

Scaled data based on original data using
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: P295530

Luminaire Tested: **HU1148D9SMB-2700K**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P295530
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1904-227-14)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO
Catalog Number: HU1148D9SMB-2700K
Description: HALO HU11 UNDERCABINET LED FIXTURE
48-INCH, SELECTABLE CCT, MATTE BLACK FINISH
Light Source: (224) 90 CRI LEDS TUNED TO 2700K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

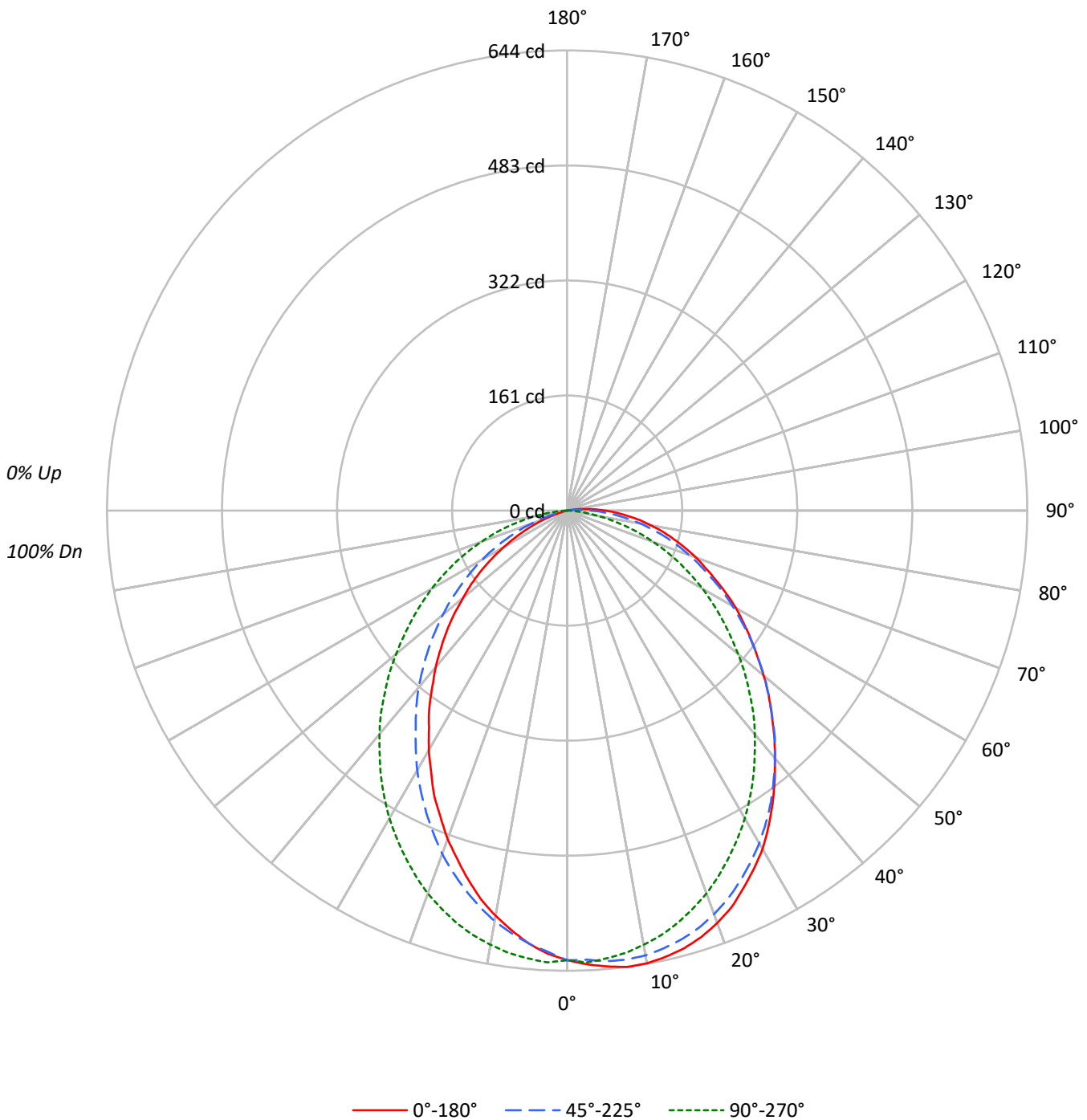
Lumens per Lamp: N/A
Luminaire Lumens: 1510.0 lumens
Efficiency: N/A
Efficacy: 71.9 lumens/watt
Spacing Criteria (0/90/45): 1.12 / 1.18 / 1.26
Luminous Opening: Rectangular w/ Sides (W: 3.92' x L: 0.08' x H: 0.04')
CIE Type: Direct

Input Watts (W): 21
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: 25 FT



TEST NUMBER: P295530
CATALOG NUMBER: HU1148D9SMB-2700K

Luminous Intensity Polar Plot





TEST NUMBER: P295530

CATALOG NUMBER: HU1148D9SMB-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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	109	104	100	96	106	102	98	95	98	95	92	94	91	89	90	88	86	84
2	100	92	85	79	97	90	84	78	86	81	76	83	78	75	80	76	73	71
3	91	81	73	67	89	79	72	66	76	70	65	73	68	64	71	66	63	60
4	84	72	64	57	81	71	63	57	68	61	56	66	60	55	64	58	54	52
5	77	65	56	50	75	64	55	49	61	54	49	59	53	48	58	52	48	45
6	72	59	50	44	70	58	49	43	56	48	43	54	48	43	52	47	42	40
7	66	53	45	39	65	52	44	39	51	44	38	49	43	38	48	42	38	36
8	62	49	40	35	60	48	40	35	47	40	34	45	39	34	44	38	34	32
9	58	45	37	31	57	44	37	31	43	36	31	42	36	31	41	35	31	29
10	54	42	34	29	53	41	34	29	40	33	28	39	33	28	38	32	28	26

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	20750	20750	20750
5°	20312	20810	19303
10°	19794	20623	17723
15°	19086	20339	16102
20°	18237	19938	14519
25°	17215	19397	12992
30°	16161	18826	11439
35°	14943	18159	10037
40°	13723	17435	8677
45°	12586	16655	7413
50°	11541	15822	6102
55°	10536	14986	4924
60°	9650	14170	3634
65°	8627	13199	2395
70°	7787	12001	1178
75°	6860	10429	209
80°	5877	8203	0
85°	4795	4420	0



TEST NUMBER: P295530

CATALOG NUMBER: HU1148D9SMB-2700K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	59.2	3.9
10°-20°	165.9	11.0
20°-30°	240.3	15.9
30°-40°	272.1	18.0
40°-50°	263.1	17.4
50°-60°	221.4	14.7
60°-70°	158.2	10.5
70°-80°	87.9	5.8
80°-90°	34.8	2.3
90°-100°	7.0	0.5
100°-110°	0.1	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°	465.4	30.8
0°-40°	737.5	48.8
0°-60°	1222.0	80.9
0°-90°	1502.9	99.5
90°-120°	7.2	0.5
90°-150°	7.2	0.5
90°-180°	7.0	0.5
0°-180°	1510.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	629	629	629	629	629	
5°	640	633	629	609	609	61
15°	634	621	597	550	535	179
25°	583	572	536	466	440	269
35°	501	497	454	369	337	313
45°	405	406	361	275	238	313
55°	314	313	265	180	147	281
65°	229	222	173	94	64	228
75°	154	142	85	21	5	164
85°	85	67	13	0	0	77
90°	53	35	0	0	0	29
95°	25	9	0	0	0	17
105°	0	0	0	0	0	1
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: P295530

CATALOG NUMBER: HU1148D9SMB-2700K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	629.2	629.2	629.2	629.2	629.2	629.2	629.2	629.2	629.2
2.5°	635.7	637.6	629.2	632.0	632.9	626.4	618.0	621.7	620.8
5°	640.4	642.3	632.9	632.9	629.2	620.8	608.6	609.6	608.6
7.5°	644.2	645.1	633.9	631.1	624.5	611.4	596.5	595.5	592.7
10°	643.2	643.2	632.0	627.3	617.0	601.1	583.4	579.6	575.9
12.5°	639.5	640.4	627.3	620.8	608.6	588.1	567.5	560.9	557.2
15°	633.9	634.8	620.8	613.3	597.4	574.0	549.7	540.4	534.8
17.5°	625.5	625.5	612.4	602.1	584.3	557.2	531.0	518.9	511.4
20°	614.2	613.3	601.1	589.9	570.3	539.4	511.4	496.4	489.0
22.5°	601.1	600.2	588.1	575.9	553.5	521.7	489.0	472.1	463.7
25°	583.4	585.3	572.2	560.0	535.7	501.1	466.5	446.9	440.3
27.5°	565.6	566.6	555.3	543.2	517.0	480.5	443.1	419.8	412.3
30°	546.9	546.0	537.6	524.5	497.4	457.2	419.8	395.5	387.1
32.5°	524.5	524.5	517.9	504.9	475.9	434.7	394.5	369.3	359.9
35°	501.1	501.1	497.4	484.3	454.4	412.3	369.3	345.0	336.6
37.5°	476.8	478.7	474.9	461.8	431.0	388.0	346.9	320.7	309.5
40°	452.5	455.3	452.5	439.4	408.6	364.6	323.5	294.5	286.1
42.5°	429.1	430.1	430.1	416.0	386.1	342.2	298.2	270.2	261.8
45°	404.8	406.7	405.8	393.6	360.9	317.9	274.9	246.8	238.4
47.5°	382.4	383.3	382.4	370.2	337.5	292.6	250.6	222.5	214.1
50°	359.0	359.9	359.9	346.9	312.3	268.3	227.2	200.1	189.8
52.5°	335.6	336.6	335.6	323.5	288.0	244.9	204.7	176.7	169.2
55°	314.1	314.1	313.2	300.1	264.6	221.6	180.4	154.3	146.8
57.5°	292.6	292.6	289.8	275.8	241.2	199.1	158.9	132.8	124.3
60°	273.0	270.2	267.4	252.4	218.8	175.8	137.4	112.2	102.8
62.5°	250.6	250.6	245.9	230.0	195.4	153.3	115.0	90.7	82.3
65°	229.1	229.1	222.5	207.5	173.0	130.9	93.5	71.1	63.6
67.5°	209.4	210.4	201.9	185.1	150.5	108.4	73.9	52.4	45.8
70°	191.7	189.8	181.4	162.7	128.1	88.8	54.2	34.6	29.0
72.5°	173.0	171.1	161.7	142.1	106.6	66.4	36.5	19.6	15.0
75°	154.3	152.4	142.1	119.7	85.1	46.7	20.6	7.5	4.7
77.5°	137.4	133.7	122.5	100.0	64.5	29.9	8.4	0.9	0.0
80°	118.7	115.9	103.8	78.5	45.8	15.0	1.9	0.0	0.0
82.5°	102.8	98.2	85.1	60.8	28.0	4.7	0.0	0.0	0.0
85°	85.1	80.4	67.3	42.1	13.1	0.0	0.0	0.0	0.0
87.5°	68.2	63.6	49.6	26.2	3.7	0.0	0.0	0.0	0.0
90°	53.3	48.6	34.6	13.1	0.0	0.0	0.0	0.0	0.0
92.5°	39.3	33.7	21.5	4.7	0.0	0.0	0.0	0.0	0.0
95°	25.2	20.6	9.3	0.0	0.0	0.0	0.0	0.0	0.0
97.5°	14.0	10.3	2.8	0.0	0.0	0.0	0.0	0.0	0.0
100°	4.7	2.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
102.5°	0.9	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
107.5°	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



TEST NUMBER: P295530

CATALOG NUMBER: HU1148D9SMB-2700K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
112.5°	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
117.5°	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
122.5°	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
127.5°	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
132.5°	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
137.5°	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
142.5°	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
147.5°	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
152.5°	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
157.5°	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
162.5°	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
167.5°	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
172.5°	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
177.5°	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

(END OF REPORT)