

Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: HALO

Report Number: P645611

Luminaire Tested: LCR408WW9FSE020-8W-2700K

Issue Date: 3/14/2023

Test Information

Test Method: LM-79-2019
Report Number: P645611
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2209-759-1)
Test Lab: INNOVATION CENTER
Issue Date: 3/14/2023
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO
Catalog Number: LCR408WW9FSE020-8W-2700K
Description: LCR 4 Wall Wash
Light Source: 2700K CCT, 93 CRI LEDS
Ballast/Driver: -

Summary

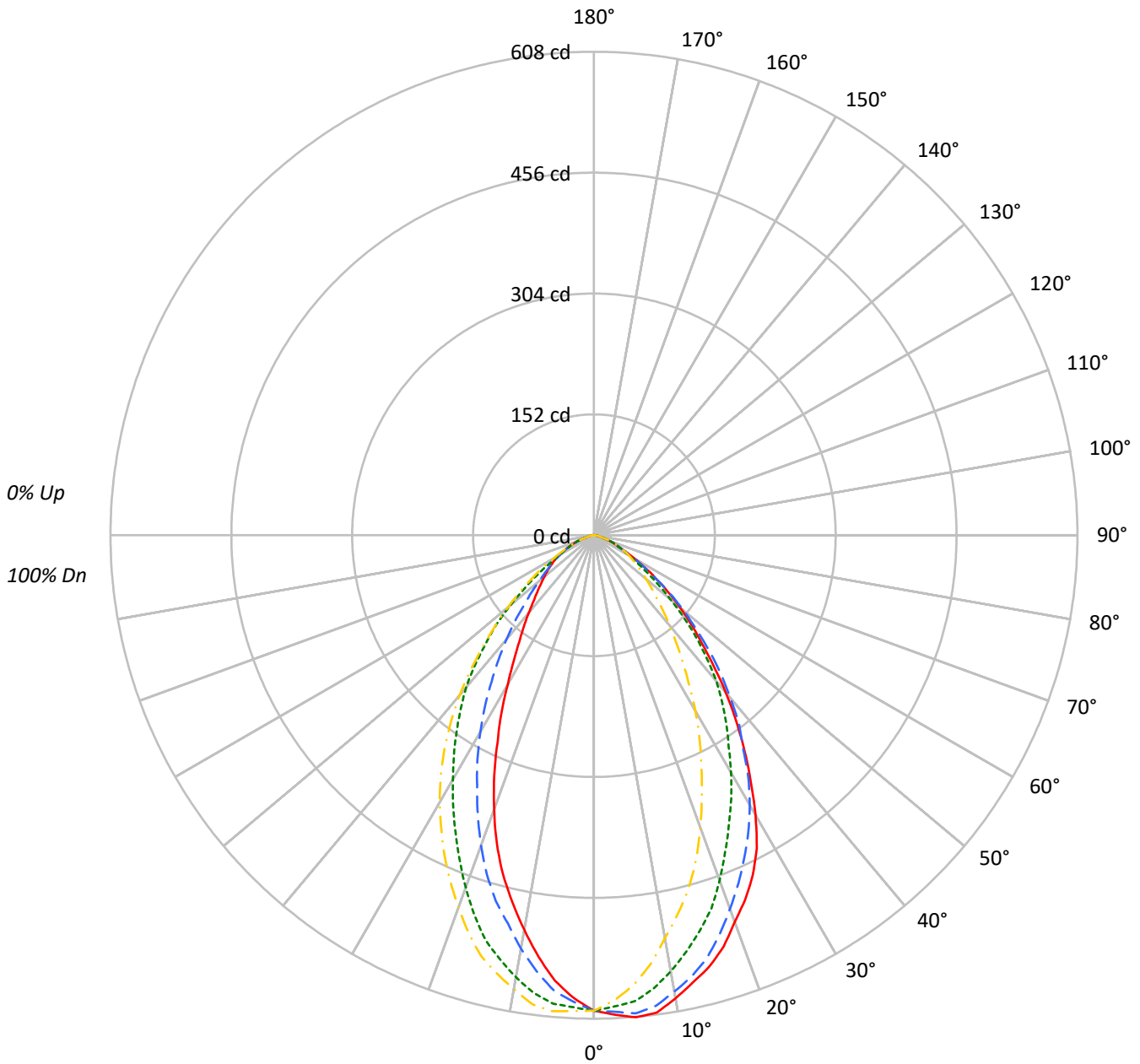
Lumens per Lamp: N/A
Luminaire Lumens: 795.0 lumens
Efficiency: N/A
Efficacy: 98.1 lumens/watt
Spacing Criteria (0/90/45): 0.89 / 0.94 / 0.99
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 8.1
Input Voltage (V): 120
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: 24 FT



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Luminous Intensity Polar Plot



— 0°-180° - - 45°-225° - · - 90°-270° - · - 135°-315°



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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
RCR																				
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	102	100	
1	112	108	105	102	109	106	103	101	102	100	97	98	96	95	95	93	92	92	90	
2	104	98	93	89	102	96	92	88	93	89	86	90	87	84	87	84	82	82	80	
3	97	89	83	78	95	88	82	77	85	80	76	82	78	74	80	76	73	73	71	
4	91	81	74	69	89	80	73	68	78	72	68	75	71	67	73	69	66	66	64	
5	85	74	67	62	83	73	66	61	71	65	61	70	64	60	68	63	60	60	58	
6	79	68	61	56	78	68	61	55	66	60	55	64	59	55	63	58	54	54	53	
7	75	63	56	51	73	62	55	51	61	55	50	60	54	50	58	53	50	50	48	
8	70	59	51	46	69	58	51	46	57	51	46	56	50	46	55	49	46	46	44	
9	66	55	47	43	65	54	47	43	53	47	42	52	46	42	51	46	42	42	41	
10	62	51	44	40	61	50	44	39	50	44	39	49	43	39	48	43	39	39	38	

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	73748	73748	73748	73748
5°	75330	72841	69635	73200
10°	74047	69726	63125	70690
15°	71702	65700	56404	67296
20°	67915	60617	48173	61877
25°	64292	54643	38992	56072
30°	57868	49123	30836	50490
35°	49630	43713	24665	45309
40°	41494	38563	20513	40270
45°	33422	31748	17548	33422
50°	27018	24082	15620	26289
55°	20601	17311	14215	18752
60°	14653	12532	12532	12754
65°	10069	9777	10361	9777
70°	7249	7609	7609	7609
75°	4099	5004	4575	4575
80°	3410	4049	4049	4049
85°	2689	4104	4104	4104

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 35603 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	54.9	6.9
10°-20°	142.2	17.9
20°-30°	179.7	22.6
30°-40°	168.5	21.2
40°-50°	125.9	15.8
50°-60°	73.9	9.3
60°-70°	35.0	4.4
70°-80°	11.9	1.5
80°-90°	2.8	0.4
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°	376.8	47.4
0°-40°	545.4	68.6
0°-60°	745.2	93.7
0°-90°	795.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	795.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	598	598	598	598	598	
5°	608	588	562	591	608	58
15°	562	514	442	527	562	157
25°	472	402	286	412	472	215
35°	330	290	164	301	330	206
45°	192	182	101	192	192	150
55°	96	80	66	87	96	87
65°	34	34	36	34	34	36
75°	9	10	10	10	9	11
85°	2	3	3	3	2	2
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	597.9	597.9	597.9	597.9	597.9	597.9	597.9	597.9	597.9	597.9	597.9
2.5°	603.6	603.6	599.8	597.9	593.1	589.3	585.4	582.6	582.6	584.5	587.3
5°	608.4	607.5	603.6	596.9	588.3	577.8	568.2	562.4	562.4	566.3	574.9
7.5°	605.6	601.7	596.9	588.3	574.9	558.6	544.2	537.5	534.6	541.4	552.9
10°	591.2	586.4	582.6	572.0	556.7	531.8	514.5	507.8	504.0	513.6	527.9
12.5°	575.9	572.0	568.2	555.7	536.6	510.7	487.7	477.2	473.3	483.9	500.2
15°	561.5	555.7	550.0	534.6	514.5	484.8	459.9	444.6	441.7	453.2	476.2
17.5°	542.3	535.6	526.0	511.7	491.5	459.0	427.3	408.2	406.3	422.5	447.5
20°	517.4	510.7	500.2	484.8	461.8	429.3	390.9	369.8	367.0	384.2	414.9
22.5°	496.3	483.9	474.3	458.0	431.2	395.7	354.5	329.6	327.7	344.0	381.3
25°	472.4	458.0	447.5	429.3	401.5	364.1	319.1	291.3	286.5	307.6	347.8
27.5°	443.6	430.2	420.6	398.6	373.7	332.5	287.4	254.9	252.0	274.0	317.1
30°	406.3	401.5	391.9	366.0	344.9	301.8	254.9	221.3	216.5	241.5	285.5
32.5°	367.0	368.9	361.2	335.4	315.2	271.2	222.3	192.6	187.8	210.8	254.9
35°	329.6	336.3	326.7	310.4	290.3	242.4	194.5	167.7	163.8	184.0	224.2
37.5°	293.2	301.8	299.9	282.7	264.5	212.7	169.6	145.6	144.7	160.0	196.4
40°	257.7	267.3	266.4	255.8	239.5	186.8	147.6	129.4	127.4	139.9	171.5
42.5°	222.3	233.8	235.7	229.0	209.8	161.0	128.4	114.0	112.1	121.7	147.6
45°	191.6	198.3	204.1	198.3	182.0	137.0	111.1	101.6	100.6	107.3	124.6
47.5°	165.8	169.6	173.4	169.6	153.3	115.9	97.7	92.0	90.1	94.9	106.4
50°	140.8	142.8	146.6	139.9	125.5	97.7	85.3	82.4	81.4	84.3	90.1
52.5°	117.9	117.9	120.7	112.1	101.6	82.4	75.7	73.8	73.8	74.7	77.6
55°	95.8	94.9	94.9	88.2	80.5	69.9	67.1	66.1	66.1	66.1	67.1
57.5°	76.7	75.7	74.7	68.0	63.2	59.4	58.4	58.4	58.4	57.5	57.5
60°	59.4	58.4	55.6	51.7	50.8	50.8	50.8	50.8	50.8	49.8	48.9
62.5°	45.0	44.1	43.1	41.2	41.2	42.2	43.1	43.1	43.1	42.2	42.2
65°	34.5	33.5	33.5	32.6	33.5	35.5	35.5	35.5	35.5	34.5	34.5
67.5°	26.8	25.9	26.8	26.8	27.8	28.7	28.7	27.8	27.8	27.8	27.8
70°	20.1	20.1	20.1	21.1	21.1	23.0	22.0	21.1	21.1	21.1	22.0
72.5°	14.4	13.4	14.4	15.3	15.3	16.3	15.3	15.3	15.3	15.3	15.3
75°	8.6	8.6	9.6	9.6	10.5	10.5	9.6	9.6	9.6	9.6	9.6
77.5°	6.7	6.7	6.7	7.7	7.7	7.7	7.7	7.7	7.7	7.7	7.7
80°	4.8	4.8	4.8	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7
82.5°	3.8	3.8	3.8	3.8	3.8	3.8	4.8	3.8	4.8	4.8	4.8
85°	1.9	1.9	1.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9
87.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
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):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	597.9	597.9	597.9	597.9	597.9	597.9
2.5°	590.2	594.1	597.9	598.8	601.7	603.6
5°	581.6	591.2	596.9	600.8	606.5	608.4
7.5°	570.1	580.6	588.3	595.0	600.8	605.6
10°	550.0	564.4	572.0	579.7	586.4	591.2
12.5°	527.9	546.1	556.7	564.4	572.0	575.9
15°	505.9	527.0	537.5	548.1	555.7	561.5
17.5°	479.1	500.2	514.5	524.1	535.6	542.3
20°	449.4	471.4	488.7	498.2	512.6	517.4
22.5°	419.7	441.7	460.9	471.4	487.7	496.3
25°	389.0	412.0	432.1	444.6	462.8	472.4
27.5°	360.3	383.3	405.3	415.8	434.0	443.6
30°	330.6	354.5	375.6	388.1	398.6	406.3
32.5°	301.8	327.7	343.0	358.3	361.2	367.0
35°	275.9	300.9	314.3	327.7	325.8	329.6
37.5°	249.1	275.0	283.6	295.1	290.3	293.2
40°	221.3	250.1	253.9	262.5	255.8	257.7
42.5°	193.5	221.3	223.2	229.0	220.4	222.3
45°	165.8	191.6	193.5	196.4	189.7	191.6
47.5°	138.9	166.7	166.7	167.7	163.8	165.8
50°	113.1	137.0	140.8	141.8	139.9	140.8
52.5°	91.0	110.2	115.0	117.9	116.9	117.9
55°	71.9	87.2	92.9	95.8	95.8	95.8
57.5°	58.4	66.1	73.8	76.7	76.7	76.7
60°	48.9	51.7	56.5	59.4	59.4	59.4
62.5°	40.2	41.2	43.1	46.9	46.0	45.0
65°	34.5	33.5	34.5	34.5	34.5	34.5
67.5°	27.8	26.8	26.8	27.8	26.8	26.8
70°	22.0	21.1	21.1	21.1	20.1	20.1
72.5°	16.3	15.3	15.3	14.4	14.4	14.4
75°	10.5	9.6	9.6	9.6	8.6	8.6
77.5°	7.7	7.7	7.7	6.7	6.7	6.7
80°	5.7	5.7	5.7	4.8	4.8	4.8
82.5°	4.8	3.8	3.8	3.8	3.8	3.8
85°	2.9	2.9	2.9	1.9	1.9	1.9
87.5°	1.0	1.0	1.0	1.0	1.0	1.0
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)