

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: P645634

Luminaire Tested: LCR621WW9FSE020-23W-6500K

Issue Date: 3/14/2023

Test Information

Test Method: LM-79-2019
Report Number: P645634
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2209-759-93)
Test Lab: INNOVATION CENTER
Issue Date: 3/14/2023
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO
Catalog Number: LCR621WW9FSE020-23W-6500K
Description: LCR 6 Wall Wash
Light Source: 6500K CCT, 93 CRI LEDS
Ballast/Driver: -

Summary

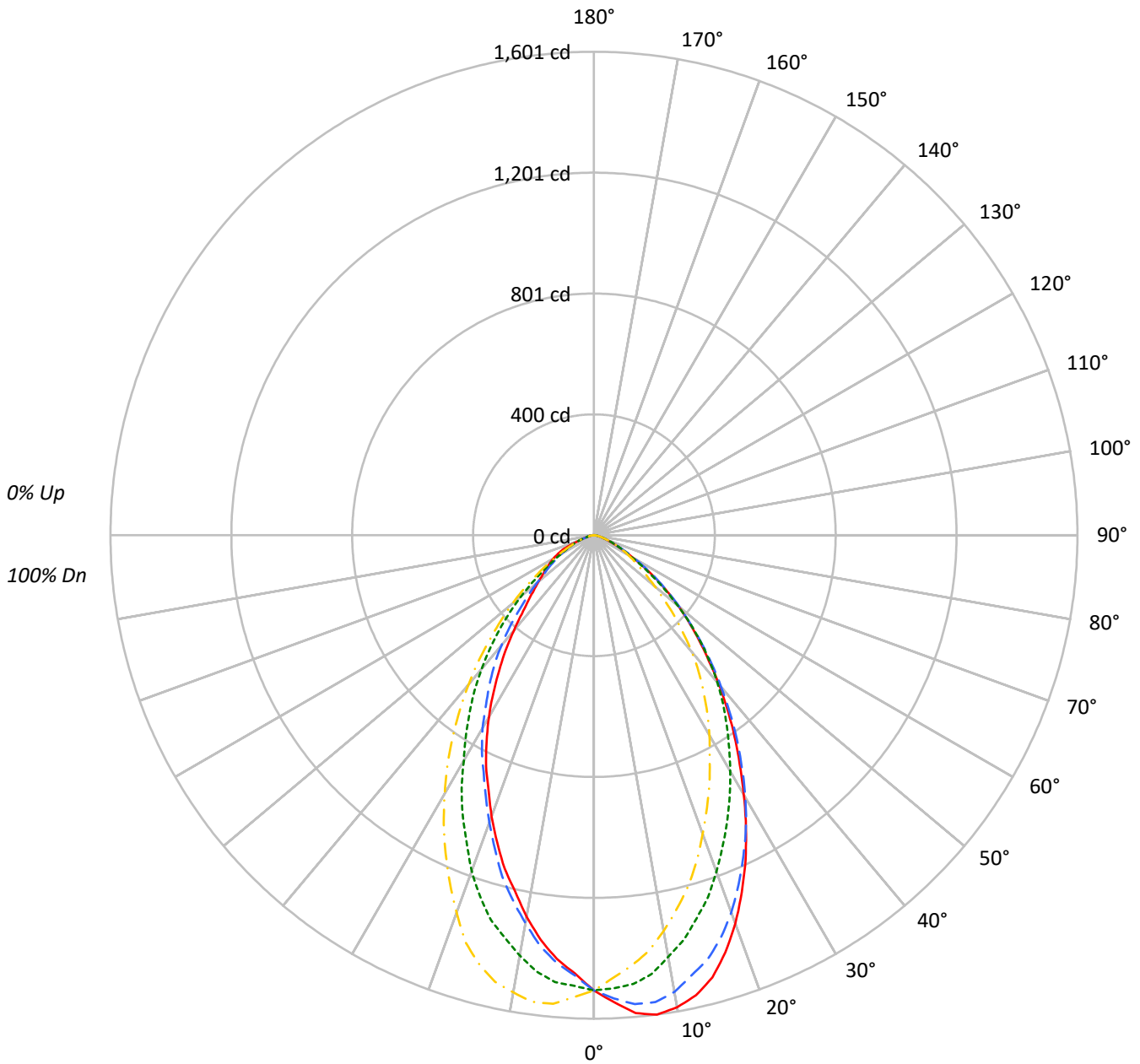
Lumens per Lamp: N/A
Luminaire Lumens: 2085.0 lumens
Efficiency: N/A
Efficacy: 92.3 lumens/watt
Spacing Criteria (0/90/45): 0.94 / 0.95 / 1.02
Luminous Opening: Circular (Dia: 0.5' x H: 0')
CIE Type: Direct

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



TEST NUMBER: P645634
CATALOG NUMBER: LCR621WW9FSE020-23W-6500K

Luminous Intensity Polar Plot



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



TEST NUMBER: P645634

CATALOG NUMBER: LCR621WW9FSE020-23W-6500K

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	87	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	59	68	63	59	58
6	79	68	61	56	78	67	60	55	66	60	55	64	59	54	63	58	54	63	58	54	52
7	74	63	56	50	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°	82625	82625	82625	82625
5°	87420	82088	77498	81713
10°	88325	78884	71380	78667
15°	86033	74535	64858	74870
20°	79842	69154	57790	69044
25°	71817	63143	51124	62145
30°	62826	57123	43994	54546
35°	54228	51243	36520	48004
40°	46058	45435	29548	41406
45°	38175	38771	23824	34267
50°	31078	30831	20417	26780
55°	23808	22508	18341	19545
60°	16369	15624	17005	14133
65°	10935	11441	14839	11065
70°	7453	8383	8543	8383
75°	4935	5338	5338	5549
80°	4578	4578	4578	5209
85°	3648	3648	3648	4277

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 38927 cd/sqm



TEST NUMBER: P645634
 CATALOG NUMBER: LCR621WW9FSE020-23W-6500K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	140.4	6.7
10°-20°	369.4	17.7
20°-30°	470.6	22.6
30°-40°	445.8	21.4
40°-50°	333.4	16.0
50°-60°	196.8	9.4
60°-70°	91.6	4.4
70°-80°	29.8	1.4
80°-90°	7.2	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°	980.4	47.0
0°-40°	1426.2	68.4
0°-60°	1956.3	93.8
0°-90°	2085.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2085.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	1507	1507	1507	1507	1507	
5°	1589	1492	1408	1485	1589	151
15°	1516	1313	1143	1319	1516	422
25°	1187	1044	845	1027	1187	543
35°	810	766	546	717	810	506
45°	492	500	307	442	492	381
55°	249	236	192	204	249	224
65°	84	88	114	85	84	88
75°	23	25	25	26	23	28
85°	6	6	6	7	6	7
90°	0	0	0	0	0	



TEST NUMBER: P645634

CATALOG NUMBER: LCR621WW9FSE020-23W-6500K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	1507.2	1507.2	1507.2	1507.2	1507.2	1507.2	1507.2	1507.2	1507.2	1507.2	1507.2
2.5°	1547.9	1547.9	1535.3	1519.8	1501.4	1482.0	1466.5	1454.9	1452.0	1454.9	1458.7
5°	1588.6	1579.9	1558.6	1528.5	1491.7	1459.7	1430.6	1414.2	1408.3	1409.3	1420.9
7.5°	1601.2	1591.5	1559.5	1516.9	1465.5	1425.8	1388.9	1364.7	1351.1	1356.0	1370.5
10°	1586.7	1569.2	1535.3	1475.2	1417.1	1371.5	1329.8	1299.8	1282.3	1287.2	1304.6
12.5°	1560.5	1535.3	1492.7	1435.5	1372.5	1320.1	1267.8	1227.1	1206.7	1215.5	1238.7
15°	1515.9	1491.7	1453.9	1388.0	1313.3	1265.9	1203.8	1159.2	1142.8	1141.8	1170.9
17.5°	1448.1	1426.8	1397.7	1328.9	1256.2	1199.0	1131.1	1081.7	1066.2	1065.2	1090.4
20°	1368.6	1347.3	1328.9	1253.3	1185.4	1130.2	1052.6	1005.1	990.6	988.6	1011.9
22.5°	1279.4	1264.9	1252.3	1185.4	1113.7	1057.5	977.0	930.5	912.1	912.1	935.3
25°	1187.3	1181.5	1170.9	1108.8	1043.9	990.6	905.3	859.7	845.2	842.3	864.6
27.5°	1090.4	1094.3	1090.4	1036.1	973.1	918.9	829.7	786.1	769.6	773.5	803.5
30°	992.5	996.4	1003.2	947.0	902.4	848.1	764.7	714.3	695.0	701.7	736.6
32.5°	898.5	904.3	912.1	867.5	832.6	777.3	698.8	642.6	620.3	632.0	664.9
35°	810.3	819.0	825.8	794.8	765.7	711.4	632.0	570.9	545.7	564.1	601.9
37.5°	725.0	727.9	738.6	715.3	700.8	646.5	569.9	505.0	480.8	499.2	541.8
40°	643.6	646.5	655.2	642.6	634.9	572.8	503.0	437.1	412.9	432.3	476.9
42.5°	562.2	566.0	576.7	577.7	568.0	506.9	435.2	373.2	352.8	368.3	412.9
45°	492.4	496.3	502.1	502.1	500.1	442.0	373.2	318.9	307.3	314.0	348.0
47.5°	426.5	428.4	432.3	438.1	430.4	377.0	314.0	275.3	269.5	270.4	297.6
50°	364.4	366.4	369.3	372.2	361.5	314.0	262.7	240.4	239.4	236.5	246.2
52.5°	306.3	308.2	308.2	301.4	297.6	259.8	219.1	210.3	213.2	205.5	205.5
55°	249.1	257.8	253.9	250.1	235.5	207.4	185.1	188.0	191.9	182.2	177.4
57.5°	195.8	199.7	201.6	197.7	185.1	167.7	157.0	166.7	173.5	159.0	148.3
60°	149.3	154.1	158.0	154.1	142.5	135.7	131.8	146.4	155.1	139.6	125.0
62.5°	111.5	115.3	120.2	118.2	112.4	109.5	109.5	127.0	135.7	118.2	103.7
65°	84.3	85.3	90.1	90.1	88.2	89.2	88.2	104.7	114.4	96.0	84.3
67.5°	63.0	64.9	66.9	68.8	67.8	69.8	68.8	79.5	84.3	73.7	66.9
70°	46.5	47.5	48.5	51.4	52.3	53.3	51.4	54.3	53.3	52.3	50.4
72.5°	33.0	33.9	33.9	35.9	35.9	36.8	34.9	35.9	35.9	35.9	37.8
75°	23.3	23.3	23.3	24.2	25.2	24.2	24.2	24.2	25.2	25.2	26.2
77.5°	18.4	18.4	18.4	19.4	19.4	19.4	19.4	19.4	19.4	19.4	20.4
80°	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5	15.5
82.5°	9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7	10.7	10.7	10.7
85°	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	6.8
87.5°	2.9	2.9	1.9	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



TEST NUMBER: P645634

CATALOG NUMBER: LCR621WW9FSE020-23W-6500K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	1507.2	1507.2	1507.2	1507.2	1507.2	1507.2
2.5°	1477.2	1493.6	1515.0	1531.4	1541.1	1547.9
5°	1451.0	1484.9	1521.7	1557.6	1578.0	1588.6
7.5°	1409.3	1456.8	1513.0	1558.6	1592.5	1601.2
10°	1352.1	1413.2	1483.0	1537.2	1576.0	1586.7
12.5°	1294.9	1364.7	1448.1	1515.0	1551.8	1560.5
15°	1232.9	1319.2	1409.3	1469.4	1510.1	1515.9
17.5°	1162.1	1254.2	1348.2	1413.2	1444.2	1448.1
20°	1074.9	1183.5	1275.5	1329.8	1363.7	1368.6
22.5°	998.3	1101.1	1202.9	1246.5	1278.5	1279.4
25°	924.7	1027.4	1124.3	1162.1	1189.3	1187.3
27.5°	853.9	948.9	1040.0	1076.8	1096.2	1090.4
30°	784.1	861.7	958.6	988.6	999.3	992.5
32.5°	718.2	789.9	874.3	902.4	903.4	898.5
35°	651.3	717.3	787.0	815.1	814.2	810.3
37.5°	586.4	649.4	704.7	728.9	721.1	725.0
40°	528.2	578.6	623.2	646.5	639.7	643.6
42.5°	460.4	509.8	540.8	565.1	564.1	562.2
45°	391.6	442.0	467.2	486.6	494.3	492.4
47.5°	337.3	376.1	395.5	416.8	424.5	426.5
50°	281.1	314.0	330.5	351.8	361.5	364.4
52.5°	231.7	255.9	273.3	292.7	303.4	306.3
55°	187.1	204.5	220.0	235.5	247.2	249.1
57.5°	153.1	162.8	175.4	189.0	195.8	195.8
60°	127.0	128.9	138.6	147.3	152.2	149.3
62.5°	104.7	104.7	107.6	116.3	115.3	111.5
65°	86.3	85.3	85.3	89.2	87.2	84.3
67.5°	69.8	68.8	67.8	68.8	65.9	63.0
70°	54.3	52.3	51.4	50.4	48.5	46.5
72.5°	38.8	37.8	36.8	35.9	33.9	33.0
75°	26.2	26.2	25.2	25.2	24.2	23.3
77.5°	20.4	21.3	20.4	20.4	19.4	18.4
80°	15.5	16.5	15.5	15.5	14.5	14.5
82.5°	11.6	11.6	11.6	11.6	10.7	9.7
85°	6.8	6.8	6.8	6.8	6.8	5.8
87.5°	2.9	2.9	3.9	2.9	2.9	2.9
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)