

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: P645633

Luminaire Tested: LCR621WW9FSE020-23W-5000K

Issue Date: 3/14/2023

Test Information

Test Method: LM-79-2019
Report Number: P645633
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2209-759-89)
Test Lab: INNOVATION CENTER
Issue Date: 3/14/2023
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO
Catalog Number: LCR621WW9FSE020-23W-5000K
Description: LCR 6 Wall Wash
Light Source: 5000K CCT, 93 CRI LEDS
Ballast/Driver: -

Summary

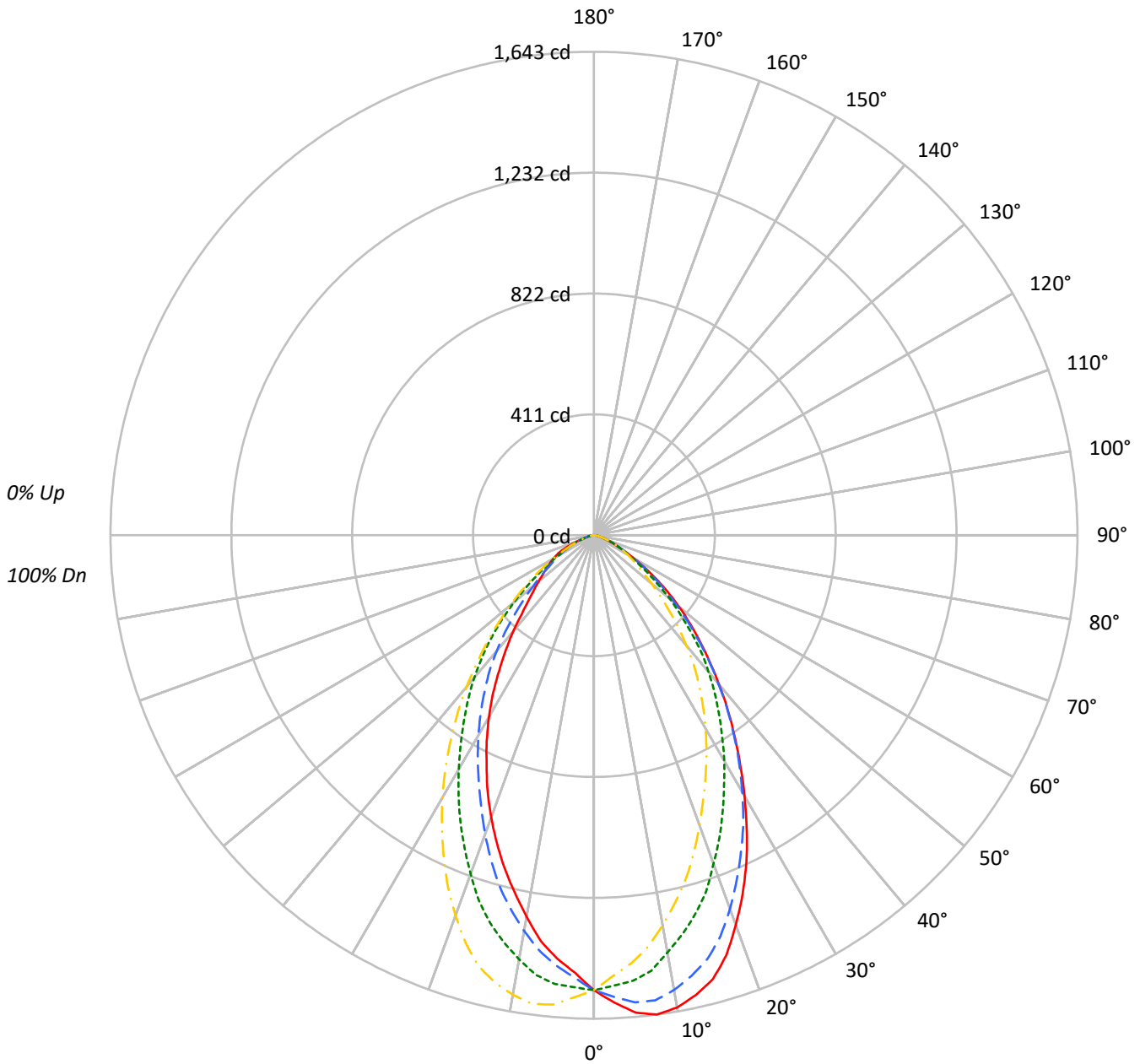
Lumens per Lamp: N/A
Luminaire Lumens: 2140.0 lumens
Efficiency: N/A
Efficacy: 94.3 lumens/watt
Spacing Criteria (0/90/45): 0.94 / 0.94 / 1.02
Luminous Opening: Circular (Dia: 0.5' x H: 0')
CIE Type: Direct

Input Watts (W): 22.7
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	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	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°	84746	84746	84746	84746
5°	89599	83628	79413	84217
10°	90691	80120	73267	81467
15°	88616	75579	66504	77395
20°	82210	69318	59540	71470
25°	74158	62610	52176	64957
30°	64788	56072	45153	58098
35°	55713	49490	37557	51497
40°	47303	43281	30450	45292
45°	39376	36143	24344	38175
50°	32067	28843	20997	30089
55°	24544	21122	18895	22231
60°	16896	15196	17422	15832
65°	11194	11441	15216	11817
70°	7774	8383	8703	8848
75°	5126	5338	5338	5740
80°	4578	4893	4893	5209
85°	4277	3648	4277	4906

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 315°

Vertical Angle: 45°

Luminance: 39671 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	144.1	6.7
10°-20°	379.6	17.7
20°-30°	483.1	22.6
30°-40°	457.5	21.4
40°-50°	342.0	16.0
50°-60°	201.7	9.4
60°-70°	94.0	4.4
70°-80°	30.6	1.4
80°-90°	7.5	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°	1006.8	47.0
0°-40°	1464.2	68.4
0°-60°	2007.9	93.8
0°-90°	2140.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2140.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	1546	1546	1546	1546	1546	
5°	1628	1520	1443	1530	1628	155
15°	1561	1332	1172	1364	1561	435
25°	1226	1035	863	1074	1226	560
35°	832	740	561	770	832	521
45°	508	466	314	492	508	393
55°	257	221	198	233	257	231
65°	86	88	117	91	86	91
75°	24	25	25	27	24	29
85°	7	6	7	8	7	8
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°	1545.9	1545.9	1545.9	1545.9	1545.9	1545.9	1545.9	1545.9	1545.9	1545.9	1545.9
2.5°	1589.5	1585.6	1570.1	1551.7	1532.3	1515.8	1498.4	1491.6	1487.7	1490.6	1505.2
5°	1628.2	1620.5	1593.4	1558.5	1519.7	1483.8	1459.6	1448.0	1443.1	1449.9	1468.3
7.5°	1642.8	1628.2	1594.3	1544.9	1492.6	1445.1	1410.2	1393.7	1389.8	1401.5	1423.7
10°	1629.2	1607.9	1569.1	1507.1	1439.3	1388.9	1345.2	1324.9	1316.2	1329.7	1365.6
12.5°	1600.1	1580.8	1533.3	1465.4	1388.9	1328.8	1277.4	1252.2	1243.5	1261.9	1302.6
15°	1561.4	1533.3	1490.6	1418.9	1331.7	1265.8	1207.6	1178.5	1171.8	1189.2	1236.7
17.5°	1496.4	1478.0	1428.6	1356.9	1268.7	1196.0	1130.1	1102.0	1097.1	1109.7	1160.1
20°	1409.2	1385.0	1351.1	1288.1	1188.2	1117.5	1048.7	1024.4	1020.6	1032.2	1080.7
22.5°	1320.0	1304.5	1267.7	1210.5	1113.6	1039.9	970.2	945.9	944.0	957.6	1000.2
25°	1226.0	1206.6	1183.4	1124.3	1035.1	966.3	898.4	873.2	862.6	881.0	925.6
27.5°	1124.3	1123.3	1099.1	1042.9	957.6	893.6	827.7	801.5	788.9	807.3	854.8
30°	1023.5	1025.4	1008.9	960.5	885.8	821.9	757.9	726.9	713.3	734.6	784.1
32.5°	925.6	928.5	918.8	871.3	811.2	752.1	690.1	654.2	638.7	662.0	715.3
35°	832.5	835.4	829.6	794.7	739.5	684.3	622.2	581.5	561.2	589.3	647.4
37.5°	746.3	747.2	743.4	715.3	673.6	620.3	558.3	513.7	491.4	523.4	583.5
40°	661.0	662.9	658.1	640.6	604.8	551.5	489.4	438.1	425.5	453.6	514.6
42.5°	580.5	582.5	577.6	563.1	541.8	482.7	422.6	374.1	362.5	386.7	446.8
45°	507.9	506.9	499.1	489.4	466.2	416.8	359.6	319.8	314.0	329.5	381.9
47.5°	440.0	438.1	429.4	420.6	397.4	352.8	304.3	278.2	277.2	283.0	322.7
50°	376.0	373.1	360.5	352.8	338.2	294.6	255.9	242.3	246.2	246.2	270.4
52.5°	315.0	313.0	302.4	289.8	272.3	242.3	214.2	213.2	218.1	213.2	224.9
55°	256.8	252.0	245.2	235.5	221.0	195.8	182.2	190.0	197.7	188.0	188.0
57.5°	201.6	198.7	196.7	186.1	175.4	159.9	155.1	167.7	178.3	165.7	158.9
60°	154.1	154.1	154.1	144.4	138.6	130.8	130.8	149.3	158.9	144.4	133.7
62.5°	115.3	116.3	118.2	112.4	109.5	107.6	109.5	127.9	140.5	125.0	111.5
65°	86.3	87.2	90.1	87.2	88.2	87.2	88.2	103.7	117.3	100.8	90.1
67.5°	65.9	65.9	67.8	67.8	69.8	69.8	68.8	79.5	87.2	76.6	71.7
70°	48.5	47.5	49.4	51.4	52.3	52.3	51.4	54.3	54.3	54.3	54.3
72.5°	33.9	33.9	34.9	35.9	36.8	36.8	35.9	35.9	36.8	38.8	38.8
75°	24.2	24.2	24.2	25.2	25.2	25.2	25.2	25.2	25.2	26.2	26.2
77.5°	19.4	19.4	19.4	19.4	20.4	19.4	19.4	20.4	20.4	20.4	21.3
80°	14.5	14.5	14.5	14.5	15.5	14.5	14.5	15.5	15.5	15.5	15.5
82.5°	10.7	10.7	10.7	10.7	10.7	10.7	9.7	10.7	10.7	10.7	11.6
85°	6.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	6.8	6.8	6.8
87.5°	2.9	2.9	1.9	1.9	1.9	1.9	1.9	2.9	2.9	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°	1545.9	1545.9	1545.9	1545.9	1545.9	1545.9
2.5°	1519.7	1537.1	1555.6	1572.0	1583.7	1589.5
5°	1497.4	1530.4	1569.1	1601.1	1621.5	1628.2
7.5°	1459.6	1507.1	1561.4	1606.0	1636.0	1642.8
10°	1407.3	1463.5	1531.3	1585.6	1618.6	1629.2
12.5°	1351.1	1416.0	1495.5	1556.5	1594.3	1600.1
15°	1295.8	1363.7	1452.8	1515.8	1549.7	1561.4
17.5°	1226.0	1300.7	1393.7	1451.9	1482.9	1496.4
20°	1149.5	1225.1	1316.2	1375.3	1402.4	1409.2
22.5°	1072.9	1148.5	1238.6	1294.8	1312.3	1320.0
25°	1000.2	1073.9	1162.1	1207.6	1222.2	1226.0
27.5°	927.5	996.3	1082.6	1118.4	1126.2	1124.3
30°	853.9	917.8	998.3	1029.3	1027.3	1023.5
32.5°	783.1	842.2	908.1	938.2	927.5	925.6
35°	714.3	769.5	827.7	847.1	835.4	832.5
37.5°	650.3	701.7	745.3	759.8	748.2	746.3
40°	582.5	632.9	659.1	674.6	662.9	661.0
42.5°	512.7	563.1	586.4	588.3	582.5	580.5
45°	443.9	492.4	508.8	511.7	507.9	507.9
47.5°	377.0	423.5	433.2	439.0	439.0	440.0
50°	315.0	352.8	369.3	372.2	375.1	376.0
52.5°	259.7	289.8	305.3	312.1	314.0	315.0
55°	209.3	232.6	244.2	255.9	255.9	256.8
57.5°	169.6	184.1	197.7	203.5	201.6	201.6
60°	137.6	144.4	154.1	159.9	156.0	154.1
62.5°	112.4	113.4	120.2	122.1	117.3	115.3
65°	92.1	91.1	93.0	93.0	88.2	86.3
67.5°	74.6	71.7	71.7	69.8	65.9	65.9
70°	56.2	55.2	54.3	51.4	48.5	48.5
72.5°	40.7	39.7	38.8	35.9	35.9	33.9
75°	27.1	27.1	26.2	25.2	24.2	24.2
77.5°	21.3	22.3	21.3	20.4	19.4	19.4
80°	16.5	16.5	16.5	15.5	14.5	14.5
82.5°	11.6	11.6	11.6	10.7	10.7	10.7
85°	7.8	7.8	7.8	6.8	6.8	6.8
87.5°	2.9	2.9	2.9	2.9	2.9	2.9
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)