

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: P583787

Luminaire Tested: **HC810D010-HM80520930-81RWWC**

Issue Date: 10/21/2021

Test Information

Test Method: LM-41-14
Report Number: P583787
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: HC810D010-HM80520930-81RWWC
Description: HALO COMMERCIAL 8" ROUND, NEW CONSTRUCTION FRAME, WITH 8" WALLWASH DISTRIBUTION, SPECULAR TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 3000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 997.1 lumens
Efficiency: N/A
Efficacy: 100.7 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

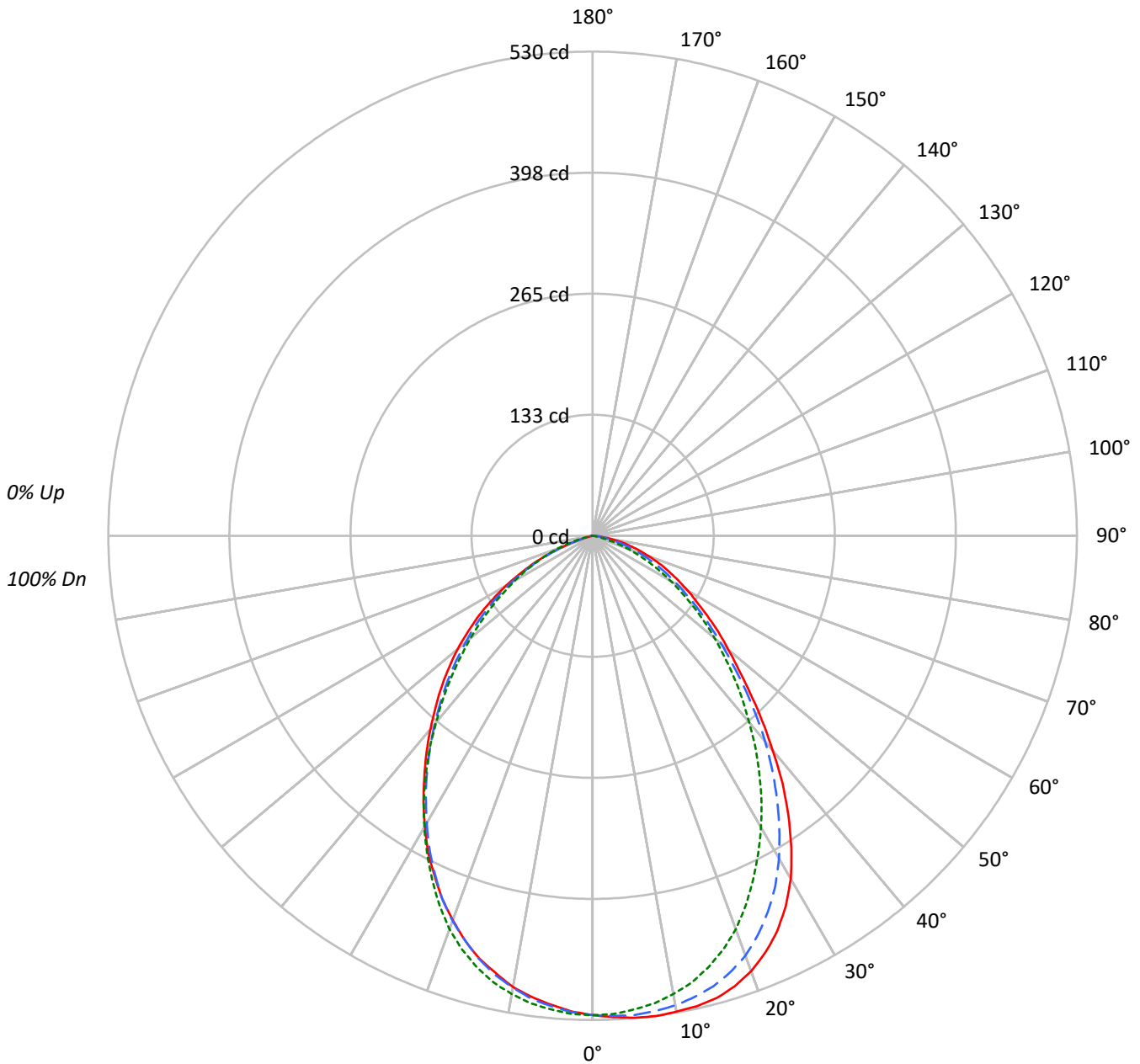
Input Watts (W): 9.9
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20									
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	85	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°	16180	16180	16180
5°	16393	16112	15957
10°	16561	15947	15706
15°	16728	15611	15295
20°	16641	15033	14688
25°	16253	14134	13943
30°	15439	13118	13071
35°	14053	11971	12076
40°	12322	10716	11110
45°	10632	9529	10200
50°	9307	8366	9244
55°	8247	7193	8134
60°	7425	6050	6741
65°	6691	4859	5166
70°	5869	3534	2840
75°	5016	1835	751
80°	3871	497	124
85°	2477	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	49.5	5.0
10°-20°	139.2	14.0
20°-30°	197.5	19.8
30°-40°	207.9	20.9
40°-50°	176.9	17.7
50°-60°	127.8	12.8
60°-70°	72.7	7.3
70°-80°	22.9	2.3
80°-90°	2.8	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°	386.2	38.7
0°-40°	594.1	59.6
0°-60°	898.8	90.1
0°-90°	997.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	997.1	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	525	525	525	525	525	
5°	530	527	520	517	516	51
15°	524	511	489	480	479	148
25°	478	454	415	408	410	219
35°	373	352	318	316	321	232
45°	244	235	218	224	234	189
55°	153	142	134	142	151	138
65°	92	79	67	66	71	91
75°	42	32	15	7	6	45
85°	7	4	0	0	0	9
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°	524.7	524.7	524.7	524.7	524.7	524.7	524.7	524.7	524.7	524.7	524.7
2.5°	527.4	528.2	526.7	526.7	528.2	526.7	527.4	527.4	526.7	526.7	526.1
5°	529.6	528.9	528.9	528.9	529.6	528.2	527.4	528.2	526.7	526.7	526.7
7.5°	530.3	530.3	529.6	528.9	528.9	528.9	528.2	527.4	526.7	525.4	524.7
10°	528.9	528.9	529.6	528.2	528.2	526.7	526.7	525.4	525.4	524.0	521.9
12.5°	527.4	526.7	526.7	525.4	525.4	524.0	524.0	521.9	521.2	519.0	517.0
15°	524.0	523.2	521.9	521.2	520.5	519.7	518.3	517.7	515.5	512.8	510.6
17.5°	517.0	516.3	515.5	514.2	512.8	512.1	511.3	509.3	506.4	504.4	500.9
20°	507.1	506.4	506.4	504.4	503.6	501.6	500.9	498.0	495.9	491.7	489.0
22.5°	493.9	494.5	493.2	491.7	490.3	488.3	486.8	484.0	480.6	476.4	472.9
25°	477.7	478.4	477.1	475.6	473.6	472.1	470.7	466.5	463.0	458.1	453.9
27.5°	457.4	457.4	457.4	456.0	452.6	451.8	450.4	446.2	441.3	437.0	432.8
30°	433.6	432.8	432.8	430.8	429.4	426.6	424.5	420.9	417.5	412.5	407.7
32.5°	404.8	405.6	403.5	402.1	400.0	400.0	397.1	394.4	390.2	385.2	380.3
35°	373.3	374.1	372.6	371.9	368.4	367.8	367.1	363.6	360.7	357.2	351.6
37.5°	341.1	340.4	339.7	339.7	337.6	336.2	334.9	332.7	328.5	325.7	323.0
40°	306.1	306.1	306.1	305.4	304.7	303.3	302.7	301.2	298.5	295.6	293.5
42.5°	274.5	274.5	273.9	273.2	271.8	272.5	271.1	269.7	266.8	264.8	263.4
45°	243.8	243.8	243.8	244.5	243.0	241.0	241.0	239.6	238.1	236.8	234.6
47.5°	216.5	218.5	217.2	216.5	217.2	214.3	214.3	213.0	211.6	210.1	207.3
50°	194.0	194.0	194.0	192.7	192.0	192.0	189.8	188.5	187.8	186.3	183.5
52.5°	173.7	172.4	172.4	171.6	170.9	169.5	169.5	168.2	165.3	164.0	161.8
55°	153.4	153.4	152.7	152.1	151.3	150.6	149.9	147.8	146.4	144.2	142.2
57.5°	135.2	136.5	135.9	134.5	133.1	133.1	131.7	130.3	128.1	126.1	123.9
60°	120.4	119.8	119.8	119.1	117.7	117.0	116.2	114.2	112.0	110.0	107.8
62.5°	105.1	105.1	105.1	103.6	102.3	101.6	100.8	99.5	96.6	94.6	93.2
65°	91.7	91.1	90.4	89.7	88.9	87.5	86.9	85.5	83.3	81.3	79.2
67.5°	78.5	77.8	77.8	77.0	75.0	74.3	74.3	72.1	70.1	67.9	65.9
70°	65.1	65.1	65.1	63.7	63.0	62.4	61.7	60.2	58.2	56.0	54.0
72.5°	54.0	53.2	53.2	52.5	50.5	49.8	49.0	47.6	45.6	44.1	42.7
75°	42.1	42.1	41.3	40.6	39.9	39.2	38.6	37.1	35.0	32.9	32.2
77.5°	32.2	31.5	31.5	30.8	29.4	28.7	28.7	27.3	25.2	23.8	22.4
80°	21.8	22.4	21.8	21.0	20.3	19.6	18.9	18.3	16.8	15.4	14.1
82.5°	13.3	14.1	13.3	13.3	12.6	11.9	11.9	10.5	9.9	9.1	8.4
85°	7.0	7.0	7.0	7.0	6.3	6.3	6.3	5.6	4.9	4.2	4.2
87.5°	2.0	2.8	2.0	2.0	2.0	2.0	2.0	2.0	1.4	1.4	1.4
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°	524.7	524.7	524.7	524.7	524.7	524.7	524.7	524.7	524.7	524.7	524.7
2.5°	526.7	526.1	525.4	525.4	525.4	525.4	525.4	524.7	524.0	524.0	524.0
5°	525.4	525.4	525.4	524.7	524.0	524.0	522.5	521.9	521.2	520.5	519.7
7.5°	524.0	522.5	521.9	521.2	520.5	520.5	519.0	517.7	517.7	516.3	514.8
10°	519.7	519.0	517.7	516.3	515.5	514.8	513.5	511.3	510.6	509.3	507.8
12.5°	514.8	513.5	512.1	509.3	508.6	507.8	505.1	502.9	501.6	500.9	497.4
15°	508.6	505.8	503.6	500.2	499.4	498.0	495.9	493.9	491.0	489.0	487.5
17.5°	497.4	494.5	491.0	487.5	486.1	486.1	482.6	479.8	476.4	474.9	472.1
20°	484.0	480.6	477.7	473.6	471.4	469.4	467.2	463.0	460.2	458.1	454.6
22.5°	468.7	463.7	460.2	456.0	452.6	450.4	446.9	443.4	439.9	437.8	435.0
25°	449.1	444.9	439.2	435.0	432.8	430.1	425.9	422.4	418.9	415.4	414.0
27.5°	427.3	421.7	416.7	411.9	409.8	407.7	402.8	398.6	395.8	392.2	390.9
30°	403.5	397.9	392.2	388.1	386.0	382.5	379.7	374.8	371.3	368.4	364.9
32.5°	376.1	371.9	367.1	360.7	359.4	356.5	352.3	350.3	346.1	343.9	341.1
35°	346.8	343.9	339.1	334.2	332.0	330.7	327.2	323.0	320.1	318.0	316.6
37.5°	318.8	315.2	310.4	306.9	305.4	303.3	299.1	297.0	294.2	292.8	290.0
40°	288.6	285.1	281.6	279.5	277.4	276.0	273.2	271.1	268.3	266.2	265.5
42.5°	259.2	257.1	254.2	251.5	250.7	248.7	247.3	245.2	243.0	242.3	240.3
45°	232.6	230.4	227.7	224.9	224.2	222.7	222.0	220.0	218.5	218.5	218.5
47.5°	205.9	203.9	201.1	199.7	200.4	197.5	197.5	196.9	195.4	195.4	196.2
50°	182.1	179.3	178.6	177.2	175.9	174.4	175.1	173.0	173.0	174.4	173.7
52.5°	159.7	156.9	156.3	154.8	154.1	154.1	153.4	153.4	152.7	153.4	153.4
55°	139.4	137.3	135.9	134.5	133.8	133.8	133.8	133.1	132.3	133.8	134.5
57.5°	121.2	120.4	119.1	117.0	116.2	115.6	114.9	114.9	114.9	114.9	115.6
60°	105.1	103.6	102.3	100.1	100.1	99.5	98.8	98.1	98.1	98.1	98.1
62.5°	91.1	88.9	86.9	85.5	84.7	84.0	83.3	82.0	82.0	82.0	82.0
65°	77.0	75.0	73.6	72.1	70.8	70.8	69.4	68.6	67.2	66.6	65.1
67.5°	63.7	62.4	60.9	58.9	58.2	57.5	56.0	55.3	53.2	52.5	51.8
70°	51.8	49.8	48.3	46.9	46.3	44.8	43.4	42.1	40.6	39.2	37.9
72.5°	40.6	38.6	37.1	35.7	34.4	34.4	32.2	30.8	28.7	27.3	25.2
75°	30.2	28.0	26.6	24.5	23.8	23.1	21.0	19.6	17.5	15.4	14.1
77.5°	20.3	18.9	17.5	15.4	14.1	14.1	11.9	10.5	9.1	7.0	6.3
80°	12.6	11.2	9.9	8.4	8.4	7.0	6.3	4.9	3.5	2.8	2.0
82.5°	7.0	6.3	5.6	4.2	4.2	3.5	2.8	2.0	1.4	0.7	0.7
85°	3.5	2.8	2.0	2.0	1.4	1.4	1.4	0.7	0.7	0.0	0.0
87.5°	1.4	0.7	0.7	0.7	0.7	0.7	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):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	524.7	524.7	524.7	524.7	524.7	524.7	524.7	524.7	524.7	524.7	524.7
2.5°	523.2	523.2	522.5	522.5	522.5	521.9	522.5	521.9	521.9	521.9	522.5
5°	520.5	519.0	519.0	518.3	518.3	517.7	518.3	517.7	517.0	516.3	517.0
7.5°	514.8	513.5	512.8	512.1	512.1	512.1	511.3	510.6	511.3	509.3	510.6
10°	507.1	506.4	505.1	504.4	503.6	504.4	503.6	502.2	502.2	502.2	501.6
12.5°	497.4	495.9	495.2	494.5	493.2	493.2	493.9	492.5	492.5	491.0	491.0
15°	485.5	484.0	482.6	482.6	481.3	481.3	480.6	480.6	479.8	479.1	479.1
17.5°	470.7	468.7	467.2	467.9	467.2	466.5	466.5	465.2	464.5	465.2	465.2
20°	453.2	451.8	450.4	451.1	449.7	449.1	449.7	447.6	448.3	448.3	448.3
22.5°	433.6	432.8	430.8	430.8	429.4	428.8	429.4	429.4	430.1	429.4	429.4
25°	411.9	410.5	409.0	409.0	408.4	407.7	408.4	409.0	408.4	409.0	409.0
27.5°	388.7	386.7	386.7	385.2	385.2	386.0	385.2	386.0	386.7	386.7	388.1
30°	363.6	362.9	362.2	361.4	361.4	362.2	362.2	362.2	362.9	364.2	364.2
32.5°	339.7	338.4	336.9	336.9	338.4	337.6	338.4	338.4	339.7	339.7	341.1
35°	313.8	313.8	312.4	313.1	313.1	313.1	313.1	314.6	315.9	316.6	318.0
37.5°	290.0	287.9	288.6	288.6	289.3	288.6	290.6	290.6	292.1	292.1	293.5
40°	264.1	264.1	264.8	264.1	264.8	264.8	266.2	267.6	268.3	269.7	270.3
42.5°	239.6	241.0	239.6	240.3	241.0	241.7	242.3	243.0	245.9	247.3	249.4
45°	217.2	217.8	218.5	219.2	218.5	220.0	220.7	222.0	224.2	224.9	225.6
47.5°	195.4	196.2	196.9	197.5	197.5	198.9	199.7	201.1	202.4	203.1	203.9
50°	174.4	175.9	176.6	176.6	177.2	178.6	180.1	180.1	181.4	183.5	184.3
52.5°	155.5	155.5	156.9	157.6	158.3	158.3	160.5	161.1	161.8	163.2	164.7
55°	134.5	136.5	137.3	137.3	138.7	140.2	140.8	141.5	141.5	144.2	144.2
57.5°	116.2	117.0	118.4	118.4	118.4	120.4	120.4	121.9	122.6	123.3	124.6
60°	98.1	99.5	99.5	100.1	99.5	100.8	101.6	103.0	103.6	104.3	105.1
62.5°	81.3	81.3	82.0	82.0	82.0	82.0	83.3	83.3	84.7	85.5	86.2
65°	65.1	65.1	65.1	65.1	65.1	65.1	65.1	65.1	65.9	65.9	67.2
67.5°	50.5	49.8	48.3	49.0	48.3	48.3	47.6	47.6	48.3	48.3	49.8
70°	36.4	35.7	34.4	34.4	33.7	32.9	32.2	31.5	30.8	30.8	30.8
72.5°	23.8	22.4	20.3	19.6	19.6	18.3	16.8	16.1	16.1	16.1	16.1
75°	11.9	10.5	9.1	8.4	8.4	7.0	7.7	7.0	7.0	7.0	7.0
77.5°	4.9	3.5	2.8	2.8	2.8	2.0	2.0	2.0	2.0	2.0	2.0
80°	1.4	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
82.5°	0.7	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



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CATALOG NUMBER: HC810D010-HM80520930-81RWWC

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	524.7	524.7	524.7	524.7	524.7	524.7	524.7	524.7
2.5°	521.9	521.9	520.5	521.2	521.2	521.2	521.2	521.2
5°	515.5	516.3	515.5	516.3	516.3	515.5	515.5	515.5
7.5°	509.3	510.0	509.3	510.0	510.0	510.0	509.3	509.3
10°	501.6	501.6	501.6	501.6	501.6	500.9	501.6	501.6
12.5°	491.0	491.0	491.0	491.7	491.7	491.0	491.0	490.3
15°	479.8	478.4	479.1	479.8	479.1	479.1	479.1	479.1
17.5°	464.5	465.2	464.5	464.5	464.5	464.5	465.2	464.5
20°	448.3	448.3	449.1	448.3	448.3	448.3	448.3	447.6
22.5°	430.1	429.4	429.4	430.1	430.1	429.4	430.1	430.1
25°	409.8	410.5	409.8	409.8	410.5	410.5	410.5	409.8
27.5°	388.1	388.7	389.4	388.7	388.7	388.7	389.4	390.2
30°	365.6	367.1	365.6	365.6	367.1	366.4	367.1	367.1
32.5°	341.8	343.9	342.6	343.9	343.9	344.6	343.9	344.6
35°	318.0	320.1	320.1	320.1	320.8	321.5	321.5	320.8
37.5°	295.6	296.3	296.3	297.7	298.5	299.1	299.1	298.5
40°	272.5	273.9	274.5	274.5	274.5	276.0	277.4	276.0
42.5°	250.0	250.7	251.5	251.5	252.9	253.6	254.2	254.2
45°	228.4	229.7	230.4	231.1	231.9	233.3	232.6	233.9
47.5°	205.9	208.1	208.8	209.4	210.8	211.6	212.3	213.0
50°	185.6	187.0	187.0	188.5	190.5	190.5	192.0	192.7
52.5°	165.3	166.0	166.7	167.4	168.8	170.2	170.2	171.6
55°	145.7	146.4	146.4	147.1	147.8	150.6	151.3	151.3
57.5°	125.4	125.4	126.8	127.5	128.1	129.6	129.6	129.6
60°	105.8	106.5	106.5	107.2	107.8	109.3	110.0	109.3
62.5°	86.2	86.9	86.9	87.5	88.9	89.7	88.9	88.9
65°	67.9	68.6	68.6	69.4	70.8	70.8	70.1	70.8
67.5°	49.8	49.8	49.8	49.8	49.8	49.8	49.8	49.8
70°	31.5	30.8	30.2	30.8	30.8	30.8	30.2	31.5
72.5°	15.4	16.1	16.1	16.1	16.1	16.1	16.1	15.4
75°	7.0	7.0	6.3	6.3	6.3	7.0	7.0	6.3
77.5°	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
80°	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
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)