

LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State  
Lighting Products

Test Report Prepared for  
Cooper Lighting Solutions  
(formerly Eaton)

Brand: HALO

Report Number: P599640

Luminaire Tested: **RL56069WZRGBWWH 5000K**

Issue Date: 5/31/2022

Tested By:

Approved By:



Cooper Lighting Solutions laboratories have been accredited by National Voluntary Laboratory Accreditation Program (NVLAP) that it adheres to the requirements of ISO/IEC 17025:2005 and appropriate IESNA test methods. This report must not be used to claim product certification, approval or endorsement by NVLAP, NIST or any agency of the Federal Government. Results contained in this report are valid for luminaire sample tested, as supplied by requestor. Information related to the luminaire tested has been supplied by requestor and can affect the validity of the test results. Report shall not be reproduced except in full without approval of Cooper Lighting Solutions Lighting Laboratory. Test performed at address noted above.

**Test Information**

Test Method: LM-79-08  
 Report Number: P599640  
 Test Lab: ETA TESTING TECHNOLOGY CO., LTD.  
 Issue Date: 5/31/2022  
 Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
 Product Line: HALO  
 Catalog Number: RL56069WZRGBWWH 5000K  
 Description: 6 INCH RL WIZ SELECTABLE CCT  
 Light Source: (1) HIGH LUMEN LED 90CRI / 5000K CCT  
 Ballast/Driver: -

**Summary**

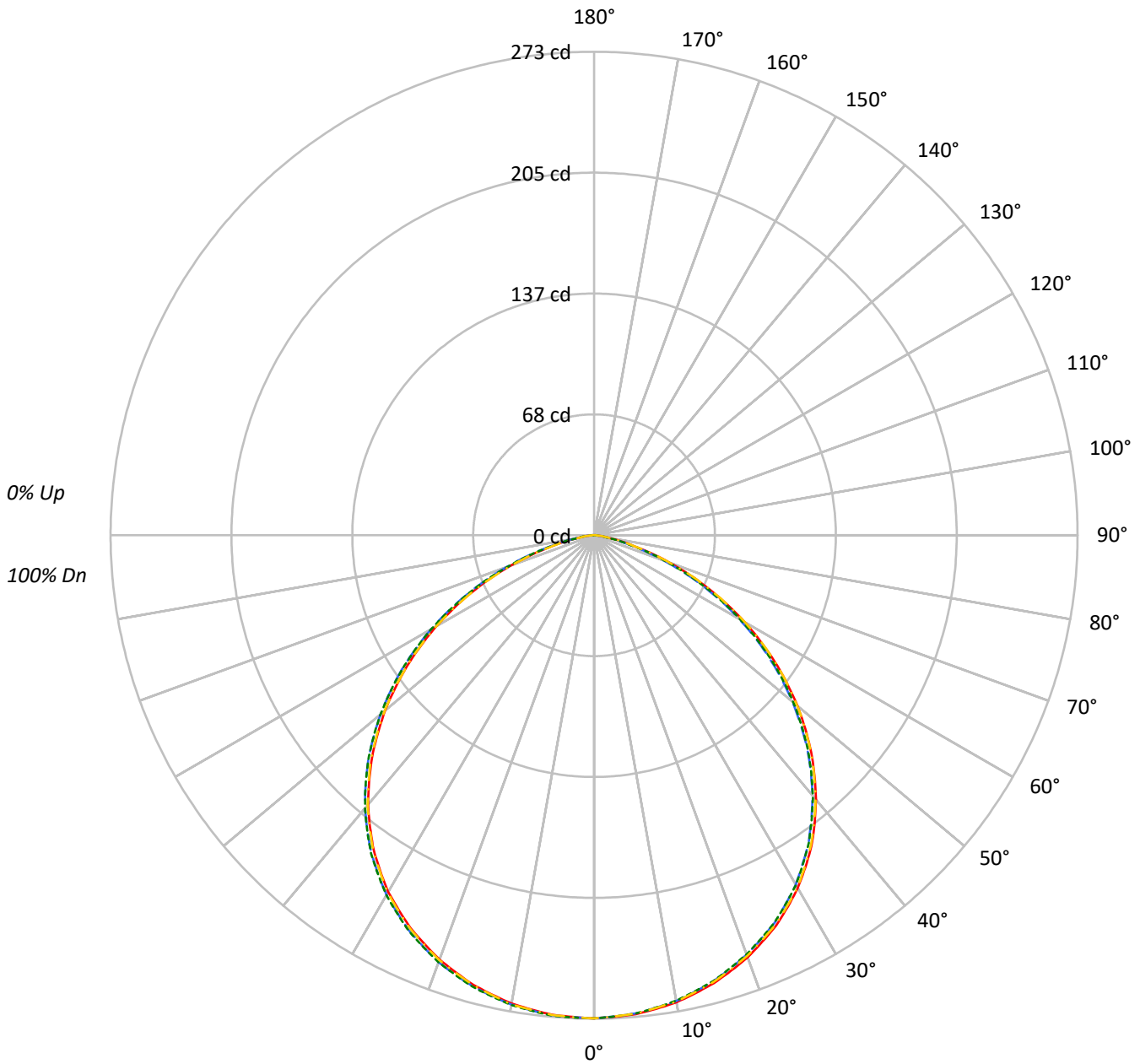
Lumens per Lamp: 707.58 (1 lamp)  
 Luminaire Lumens: 699.9 lumens  
 Efficiency: 98.9%  
 Efficacy: 87.5 lumens/watt  
 Spacing Criteria (0/90/45): 1.26 / 1.26 / 1.35  
 Luminous Opening: Circular (Dia: 0.5' x H: 0')  
 CIE Type: Direct

Input Watts (W): 8  
 Input Voltage (V): NR  
 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: 25 FT

Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	GONIO 1 IN0055	4/22/2021	10/22/2021
Power Meter	XITRON 2801 IN0197	12/1/2020	12/1/2021
AC Power Source	CHROMA 61505 IN0196	12/1/2020	12/1/2021
DC Power Supply	AGILENT E3634A IN0198	11/30/2020	11/30/2021
Room Thermometer	ONSET IN0143	12/1/2020	12/1/2021

TEST NUMBER: P599640  
CATALOG NUMBER: RL56069WZRGBWWH 5000K

### Luminous Intensity Polar Plot



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

TEST NUMBER: P599640  
 CATALOG NUMBER: RL56069WZRGBWWH 5000K

**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20				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	118	118	118	118	115	115	115	115	110	110	110	105	105	105	101	101	101	99				99
1	109	105	101	97	106	102	99	96	98	95	93	94	92	90	91	89	87	85				85
2	100	92	86	81	97	90	85	80	87	82	78	84	80	76	81	77	74	72				72
3	91	81	74	68	89	80	73	67	77	71	66	74	69	65	72	67	64	62				62
4	84	72	64	58	82	71	63	58	69	62	57	66	61	56	64	59	55	53				53
5	77	65	56	50	75	64	56	50	62	55	49	60	54	49	58	53	48	46				46
6	71	59	50	44	69	58	50	44	56	49	43	54	48	43	53	47	43	41				41
7	66	53	45	39	64	52	44	39	51	44	38	49	43	38	48	42	38	36				36
8	62	49	40	35	60	48	40	35	47	40	34	45	39	34	44	38	34	32				32
9	58	45	37	31	56	44	36	31	43	36	31	42	36	31	41	35	31	29				29
10	54	41	34	28	53	41	33	28	40	33	28	39	33	28	38	32	28	26				26

**AVERAGE LUMINANCE (cd/sqm):**

	0°	90°	180°	270°
0°	14955	14955	14955	14955
5°	14941	14919	14957	14985
10°	14907	14857	14946	14991
15°	14858	14784	14921	14989
20°	14795	14690	14876	14970
25°	14711	14590	14813	14934
30°	14566	14433	14717	14850
35°	14328	14154	14522	14690
40°	13955	13754	14205	14398
45°	13443	13226	13746	13994
50°	12784	12537	13134	13432
55°	11909	11641	12329	12654
60°	10778	10482	11271	11633
65°	9262	8937	9858	10209
70°	7261	6956	7950	8319
75°	4766	4406	5486	5846
80°	2526	2305	3031	3252
85°	1572	1447	2264	2453

TEST NUMBER: P599640  
 CATALOG NUMBER: RL56069WZRGBWWH 5000K

**ZONAL LUMENS:**

Zone	Lumens	% Fixture	% Lamp
0°-10°	25.8	3.7	3.6
10°-20°	74.0	10.6	10.5
20°-30°	112.4	16.1	15.9
30°-40°	134.5	19.2	19.0
40°-50°	135.1	19.3	19.1
50°-60°	113.3	16.2	16.0
60°-70°	73.1	10.4	10.3
70°-80°	27.6	3.9	3.9
80°-90°	4.1	0.6	0.6
90°-100°	0.0	0.0	0.0
100°-110°	0.0	0.0	0.0
110°-120°	0.0	0.0	0.0
120°-130°	0.0	0.0	0.0
130°-140°	0.0	0.0	0.0
140°-150°	0.0	0.0	0.0
150°-160°	0.0	0.0	0.0
160°-170°	0.0	0.0	0.0
170°-180°	0.0	0.0	0.0
0°-30°	212.2	30.3	30.0
0°-40°	346.8	49.5	49.0
0°-60°	595.1	85.0	84.1
0°-90°	699.8	100.0	98.9
90°-120°	0.0	0.0	0.0
90°-150°	0.0	0.0	0.0
90°-180°	0.0	0.0	0.0
0°-180°	699.9	100.0	98.9

**CANDELA DISTRIBUTION:**

	0°	90°	180°	270°	360°	Flux
0°	273	273	273	273	273	
5°	272	271	272	272	272	26
15°	262	260	263	264	262	74
25°	243	241	245	247	243	112
35°	214	212	217	220	214	134
45°	173	171	177	180	173	134
55°	125	122	129	132	125	111
65°	71	69	76	79	71	71
75°	22	21	26	28	22	26
85°	2	2	4	4	2	3
90°	0	0	0	0	0	0
95°	0	0	0	0	0	0
105°	0	0	0	0	0	0
115°	0	0	0	0	0	0
125°	0	0	0	0	0	0
135°	0	0	0	0	0	0
145°	0	0	0	0	0	0
155°	0	0	0	0	0	0
165°	0	0	0	0	0	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0

TEST NUMBER: P599640  
 CATALOG NUMBER: RL56069WZRGBWWH 5000K

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	272.8	272.8	272.8	272.8	272.8	272.8	272.8	272.8	272.8	272.8	272.8
5°	271.5	271.2	271.0	271.1	271.1	270.8	271.1	271.5	271.8	272.0	272.1
10°	267.8	267.4	267.1	267.0	266.9	266.9	267.3	267.9	268.5	268.9	269.1
15°	261.8	261.2	260.7	260.4	260.5	260.6	261.1	261.8	262.9	263.4	263.9
20°	253.6	253.1	252.0	252.0	251.8	252.1	252.8	253.7	255.0	255.6	256.6
25°	243.2	242.3	241.4	241.3	241.2	241.5	242.5	243.2	244.9	245.5	246.6
30°	230.1	229.1	227.7	227.9	228.0	228.2	229.6	230.7	232.5	233.2	234.4
35°	214.1	212.8	211.3	211.4	211.5	211.9	213.6	214.8	217.0	217.8	219.3
40°	195.0	193.8	191.8	192.0	192.2	192.7	194.6	196.0	198.5	199.4	201.2
45°	173.4	172.0	170.2	170.2	170.6	171.1	173.2	174.5	177.3	178.4	180.5
50°	149.9	148.3	146.2	146.3	147.0	147.5	149.8	151.2	154.0	155.2	157.5
55°	124.6	123.1	120.8	121.1	121.8	122.5	124.7	126.2	129.0	130.4	132.7
60°	98.3	96.8	94.6	94.7	95.6	96.1	98.4	99.8	102.8	104.1	106.4
65°	71.4	70.0	67.8	67.9	68.9	69.5	71.7	73.1	76.0	77.2	79.3
70°	45.3	44.2	42.0	42.3	43.4	43.5	45.6	46.8	49.6	50.6	52.5
75°	22.5	21.5	20.1	20.1	20.8	21.2	22.7	23.8	25.9	26.9	28.3
80°	8.0	7.6	7.1	7.1	7.3	7.4	8.1	8.6	9.6	10.1	10.9
85°	2.5	2.4	2.1	2.1	2.3	2.4	2.8	3.0	3.6	3.8	4.2
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
95°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
100°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
105°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
115°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
120°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
125°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
130°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
135°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
140°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
145°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
150°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
155°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
160°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

TEST NUMBER: P599640  
 CATALOG NUMBER: RL56069WZRGBWWH 5000K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
0°	272.8	272.8	272.8	272.8	272.8	272.8
5°	272.2	272.3	272.1	271.9	271.8	271.5
10°	269.3	269.3	269.2	268.9	268.3	267.8
15°	264.1	264.1	264.0	263.1	262.7	261.8
20°	256.5	256.6	256.4	255.3	254.8	253.6
25°	246.6	246.9	246.4	245.4	244.5	243.2
30°	234.5	234.6	234.3	232.9	231.9	230.1
35°	219.4	219.5	219.1	217.3	216.3	214.1
40°	201.5	201.2	200.9	198.9	197.5	195.0
45°	180.7	180.5	180.1	177.9	176.2	173.4
50°	157.7	157.5	156.8	154.4	152.9	149.9
55°	132.8	132.4	131.9	129.2	127.7	124.6
60°	106.7	106.1	105.5	102.9	101.4	98.3
65°	79.5	78.7	78.3	75.8	74.3	71.4
70°	52.8	51.9	51.5	49.0	48.0	45.3
75°	28.4	27.6	27.2	25.5	24.5	22.5
80°	10.9	10.3	10.2	9.4	8.9	8.0
85°	4.2	3.9	3.8	3.4	3.1	2.5
90°	0.1	0.1	0.1	0.1	0.0	0.0
95°	0.1	0.1	0.1	0.1	0.0	0.0
100°	0.1	0.1	0.1	0.0	0.0	0.0
105°	0.1	0.1	0.1	0.0	0.0	0.0
110°	0.0	0.0	0.0	0.0	0.0	0.0
115°	0.0	0.0	0.0	0.0	0.0	0.0
120°	0.0	0.0	0.0	0.0	0.0	0.0
125°	0.0	0.0	0.0	0.0	0.0	0.0
130°	0.0	0.0	0.0	0.0	0.0	0.0
135°	0.0	0.0	0.0	0.0	0.0	0.0
140°	0.0	0.0	0.0	0.0	0.0	0.0
145°	0.0	0.0	0.0	0.0	0.0	0.0
150°	0.0	0.0	0.0	0.0	0.0	0.0
155°	0.0	0.0	0.0	0.0	0.0	0.0
160°	0.0	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)