

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: P583745

Luminaire Tested: **HC810D010-HM80520835-81WWWB**

Issue Date: 10/21/2021

Test Information

Test Method: LM-41-14
Report Number: P583745
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2109-368-18)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 10/21/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO COMMERCIAL
Catalog Number: HC810D010-HM80520835-81WWWB
Description: HALO COMMERCIAL 8" ROUND, NEW CONSTRUCTION FRAME, WITH 8" WALLWASH DISTRIBUTION, BLACK BAFFLE TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 3500K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1141.0 lumens
Efficiency: N/A
Efficacy: 115.3 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 1.09 / 1.18
Luminous Opening: Circular (Dia: 0.67' x H: 0')
CIE Type: Direct

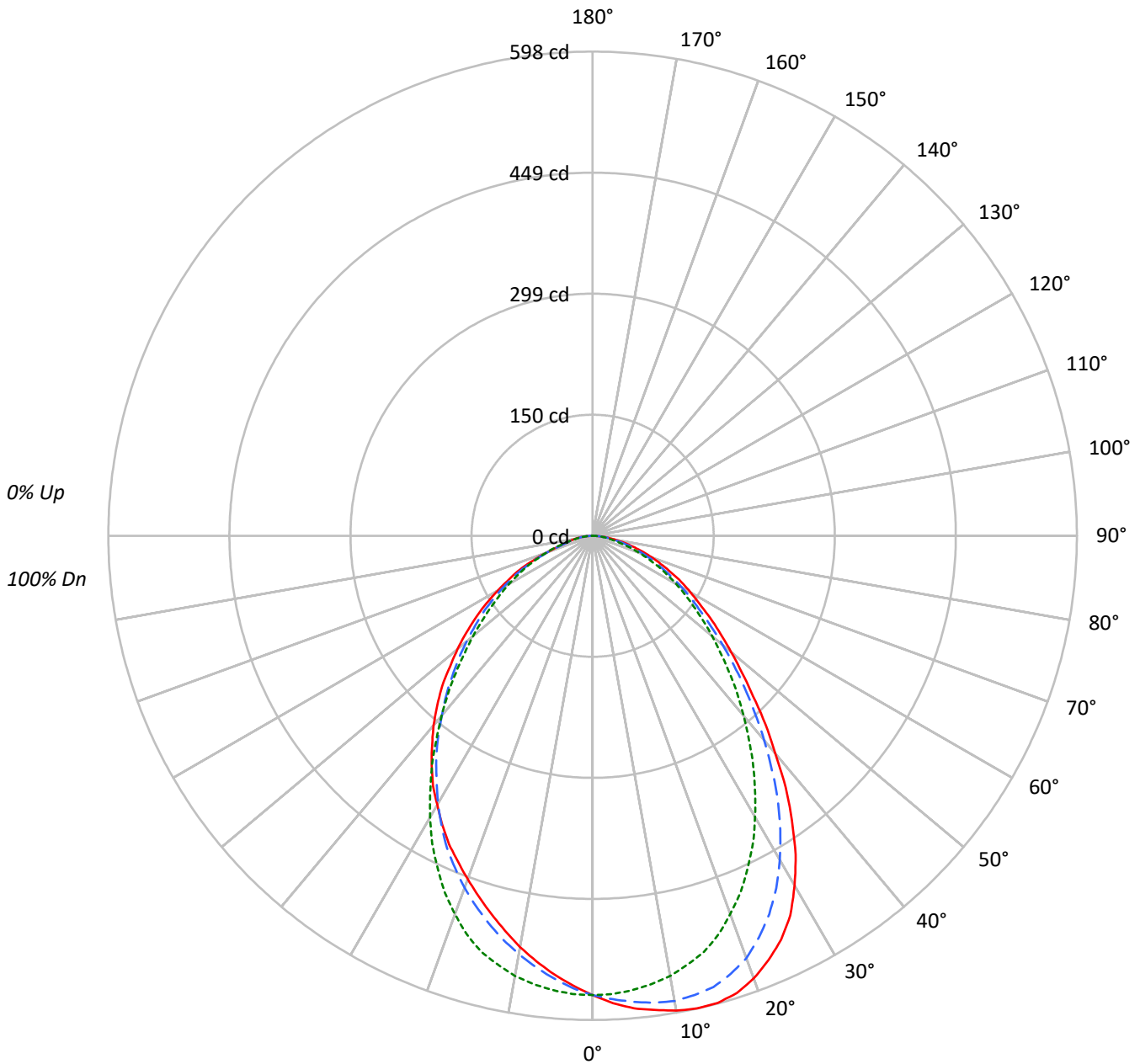
Input Watts (W): 9.9
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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								
1	110	106	103	99	108	104	101	98	100	97	95	96	94	92	92	91	89	87								
2	102	94	88	83	99	93	87	82	89	85	81	86	82	79	83	80	77	75								
3	94	84	77	71	91	83	76	71	80	74	69	77	72	68	75	71	67	65								
4	87	76	68	62	84	75	67	61	72	66	61	70	64	60	68	63	59	57								
5	80	69	60	54	78	67	60	54	65	59	54	64	58	53	62	57	52	50								
6	75	62	54	48	73	61	54	48	60	53	48	58	52	47	57	51	47	45								
7	70	57	49	43	68	56	49	43	55	48	43	53	47	43	52	47	42	40								
8	65	52	45	39	64	52	44	39	51	44	39	49	43	39	48	43	38	37								
9	61	48	41	36	60	48	41	36	47	40	35	46	40	35	45	39	35	33								
10	57	45	38	33	56	44	37	33	44	37	32	43	37	32	42	36	32	30								

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	17493	17493	17493
5°	18136	17436	16836
10°	18646	17284	16151
15°	19065	16980	15432
20°	19092	16312	14806
25°	18727	15410	14287
30°	17761	14289	13659
35°	16142	13014	13044
40°	14109	11674	12294
45°	12228	10401	11460
50°	10708	9240	10439
55°	9532	8188	9441
60°	8597	7351	8301
65°	7763	6465	7238
70°	6978	5455	5373
75°	6148	4325	4039
80°	5150	3587	3871
85°	3998	3149	3397



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	53.5	4.7
10°-20°	150.7	13.2
20°-30°	215.4	18.9
30°-40°	228.9	20.1
40°-50°	197.1	17.3
50°-60°	147.3	12.9
60°-70°	94.0	8.2
70°-80°	42.8	3.7
80°-90°	11.2	1.0
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°	419.7	36.8
0°-40°	648.6	56.8
0°-60°	993.0	87.0
0°-90°	1141.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1141.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	567	567	567	567	567	
5°	586	578	563	549	544	56
15°	597	577	532	496	483	168
25°	550	516	453	426	420	252
35°	429	399	346	337	346	267
45°	280	265	238	245	263	218
55°	177	163	152	165	176	159
65°	106	94	89	93	99	106
75°	52	44	36	33	34	55
85°	11	10	9	10	10	14
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°	567.3	567.3	567.3	567.3	567.3	567.3	567.3	567.3	567.3	567.3	567.3
2.5°	577.8	576.1	577.0	576.1	577.0	577.0	575.4	575.4	575.4	575.4	573.0
5°	585.9	585.0	585.0	584.2	583.5	584.2	583.5	582.6	581.0	580.2	577.8
7.5°	590.7	590.7	590.7	590.7	589.8	589.1	588.3	586.7	585.0	583.5	581.8
10°	595.5	596.3	595.5	594.7	593.9	592.2	591.5	589.8	587.4	585.0	583.5
12.5°	597.9	597.9	597.2	597.2	595.5	594.7	592.2	589.8	587.4	585.0	581.0
15°	597.2	597.2	596.3	595.5	593.1	592.2	590.7	588.3	584.2	581.0	577.0
17.5°	592.2	591.5	589.8	589.8	586.7	585.9	584.2	581.0	577.0	572.2	567.3
20°	581.8	581.8	581.0	580.2	577.0	574.6	573.0	568.9	565.7	560.0	555.2
22.5°	567.3	568.9	567.3	565.7	561.7	560.9	558.4	553.6	548.7	542.3	536.7
25°	550.4	549.6	548.7	547.2	543.9	542.3	539.1	534.3	529.5	522.1	515.8
27.5°	528.6	525.4	525.4	522.1	519.7	517.3	515.8	510.8	504.5	498.8	490.8
30°	498.8	499.6	495.6	494.7	490.8	489.1	486.0	481.0	475.4	469.0	462.5
32.5°	466.6	464.2	464.2	461.0	457.7	455.3	454.5	448.8	444.0	437.5	431.2
35°	428.8	428.8	426.2	425.5	422.3	420.6	418.2	415.1	409.4	403.8	398.8
37.5°	391.6	390.0	389.2	387.6	385.2	382.7	382.7	377.1	376.3	369.9	363.5
40°	350.5	352.2	350.5	348.1	347.3	345.7	344.9	341.6	339.2	333.6	329.6
42.5°	315.9	314.3	314.3	313.5	310.2	310.2	308.7	307.0	303.0	301.3	296.5
45°	280.4	282.0	279.6	280.4	277.2	277.2	277.2	273.9	270.8	268.3	265.2
47.5°	249.8	250.6	250.6	248.2	247.4	247.4	245.8	244.1	241.7	238.5	236.1
50°	223.2	224.1	222.4	221.6	220.0	219.1	219.1	216.0	214.3	211.1	209.5
52.5°	199.1	199.1	198.2	198.2	195.8	195.8	194.2	191.8	190.2	188.6	184.5
55°	177.3	177.3	176.5	175.6	175.6	173.2	172.5	170.1	168.4	165.2	162.8
57.5°	156.4	157.1	156.4	155.5	154.7	153.9	152.3	149.9	148.3	145.8	144.2
60°	139.4	139.4	138.6	137.7	136.2	135.3	134.6	132.9	130.5	129.0	126.6
62.5°	123.3	122.5	121.6	120.9	119.2	119.2	117.7	116.0	113.6	112.0	110.3
65°	106.4	106.4	105.5	105.5	104.8	103.1	102.3	101.6	98.3	97.5	94.2
67.5°	91.1	91.8	90.3	90.3	88.6	88.6	87.9	85.5	84.6	83.1	81.4
70°	77.4	77.4	77.4	76.6	74.9	74.2	73.3	71.8	70.9	69.4	67.7
72.5°	63.7	63.7	62.9	62.9	62.0	61.3	60.5	58.8	58.8	57.2	55.7
75°	51.6	51.6	50.7	50.0	49.2	49.2	48.3	47.6	45.9	45.1	44.4
77.5°	39.4	39.4	39.4	38.7	37.9	37.9	37.9	36.3	34.6	34.6	33.9
80°	29.0	29.0	28.2	28.2	27.4	27.4	27.4	26.6	25.8	25.0	24.2
82.5°	19.4	19.4	19.4	19.4	18.5	18.5	18.5	17.7	16.9	16.9	16.9
85°	11.3	11.3	11.3	11.3	10.5	10.5	10.5	10.5	10.5	9.6	9.6
87.5°	4.8	4.1	4.8	4.1	4.8	4.1	4.8	4.1	4.1	4.1	4.1
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°	567.3	567.3	567.3	567.3	567.3	567.3	567.3	567.3	567.3	567.3	567.3
2.5°	573.7	573.0	572.2	571.3	571.3	570.5	568.9	568.1	567.3	566.5	566.5
5°	577.0	576.1	574.6	573.0	572.2	570.5	568.9	567.3	565.7	563.3	562.4
7.5°	579.4	577.0	575.4	572.2	571.3	569.7	567.3	564.9	561.7	558.4	556.0
10°	579.4	576.1	573.7	569.7	568.1	566.5	563.3	559.3	555.2	552.0	548.0
12.5°	577.8	573.7	569.7	565.7	563.3	560.9	556.0	552.0	547.2	542.3	539.1
15°	572.2	567.3	562.4	557.6	555.2	552.0	547.2	541.5	536.7	531.9	526.2
17.5°	561.7	556.8	551.2	545.6	542.3	539.9	532.6	528.6	521.3	516.5	511.7
20°	548.0	542.3	535.0	529.5	525.4	523.0	517.3	510.1	504.5	497.1	492.3
22.5°	530.2	523.0	515.8	510.1	506.0	502.8	495.6	488.4	483.4	477.1	471.4
25°	509.3	502.1	494.7	486.7	482.7	479.5	473.0	466.6	460.1	452.9	448.0
27.5°	484.3	476.2	469.7	462.5	458.6	453.6	446.4	439.9	433.6	428.8	422.3
30°	456.9	448.0	441.6	434.3	430.3	426.2	419.0	412.5	407.0	401.3	398.1
32.5°	423.8	417.5	411.0	403.8	400.5	398.1	390.8	384.4	377.9	373.1	370.7
35°	392.5	385.2	379.6	373.1	369.0	366.6	360.2	354.6	351.3	345.7	342.4
37.5°	359.4	353.7	347.3	340.9	338.5	336.1	331.2	325.5	320.7	316.7	315.0
40°	324.8	319.9	314.3	310.2	307.8	305.4	301.3	297.4	294.1	290.0	288.5
42.5°	291.7	288.5	283.7	278.9	276.3	275.6	270.8	267.6	265.9	264.3	262.8
45°	261.9	257.1	253.9	250.6	248.2	246.5	244.1	241.7	240.2	238.5	236.9
47.5°	232.8	228.9	225.6	223.2	220.8	220.0	218.4	216.0	214.3	214.3	214.3
50°	206.3	203.0	199.9	198.2	197.4	195.8	194.2	193.4	192.6	192.6	192.6
52.5°	182.9	179.7	177.3	175.6	175.6	174.0	172.5	171.6	171.6	171.6	171.6
55°	161.2	158.8	157.1	155.5	153.9	153.1	153.1	153.1	152.3	152.3	153.1
57.5°	141.8	140.2	137.7	136.2	135.3	135.3	134.6	133.8	134.6	135.3	136.2
60°	124.0	122.5	121.6	119.2	119.2	119.2	118.4	118.4	118.4	119.2	120.1
62.5°	107.9	107.2	105.5	104.8	104.0	104.0	103.1	103.1	103.1	103.1	104.0
65°	93.5	91.8	90.3	90.3	90.3	89.4	89.4	87.9	88.6	88.6	87.9
67.5°	79.8	78.1	77.4	76.6	75.7	75.7	74.9	74.2	73.3	73.3	73.3
70°	66.8	65.3	65.3	63.7	63.7	62.9	62.0	62.0	61.3	60.5	59.6
72.5°	54.0	53.1	52.4	51.6	51.6	51.6	50.7	50.0	49.2	48.3	46.8
75°	42.7	42.7	41.1	40.3	40.3	39.4	38.7	37.9	37.0	36.3	35.5
77.5°	33.1	32.2	30.7	29.8	29.8	29.8	29.0	28.2	27.4	26.6	25.8
80°	24.2	23.3	22.6	21.8	21.8	21.8	20.9	20.9	20.2	20.2	20.2
82.5°	16.1	16.1	15.3	15.3	15.3	15.3	14.5	14.5	14.5	14.5	14.5
85°	9.6	9.6	8.9	8.9	8.9	8.9	8.9	8.9	8.9	8.9	8.9
87.5°	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
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):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	567.3	567.3	567.3	567.3	567.3	567.3	567.3	567.3	567.3	567.3	567.3
2.5°	564.9	564.9	563.3	562.4	561.7	562.4	560.9	560.0	559.3	559.3	558.4
5°	560.0	559.3	556.0	555.2	554.4	553.6	552.0	550.4	548.7	548.0	547.2
7.5°	553.6	551.2	548.0	547.2	546.3	543.9	541.5	539.9	537.5	536.7	535.0
10°	544.7	541.5	539.1	536.7	535.0	532.6	530.2	527.8	524.6	523.8	521.3
12.5°	534.3	530.2	525.4	524.6	522.1	518.9	515.8	513.3	510.8	509.3	506.9
15°	521.3	517.3	512.5	510.1	507.7	505.2	501.2	498.0	495.6	493.2	490.8
17.5°	506.0	501.2	497.1	494.7	493.2	489.1	486.0	481.9	479.5	477.1	474.7
20°	487.5	483.4	477.8	475.4	474.7	471.4	467.3	465.8	462.5	460.1	458.6
22.5°	466.6	462.5	457.7	456.0	452.9	451.2	447.3	445.6	444.0	441.6	440.8
25°	443.2	439.2	435.1	434.3	431.9	430.3	427.9	425.5	425.5	423.1	423.1
27.5°	419.0	415.1	411.8	410.1	409.4	407.7	405.3	404.5	403.8	402.9	402.9
30°	393.3	388.4	386.8	386.0	385.2	383.6	382.7	381.2	382.0	382.7	382.0
32.5°	365.9	364.2	361.0	359.4	360.2	359.4	357.8	359.4	358.6	360.2	361.0
35°	339.2	337.6	336.1	336.1	334.4	334.4	334.4	335.2	336.8	337.6	339.2
37.5°	313.5	311.1	310.2	309.4	310.2	310.2	310.2	311.8	313.5	315.0	317.4
40°	286.1	284.5	284.5	284.5	284.5	286.9	286.1	287.6	289.3	291.7	294.1
42.5°	260.2	260.2	261.1	261.1	261.1	261.1	262.8	265.2	267.6	270.0	272.4
45°	236.1	236.1	236.1	237.8	237.8	238.5	241.7	243.4	245.0	247.4	249.8
47.5°	213.6	213.6	214.3	215.2	216.0	217.6	219.1	221.6	224.1	225.6	228.0
50°	192.6	193.4	195.0	196.6	196.6	197.4	199.9	201.5	203.0	205.5	206.3
52.5°	172.5	174.0	175.6	176.5	177.3	178.9	179.7	182.1	182.9	185.3	186.2
55°	153.9	154.7	157.1	157.9	157.9	159.5	161.2	162.8	165.2	165.2	166.8
57.5°	137.0	137.7	139.4	140.2	139.4	141.8	142.7	144.2	145.1	146.6	147.5
60°	120.1	121.6	122.5	122.5	123.3	124.0	125.7	125.7	127.3	129.0	129.0
62.5°	104.0	104.8	105.5	106.4	107.2	106.4	108.8	108.8	110.3	111.2	112.9
65°	88.6	89.4	89.4	90.3	90.3	91.1	91.1	91.8	92.7	94.2	95.1
67.5°	73.3	73.3	73.3	74.2	73.3	74.2	74.2	74.9	74.9	76.6	77.4
70°	59.6	58.8	58.1	58.1	58.1	58.1	57.2	58.1	58.1	58.8	58.8
72.5°	45.9	45.1	44.4	43.5	43.5	42.7	41.9	42.7	42.7	43.5	43.5
75°	34.6	33.1	33.1	33.1	32.2	32.2	32.2	33.1	33.1	33.1	33.9
77.5°	25.8	25.8	25.0	25.0	25.0	25.8	25.8	26.6	26.6	26.6	26.6
80°	19.4	20.2	20.2	20.2	20.2	20.9	20.9	20.9	20.9	21.8	21.8
82.5°	14.5	14.5	14.5	14.5	15.3	15.3	15.3	15.3	15.3	15.3	15.3
85°	8.9	9.6	9.6	8.9	9.6	9.6	9.6	9.6	9.6	9.6	9.6
87.5°	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
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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CATALOG NUMBER: HC810D010-HM80520835-81WWWB

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	567.3	567.3	567.3	567.3	567.3	567.3	567.3	567.3
2.5°	557.6	557.6	557.6	557.6	556.8	556.8	556.8	556.0
5°	545.6	545.6	545.6	543.9	544.7	544.7	543.1	543.9
7.5°	533.4	532.6	531.9	531.9	531.0	530.2	529.5	530.2
10°	519.7	517.3	517.3	516.5	516.5	514.9	514.9	515.8
12.5°	504.5	502.8	502.8	502.1	501.2	500.4	499.6	499.6
15°	489.1	487.5	486.7	486.0	485.1	483.4	484.3	483.4
17.5°	473.8	471.4	471.4	470.6	469.7	468.2	468.2	467.3
20°	456.0	455.3	453.6	454.5	453.6	452.1	451.2	451.2
22.5°	438.4	438.4	437.5	437.5	436.8	436.0	435.1	435.1
25°	421.4	420.6	421.4	421.4	419.0	419.0	419.0	419.9
27.5°	402.1	402.9	402.1	402.1	402.1	402.1	402.9	402.1
30°	382.7	382.7	382.7	383.6	385.2	384.4	384.4	383.6
32.5°	361.8	362.6	362.6	363.5	364.2	365.9	365.9	366.6
35°	340.9	342.4	343.3	342.4	344.9	344.9	346.5	346.5
37.5°	319.1	319.9	321.5	322.4	323.9	324.8	325.5	325.5
40°	295.7	298.9	299.8	300.6	303.0	303.0	303.7	305.4
42.5°	273.9	277.2	278.0	278.9	280.4	282.8	282.0	283.7
45°	253.0	255.4	256.3	257.1	259.5	260.2	260.2	262.8
47.5°	230.4	232.1	232.8	234.5	236.1	237.8	239.3	238.5
50°	207.9	210.4	211.9	212.8	215.2	216.0	216.7	217.6
52.5°	187.8	189.3	190.2	191.0	193.4	194.2	195.0	196.6
55°	168.4	169.2	170.8	170.1	172.5	173.2	174.0	175.6
57.5°	149.0	149.9	150.7	150.7	152.3	153.9	154.7	155.5
60°	130.5	132.1	132.9	132.9	132.9	134.6	134.6	134.6
62.5°	113.6	113.6	114.4	114.4	116.0	116.0	116.0	116.0
65°	95.9	96.6	97.5	97.5	99.2	98.3	99.9	99.2
67.5°	77.4	77.4	79.0	79.0	78.1	79.0	79.0	79.0
70°	58.8	58.8	59.6	59.6	59.6	59.6	59.6	59.6
72.5°	43.5	43.5	43.5	44.4	43.5	43.5	44.4	43.5
75°	33.9	33.9	33.9	33.9	33.9	33.9	33.9	33.9
77.5°	26.6	26.6	27.4	27.4	27.4	27.4	27.4	27.4
80°	21.8	21.8	21.8	21.8	22.6	21.8	21.8	21.8
82.5°	16.1	15.3	16.1	15.3	16.1	16.1	16.1	16.1
85°	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6
87.5°	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
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)