

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: P645631

Luminaire Tested: LCR621WW9FSE020-23W-3500K

Issue Date: 3/14/2023

Test Information

Test Method: LM-79-2019
Report Number: P645631
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2209-759-81)
Test Lab: INNOVATION CENTER
Issue Date: 3/14/2023
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO
Catalog Number: LCR621WW9FSE020-23W-3500K
Description: LCR 6 Wall Wash
Light Source: 3500K CCT, 93 CRI LEDS
Ballast/Driver: -

Summary

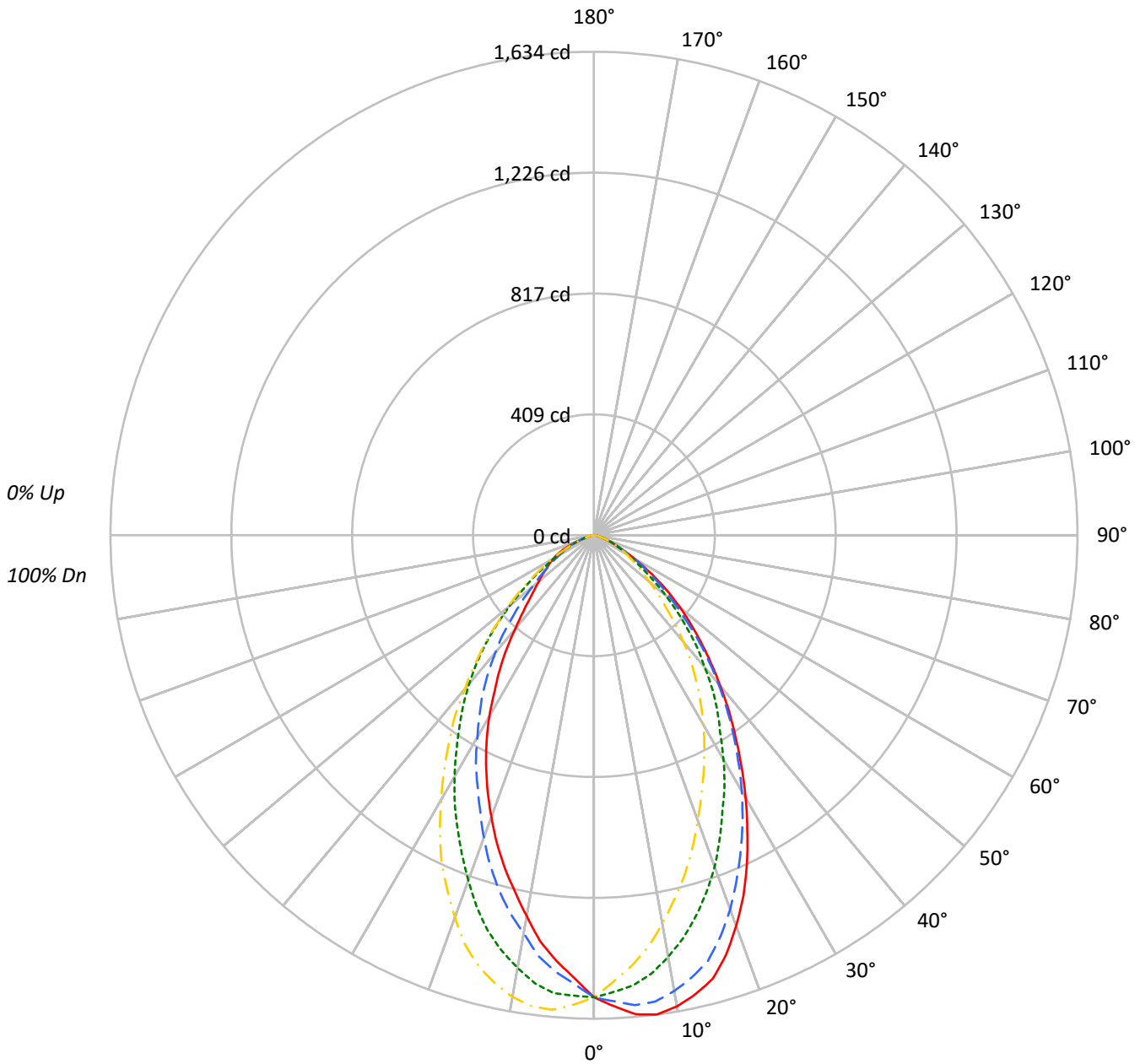
Lumens per Lamp: N/A
Luminaire Lumens: 2135.0 lumens
Efficiency: N/A
Efficacy: 94.5 lumens/watt
Spacing Criteria (0/90/45): 0.93 / 0.94 / 1.01
Luminous Opening: Circular (Dia: 0.5' x H: 0')
CIE Type: Direct

Input Watts (W): 22.6
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	0
RCR																					
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	102	102	102	100
1	112	108	105	102	109	106	103	101	102	100	97	98	96	95	95	93	92	95	93	92	90
2	104	98	93	89	102	96	92	88	93	89	86	90	87	84	87	84	82	87	84	82	80
3	97	89	83	78	95	88	82	77	85	80	76	82	78	74	80	76	73	80	76	73	71
4	91	81	74	69	89	80	73	68	78	72	67	75	71	67	73	69	66	73	69	66	64
5	85	74	67	62	83	73	66	61	71	65	61	69	64	60	68	63	60	68	63	60	58
6	79	68	61	56	78	67	60	55	66	60	55	64	59	55	63	58	54	63	58	54	52
7	74	63	56	51	73	62	55	50	61	55	50	60	54	50	58	53	49	58	53	49	48
8	70	58	51	46	69	58	51	46	57	50	46	55	50	46	54	49	45	54	49	45	44
9	66	54	47	43	65	54	47	42	53	47	42	52	46	42	51	46	42	51	46	42	40
10	62	51	44	39	61	50	44	39	49	43	39	49	43	39	48	43	39	48	43	39	37

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	85591	85591	85591	85591
5°	89434	84003	79485	85494
10°	89984	80510	72761	82664
15°	88065	75608	66062	78570
20°	81948	69598	59108	72415
25°	73976	62163	52164	66022
30°	64871	55445	44798	59604
35°	55834	48720	37136	53117
40°	47460	41649	29613	46974
45°	39648	34554	24057	39950
50°	32323	26959	20775	31743
55°	24764	19775	18666	23751
60°	17170	14198	17389	16534
65°	11285	10909	14917	11908
70°	7742	8207	8367	8992
75°	5126	5316	5316	5740
80°	4578	4578	4578	5177
85°	4277	3648	3648	4277

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 292.5°
 Vertical Angle: 45°
 Luminance: 40927 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	144.4	6.8
10°-20°	378.5	17.7
20°-30°	481.9	22.6
30°-40°	455.9	21.4
40°-50°	341.2	16.0
50°-60°	201.7	9.4
60°-70°	93.6	4.4
70°-80°	30.3	1.4
80°-90°	7.5	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°	1004.9	47.1
0°-40°	1460.8	68.4
0°-60°	2003.6	93.8
0°-90°	2135.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2135.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	1561	1561	1561	1561	1561	
5°	1625	1526	1444	1554	1625	155
15°	1552	1332	1164	1384	1552	432
25°	1223	1028	862	1092	1223	559
35°	834	728	555	794	834	523
45°	511	446	310	515	511	396
55°	259	207	195	248	259	233
65°	87	84	115	92	87	91
75°	24	25	25	27	24	29
85°	7	6	6	7	7	7
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°	1561.3	1561.3	1561.3	1561.3	1561.3	1561.3	1561.3	1561.3	1561.3	1561.3	1561.3
2.5°	1594.2	1594.2	1576.8	1561.3	1544.9	1524.6	1510.1	1501.4	1498.5	1506.2	1517.8
5°	1625.2	1615.5	1594.2	1560.4	1526.5	1490.8	1460.8	1448.2	1444.4	1459.8	1481.1
7.5°	1633.9	1619.4	1589.4	1545.9	1493.7	1447.3	1403.8	1383.5	1385.4	1401.8	1434.7
10°	1616.5	1600.0	1564.2	1506.2	1446.3	1375.7	1332.2	1307.1	1307.1	1324.5	1366.1
12.5°	1588.4	1572.0	1530.4	1466.6	1394.1	1314.8	1258.7	1232.6	1233.6	1255.8	1308.1
15°	1551.7	1528.5	1488.8	1418.3	1332.2	1247.1	1186.2	1160.1	1164.0	1189.1	1240.4
17.5°	1485.9	1467.6	1422.1	1357.4	1264.5	1173.7	1107.0	1082.8	1090.5	1116.6	1167.9
20°	1404.7	1387.3	1345.8	1279.0	1193.0	1085.7	1024.8	1004.5	1013.2	1033.5	1087.6
22.5°	1319.7	1299.4	1259.7	1201.7	1109.9	1009.3	948.4	928.1	937.8	955.2	1005.5
25°	1223.0	1208.5	1173.7	1121.5	1027.7	931.0	877.8	854.6	862.4	885.6	931.0
27.5°	1122.4	1113.7	1087.6	1041.2	955.2	865.3	807.3	782.1	786.0	810.2	864.3
30°	1024.8	1017.1	998.7	956.1	875.9	787.9	740.6	708.6	707.7	733.8	787.9
32.5°	928.1	922.3	908.8	873.0	793.7	719.3	670.9	635.2	624.5	663.2	718.3
35°	834.3	828.5	821.8	787.0	728.0	659.3	603.3	564.6	554.9	589.7	656.4
37.5°	750.2	741.5	736.7	705.7	658.4	591.7	538.5	496.9	485.3	520.1	586.8
40°	663.2	657.4	654.5	624.5	582.0	522.1	470.8	429.3	413.8	451.5	518.2
42.5°	584.9	576.2	572.3	550.1	518.2	462.1	405.1	366.4	356.7	386.7	455.4
45°	511.4	500.8	495.0	477.6	445.7	390.6	343.2	313.2	310.3	327.7	384.8
47.5°	442.8	432.2	416.7	401.2	379.0	334.5	294.9	272.6	272.6	283.3	329.7
50°	379.0	367.4	351.9	338.4	316.1	278.4	244.6	239.8	243.6	245.6	271.7
52.5°	318.1	307.4	293.9	277.5	256.2	230.1	207.9	209.8	218.5	215.6	231.1
55°	259.1	251.4	238.8	224.3	206.9	185.6	175.0	186.6	195.3	188.5	192.4
57.5°	204.0	198.2	193.4	176.9	162.4	152.8	149.9	165.3	176.9	166.3	162.4
60°	156.6	154.7	151.8	138.2	129.5	126.6	126.6	144.1	158.6	145.0	136.3
62.5°	116.0	117.0	115.0	107.3	104.4	104.4	104.4	123.7	138.2	123.7	113.1
65°	87.0	88.0	89.9	85.1	84.1	85.1	84.1	99.6	115.0	100.5	91.8
67.5°	65.7	66.7	66.7	66.7	67.7	67.7	65.7	74.4	83.1	76.4	71.5
70°	48.3	49.3	50.3	49.3	51.2	51.2	50.3	51.2	52.2	53.2	54.1
72.5°	34.8	33.8	34.8	34.8	35.8	35.8	34.8	34.8	34.8	36.7	38.7
75°	24.2	24.2	25.1	25.1	25.1	25.1	24.2	24.2	25.1	25.1	26.1
77.5°	19.3	19.3	20.3	20.3	19.3	19.3	19.3	19.3	19.3	20.3	20.3
80°	14.5	14.5	15.5	14.5	14.5	14.5	14.5	14.5	14.5	15.5	15.5
82.5°	10.6	10.6	10.6	10.6	10.6	10.6	9.7	9.7	9.7	10.6	10.6
85°	6.8	6.8	6.8	6.8	5.8	5.8	5.8	5.8	5.8	6.8	6.8
87.5°	2.9	2.9	2.9	1.9	1.9	1.9	1.9	1.9	1.9	2.9	2.9
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°	1561.3	1561.3	1561.3	1561.3	1561.3	1561.3
2.5°	1538.1	1557.5	1573.9	1588.4	1591.3	1594.2
5°	1516.9	1553.6	1582.6	1609.7	1623.2	1625.2
7.5°	1477.2	1527.5	1572.0	1605.8	1630.0	1633.9
10°	1424.1	1485.0	1539.1	1584.6	1609.7	1616.5
12.5°	1367.0	1438.6	1498.5	1549.7	1580.7	1588.4
15°	1309.0	1384.4	1453.1	1507.2	1542.0	1551.7
17.5°	1240.4	1316.8	1393.1	1450.2	1477.2	1485.9
20°	1164.0	1241.3	1320.6	1373.8	1398.9	1404.7
22.5°	1087.6	1165.9	1244.2	1295.5	1317.7	1319.7
25°	1017.1	1091.5	1167.9	1218.1	1225.9	1223.0
27.5°	944.5	1019.0	1085.7	1127.3	1131.1	1122.4
30°	873.0	941.6	1002.6	1032.5	1034.5	1024.8
32.5°	799.5	865.3	909.7	941.6	939.7	928.1
35°	729.9	793.7	834.3	852.7	845.0	834.3
37.5°	664.2	726.1	755.1	772.5	760.9	750.2
40°	595.5	656.4	674.8	679.6	674.8	663.2
42.5°	525.0	586.8	599.4	597.5	593.6	584.9
45°	454.4	515.3	527.9	525.0	519.2	511.4
47.5°	393.5	441.8	452.5	447.6	448.6	442.8
50°	328.7	372.2	383.8	381.9	384.8	379.0
52.5°	265.9	302.6	318.1	324.8	322.9	318.1
55°	213.7	248.5	258.1	263.0	263.9	259.1
57.5°	172.1	192.4	206.9	214.6	209.8	204.0
60°	139.2	150.8	161.5	168.2	162.4	156.6
62.5°	113.1	117.9	123.7	128.6	120.8	116.0
65°	91.8	91.8	94.7	96.7	89.9	87.0
67.5°	73.5	73.5	73.5	72.5	67.7	65.7
70°	57.0	56.1	55.1	53.2	49.3	48.3
72.5°	39.6	39.6	38.7	37.7	35.8	34.8
75°	26.1	27.1	26.1	26.1	25.1	24.2
77.5°	21.3	21.3	21.3	21.3	20.3	19.3
80°	15.5	16.4	16.4	16.4	15.5	14.5
82.5°	11.6	11.6	11.6	11.6	10.6	10.6
85°	6.8	6.8	7.7	6.8	6.8	6.8
87.5°	2.9	2.9	2.9	3.9	2.9	2.9
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)