

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: P295531

Luminaire Tested: **HU1148D9SMB-3000K**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P295531
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-3000K
Description: HALO HU11 UNDERCABINET LED FIXTURE
48-INCH, SELECTABLE CCT, MATTE BLACK FINISH
Light Source: (224) 90 CRI LEDS TUNED TO 3000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

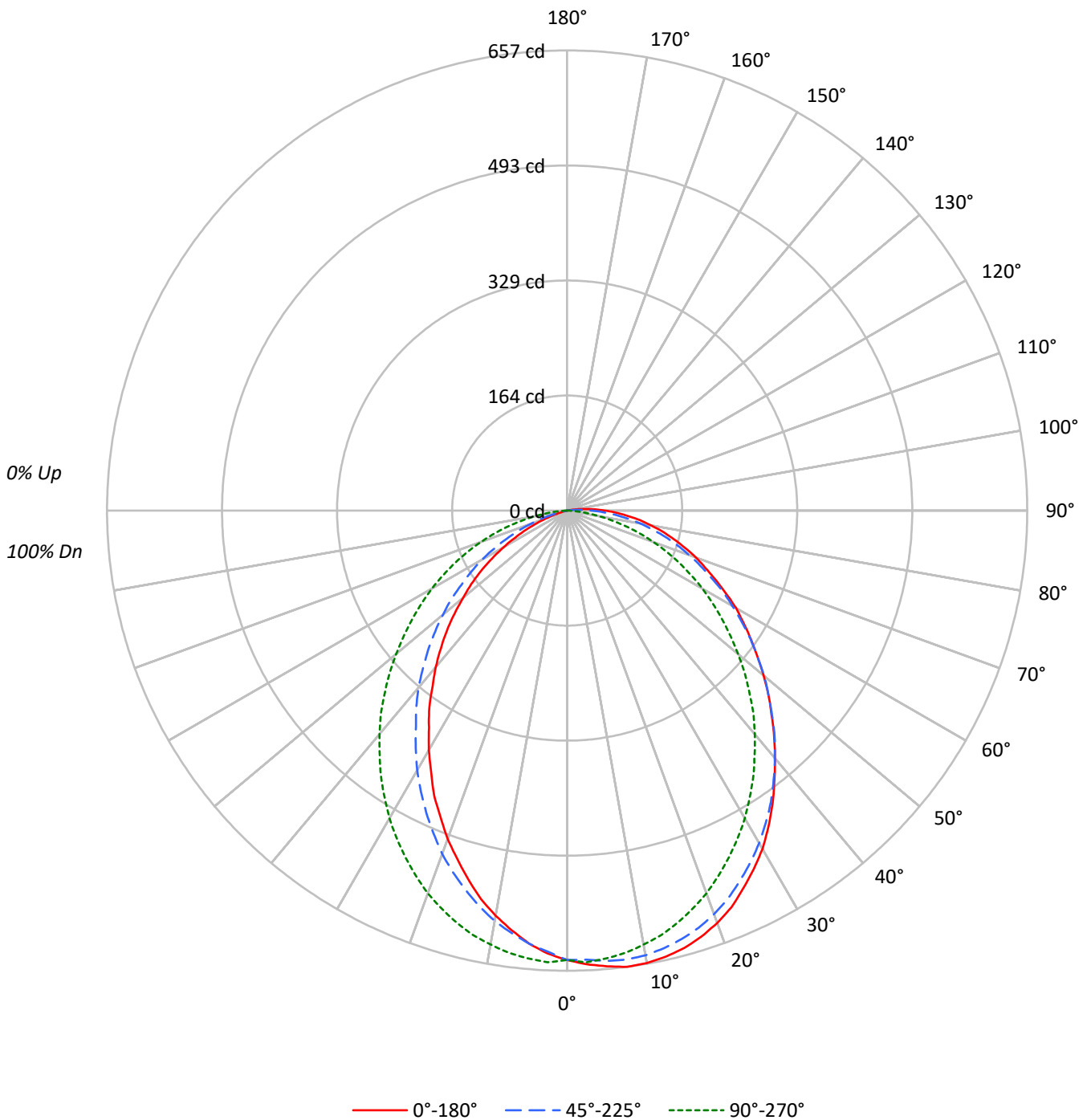
Lumens per Lamp: N/A
Luminaire Lumens: 1540.0 lumens
Efficiency: N/A
Efficacy: 73.3 lumens/watt
Spacing Criteria (0/90/45): 1.12 / 1.18 / 1.26
Luminous Opening: Rectangular w/ Sides (W: 3.92' x L: 0.08' x H: 0.04')
CIE Type: Direct

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



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Luminous Intensity Polar Plot





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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	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°	21163	21163	21163
5°	20715	21224	19687
10°	20188	21034	18074
15°	19465	20744	16421
20°	18599	20333	14807
25°	17557	19781	13252
30°	16483	19200	11663
35°	15241	18518	10237
40°	13996	17781	8849
45°	12838	16983	7559
50°	11770	16136	6224
55°	10747	15281	5022
60°	9840	14449	3708
65°	8797	13458	2440
70°	7941	12235	1202
75°	6993	10638	213
80°	5996	8365	0
85°	4891	4487	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	60.4	3.9
10°-20°	169.2	11.0
20°-30°	245.1	15.9
30°-40°	277.5	18.0
40°-50°	268.3	17.4
50°-60°	225.8	14.7
60°-70°	161.3	10.5
70°-80°	89.6	5.8
80°-90°	35.5	2.3
90°-100°	7.2	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°	474.6	30.8
0°-40°	752.1	48.8
0°-60°	1246.3	80.9
0°-90°	1532.7	99.5
90°-120°	7.3	0.5
90°-150°	7.3	0.5
90°-180°	7.0	0.5
0°-180°	1540.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	642	642	642	642	642	
5°	653	646	642	621	621	62
15°	646	633	609	561	545	182
25°	595	584	546	476	449	274
35°	511	507	463	377	343	320
45°	413	414	368	280	243	319
55°	320	319	270	184	150	287
65°	234	227	176	95	65	233
75°	157	145	87	21	5	167
85°	87	69	13	0	0	78
90°	54	35	0	0	0	30
95°	26	10	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



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	641.7	641.7	641.7	641.7	641.7	641.7	641.7	641.7	641.7
2.5°	648.4	650.3	641.7	644.6	645.5	638.8	630.3	634.1	633.1
5°	653.1	655.0	645.5	645.5	641.7	633.1	620.7	621.7	620.7
7.5°	657.0	657.9	646.5	643.6	636.9	623.6	608.3	607.4	604.5
10°	656.0	656.0	644.6	639.8	629.3	613.1	595.0	591.2	587.3
12.5°	652.2	653.1	639.8	633.1	620.7	599.7	578.8	572.1	568.3
15°	646.5	647.4	633.1	625.5	609.3	585.4	560.6	551.1	545.4
17.5°	637.9	637.9	624.5	614.0	595.9	568.3	541.6	529.2	521.6
20°	626.4	625.5	613.1	601.6	581.6	550.2	521.6	506.3	498.7
22.5°	613.1	612.1	599.7	587.3	564.5	532.0	498.7	481.5	472.9
25°	595.0	596.9	583.5	571.1	546.3	511.1	475.8	455.8	449.1
27.5°	576.9	577.8	566.4	554.0	527.3	490.1	452.0	428.1	420.5
30°	557.8	556.8	548.3	534.9	507.3	466.3	428.1	403.3	394.7
32.5°	534.9	534.9	528.2	514.9	485.3	443.4	402.4	376.6	367.1
35°	511.1	511.1	507.3	493.9	463.4	420.5	376.6	351.8	343.3
37.5°	486.3	488.2	484.4	471.0	439.6	395.7	353.7	327.0	315.6
40°	461.5	464.3	461.5	448.1	416.7	371.9	329.9	300.3	291.8
42.5°	437.6	438.6	438.6	424.3	393.8	349.0	304.2	275.6	267.0
45°	412.9	414.8	413.8	401.4	368.0	324.2	280.3	251.7	243.1
47.5°	390.0	390.9	390.0	377.6	344.2	298.4	255.5	226.9	218.3
50°	366.1	367.1	367.1	353.7	318.5	273.6	231.7	204.0	193.6
52.5°	342.3	343.3	342.3	329.9	293.7	249.8	208.8	180.2	172.6
55°	320.4	320.4	319.4	306.1	269.8	226.0	184.0	157.3	149.7
57.5°	298.4	298.4	295.6	281.3	246.0	203.1	162.1	135.4	126.8
60°	278.4	275.6	272.7	257.4	223.1	179.3	140.2	114.4	104.9
62.5°	255.5	255.5	250.8	234.6	199.3	156.4	117.3	92.5	83.9
65°	233.6	233.6	226.9	211.7	176.4	133.5	95.3	72.5	64.8
67.5°	213.6	214.5	206.0	188.8	153.5	110.6	75.3	53.4	46.7
70°	195.5	193.6	185.0	165.9	130.6	90.6	55.3	35.3	29.6
72.5°	176.4	174.5	165.0	144.9	108.7	67.7	37.2	20.0	15.3
75°	157.3	155.4	144.9	122.0	86.8	47.7	21.0	7.6	4.8
77.5°	140.2	136.3	124.9	102.0	65.8	30.5	8.6	1.0	0.0
80°	121.1	118.2	105.8	80.1	46.7	15.3	1.9	0.0	0.0
82.5°	104.9	100.1	86.8	62.0	28.6	4.8	0.0	0.0	0.0
85°	86.8	82.0	68.7	42.9	13.3	0.0	0.0	0.0	0.0
87.5°	69.6	64.8	50.5	26.7	3.8	0.0	0.0	0.0	0.0
90°	54.3	49.6	35.3	13.3	0.0	0.0	0.0	0.0	0.0
92.5°	40.0	34.3	21.9	4.8	0.0	0.0	0.0	0.0	0.0
95°	25.7	21.0	9.5	0.0	0.0	0.0	0.0	0.0	0.0
97.5°	14.3	10.5	2.9	0.0	0.0	0.0	0.0	0.0	0.0
100°	4.8	2.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
102.5°	1.0	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
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



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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)