

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: G1-1812-059-3

Luminaire Tested: **LCR6159FSE010MW 2700K**

Test Date: 12/14/18

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: G1-1812-059-3
 Test Lab: INNOVATION CENTER(G1)
 Test Date: 12/14/18
 Issue Date: 3/3/2020
 Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
 Product Line: HALO
 Catalog Number: LCR6159FSE010MW 2700K
 Description: LCR 6INCH LED RECESSED FIXTURE 90CRI 2700K
 Light Source:
 (1) HIGH LED
 Ballast/Driver: -

Summary

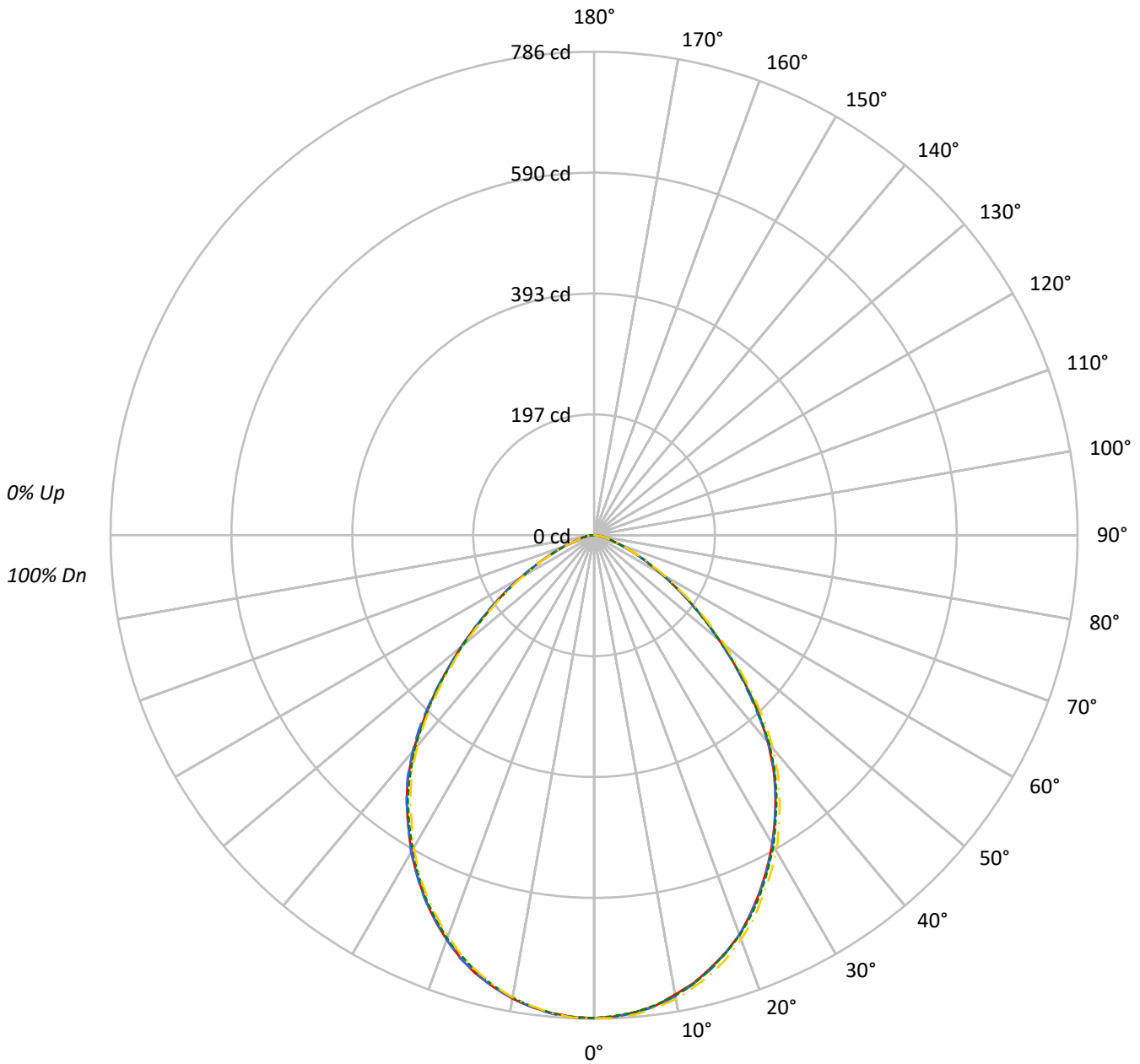
Lumens per Lamp: N/A
 Luminaire Lumens: 1477.9 lumens
 Efficiency: N/A
 Efficacy: 99.2 lumens/watt
 Spacing Criteria (0/90/45): 1.13 / 1.13 / 1.2
 Luminous Opening: Circular (Dia: 0.5' x H: 0')
 CIE Type: Direct

Input Watts (W): 14.9
 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: G1-1812-059-3
CATALOG NUMBER: LCR6159FSE010MW 2700K

Luminous Intensity Polar Plot



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

TEST NUMBER: G1-1812-059-3
 CATALOG NUMBER: LCR6159FSE010MW 2700K

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	100	100	100	100
1	111	107	104	101	109	105	102	99	101	98	96	97	95	93	94	92	91	89	89	89	89
2	103	96	91	86	101	94	89	85	91	87	83	88	84	81	85	82	79	78	78	78	78
3	95	87	80	74	93	85	79	74	82	77	72	80	75	71	77	73	70	68	68	68	68
4	88	78	71	65	86	77	70	64	74	68	64	72	67	63	70	66	62	60	60	60	60
5	82	71	63	57	80	70	62	57	68	61	56	66	60	56	64	59	55	53	53	53	53
6	76	65	57	51	75	64	56	51	62	55	50	60	55	50	59	54	50	48	48	48	48
7	71	59	51	46	70	58	51	46	57	50	45	56	50	45	54	49	45	43	43	43	43
8	67	54	47	41	65	54	46	41	53	46	41	51	45	41	50	45	41	39	39	39	39
9	63	50	43	38	61	50	43	38	49	42	38	48	42	37	47	41	37	36	36	36	36
10	59	47	39	35	58	46	39	35	45	39	34	44	38	34	44	38	34	33	33	33	33

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	43034	43034	43034	43034
5°	42813	42813	42923	42923
10°	42195	42306	42584	42473
15°	41374	41430	41941	41771
20°	40312	40370	40837	40720
25°	38591	38772	39377	39256
30°	36651	36904	37601	37284
35°	34398	34599	35536	35335
40°	31416	31702	32704	32418
45°	27367	27367	28608	28453
50°	22686	22771	24050	23795
55°	18255	18351	19306	19115
60°	14034	14144	15021	14801
65°	10377	10377	11026	10896
70°	7373	7213	7533	7854
75°	5507	5295	5507	5507
80°	5051	5051	5051	5051
85°	4403	4403	4403	4403

TEST NUMBER: G1-1812-059-3
 CATALOG NUMBER: LCR6159FSE010MW 2700K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	73.8	5.0
10°-20°	206.5	14.0
20°-30°	296.3	20.0
30°-40°	325.2	22.0
40°-50°	277.1	18.8
50°-60°	177.3	12.0
60°-70°	84.0	5.7
70°-80°	29.6	2.0
80°-90°	8.1	0.5
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°	576.6	39.0
0°-40°	901.8	61.0
0°-60°	1356.2	91.8
0°-90°	1477.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1477.9	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	785	785	785	785	785	
5°	778	778	780	780	778	74
15°	729	730	739	736	729	205
25°	638	641	651	649	638	293
35°	514	517	531	528	514	320
45°	353	353	369	367	353	271
55°	191	192	202	200	191	172
65°	80	80	85	84	80	81
75°	26	25	26	26	26	30
85°	7	7	7	7	7	8
90°	0	0	0	0	0	

TEST NUMBER: G1-1812-059-3
 CATALOG NUMBER: LCR6159FSE010MW 2700K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	785	785	785	785	785	785	785	785	785	785	785
2.5°	783	782	784	782	782	783	786	784	784	784	785
5°	778	777	779	777	778	778	782	780	780	781	781
7.5°	771	768	772	769	770	772	774	774	774	774	774
10°	758	758	761	759	760	762	766	763	765	766	764
12.5°	746	744	747	746	747	749	752	752	753	753	753
15°	729	728	731	729	730	733	738	737	739	739	738
17.5°	711	710	712	710	712	715	720	719	721	722	722
20°	691	687	691	688	692	695	699	699	700	702	700
22.5°	665	663	666	666	668	670	676	676	677	679	676
25°	638	635	639	639	641	643	648	649	651	652	652
27.5°	609	607	610	611	612	617	621	622	623	625	624
30°	579	577	580	578	583	586	593	591	594	595	595
32.5°	547	544	547	547	549	554	559	561	562	564	562
35°	514	512	514	513	517	520	526	528	531	531	531
37.5°	479	479	481	479	482	486	491	493	497	498	498
40°	439	438	441	440	443	447	452	456	457	458	459
42.5°	397	395	394	394	398	403	410	410	412	414	417
45°	353	350	349	349	353	358	363	364	369	370	371
47.5°	308	305	307	305	309	315	318	319	323	327	324
50°	266	263	264	263	267	270	276	277	282	281	281
52.5°	228	223	226	224	227	231	235	238	239	240	241
55°	191	189	189	189	192	193	199	199	202	205	205
57.5°	157	157	158	157	159	160	163	166	170	169	170
60°	128	127	127	127	129	131	134	134	137	139	139
62.5°	102	101	101	101	102	105	106	108	110	111	111
65°	80	80	80	79	80	82	83	85	85	86	86
67.5°	61	61	61	60	61	62	63	63	64	65	65
70°	46	45	45	46	45	46	46	47	47	48	49
72.5°	34	33	34	33	34	34	34	35	35	35	35
75°	26	25	25	25	25	25	26	26	26	26	26
77.5°	21	21	21	20	20	21	21	21	21	21	21
80°	16	16	16	15	16	16	16	16	16	16	16
82.5°	11	11	11	11	11	11	11	11	11	11	11
85°	7	7	7	7	7	7	7	7	7	7	7
87.5°	3	3	3	3	3	3	3	3	4	4	4
90°	0	0	0	0	0	0	0	0	0	0	0

TEST NUMBER: G1-1812-059-3
 CATALOG NUMBER: LCR6159FSE010MW 2700K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	785	785	785	785	785	785
2.5°	784	784	782	785	781	783
5°	780	780	778	780	777	778
7.5°	774	773	771	772	769	771
10°	764	763	761	763	758	758
12.5°	752	751	749	750	746	746
15°	736	736	733	734	731	729
17.5°	720	717	715	716	711	711
20°	698	698	695	694	690	691
22.5°	675	674	671	670	665	665
25°	651	649	644	645	640	638
27.5°	622	620	617	617	610	609
30°	591	589	585	586	579	579
32.5°	560	559	555	552	547	547
35°	530	528	522	520	515	514
37.5°	495	491	489	487	480	479
40°	457	453	448	446	440	439
42.5°	414	410	406	405	398	397
45°	368	367	362	360	354	353
47.5°	325	320	318	315	310	308
50°	282	279	278	274	268	266
52.5°	241	237	235	232	229	228
55°	204	200	200	197	194	191
57.5°	168	167	166	164	160	157
60°	138	135	134	133	130	128
62.5°	110	109	106	107	103	102
65°	86	84	83	83	81	80
67.5°	65	64	64	62	61	61
70°	48	49	48	46	46	46
72.5°	35	35	34	34	34	34
75°	27	26	27	26	26	26
77.5°	21	22	21	21	21	21
80°	16	16	16	16	16	16
82.5°	11	12	12	11	11	11
85°	8	7	7	7	7	7
87.5°	4	4	4	4	3	3
90°	0	0	0	0	0	0

(END OF REPORT)