31.9	32.5	32.5
75°	26.3	25.7	25.7	25.7	25.0	25.0	25.7	25.7	26.3	26.3	26.3
77.5°	19.4	19.4	19.4	19.4	19.4	19.4	20.1	20.1	20.7	20.7	20.7
80°	14.3	14.3	14.3	14.3	14.3	15.1	15.1	15.1	15.1	15.1	15.7
82.5°	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.6	10.6	10.6	10.6
85°	5.6	6.2	6.2	6.2	6.2	6.2	6.2	6.2	6.2	6.2	6.2
87.5°	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
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: P583574

CATALOG NUMBER: HC807D010-HM80520827-81WWW

**CANDELA DISTRIBUTION (continued):**

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	461.2	461.2	461.2	461.2	461.2	461.2	461.2	461.2
2.5°	451.8	451.8	451.8	452.4	451.2	451.2	451.2	451.2
5°	441.2	440.6	439.9	440.6	439.3	439.3	438.7	438.7
7.5°	428.0	427.5	426.7	426.7	425.5	425.5	424.9	424.3
10°	413.6	412.4	413.0	411.8	411.2	410.5	409.9	409.3
12.5°	398.1	396.7	396.1	394.8	393.6	393.0	393.6	392.3
15°	381.1	379.2	378.6	377.4	376.1	375.5	375.5	374.9
17.5°	362.3	361.1	360.4	359.2	358.6	357.3	356.7	356.1
20°	344.8	341.7	342.2	341.1	340.5	337.9	337.9	338.5
22.5°	325.4	323.5	322.3	321.0	320.4	319.2	319.2	318.5
25°	306.0	304.1	303.5	302.2	301.6	300.4	299.7	299.7
27.5°	287.3	284.8	284.8	283.5	282.3	281.7	280.9	280.3
30°	267.2	265.3	264.7	264.7	264.1	264.1	262.2	262.8
32.5°	248.4	247.2	246.5	245.3	245.3	244.7	244.7	242.8
35°	229.7	227.8	228.4	227.2	226.6	225.9	226.6	225.9
37.5°	211.5	210.3	210.3	209.0	209.0	208.4	207.8	209.0
40°	193.4	192.8	192.2	191.4	192.2	191.4	190.2	190.8
42.5°	175.2	175.2	174.6	174.6	174.0	174.0	174.0	174.0
45°	158.9	158.3	158.3	157.7	157.7	157.7	157.7	157.0
47.5°	142.7	142.1	142.1	142.1	141.5	141.5	140.8	141.5
50°	127.0	127.0	126.4	126.4	127.0	126.4	125.8	125.8
52.5°	112.7	112.7	112.0	112.0	111.4	110.8	111.4	111.4
55°	99.5	98.8	98.2	98.2	97.6	97.0	97.0	97.6
57.5°	87.0	86.4	85.7	85.7	84.5	83.9	83.9	83.9
60°	75.0	73.9	73.9	73.3	73.3	72.5	72.5	72.5
62.5°	63.8	63.2	63.2	63.2	63.2	62.6	62.6	62.6
65°	54.5	54.5	54.5	55.1	55.1	55.7	55.7	55.7
67.5°	47.0	47.6	47.6	47.6	48.2	48.2	48.2	47.6
70°	40.0	40.0	40.0	40.6	40.6	40.6	40.6	40.6
72.5°	33.2	33.2	33.2	33.2	33.2	33.2	33.2	33.2
75°	26.3	26.9	26.9	26.9	26.3	26.9	26.9	26.3
77.5°	20.7	20.7	20.7	20.7	20.7	20.7	20.7	20.7
80°	15.7	15.7	15.7	15.7	15.7	15.7	15.7	15.7
82.5°	10.6	10.6	10.6	10.6	10.6	10.6	10.6	10.6
85°	6.2	6.2	6.2	6.2	6.2	6.2	6.2	6.2
87.5°	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
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)