

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: P295526

Luminaire Tested: **HU1124D9SMB-4000K**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P295526
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1904-227-8)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO
Catalog Number: HU1124D9SMB-4000K
Description: HALO HU11 UNDERCABINET LED FIXTURE
24-INCH, SELECTABLE CCT, MATTE BLACK FINISH
Light Source: (112) 90 CRI LEDS TUNED TO 4000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

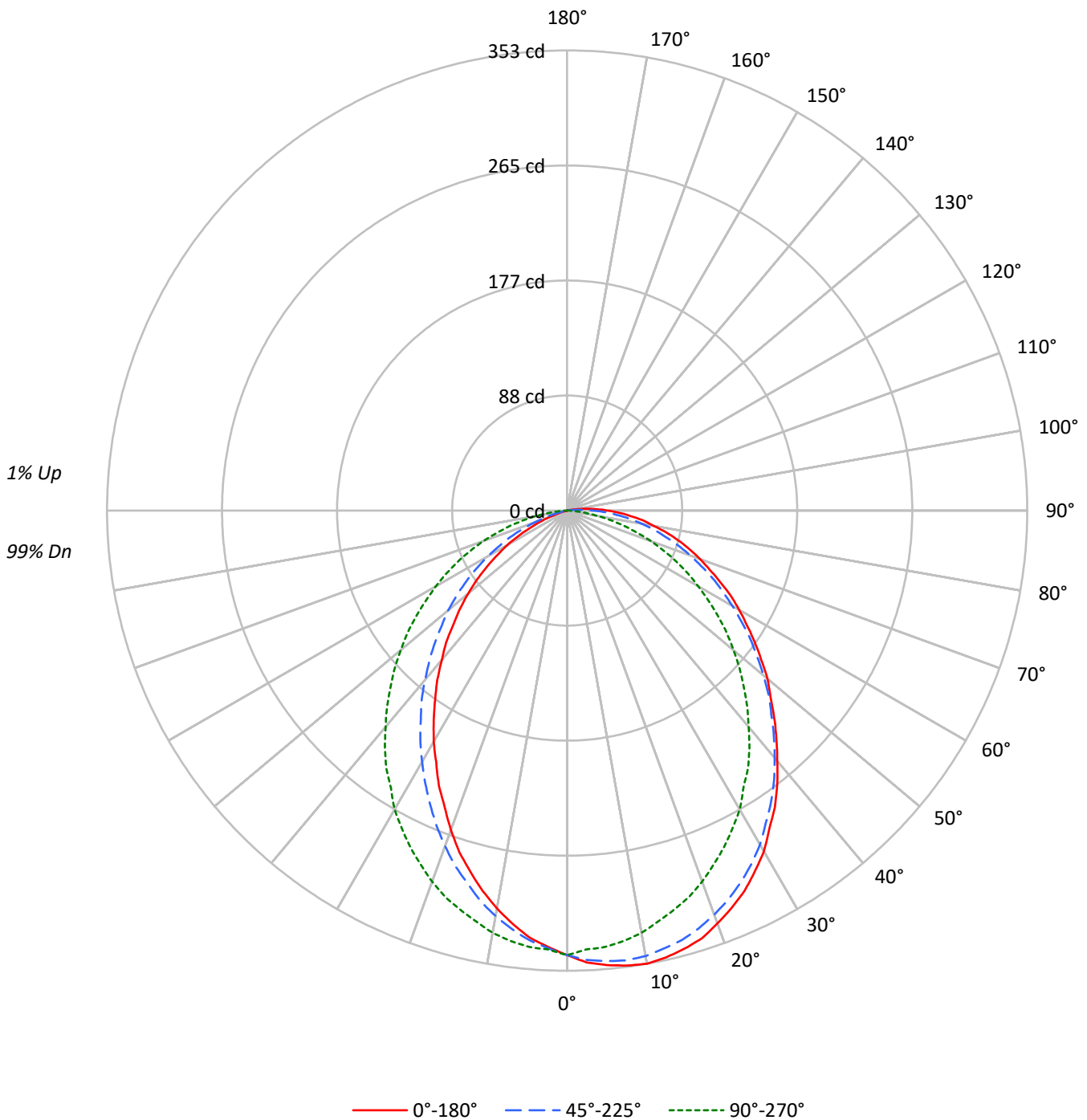
Lumens per Lamp: N/A
Luminaire Lumens: 815.0 lumens
Efficiency: N/A
Efficacy: 74.1 lumens/watt
Spacing Criteria (0/90/45): 1.12 / 1.16 / 1.25
Luminous Opening: Rectangular w/ Sides (W: 1.92' x L: 0.08' x H: 0.04')
CIE Type: Direct

Input Watts (W): 11
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	99
1	109	104	100	96	106	102	98	95	98	94	92		94	91	89		90	88	86	84
2	99	91	85	79	97	90	83	78	86	81	76		83	78	75		79	76	73	71
3	91	81	73	67	89	79	72	66	76	70	65		73	68	64		71	66	62	60
4	84	72	63	57	81	71	63	57	68	61	56		66	60	55		64	58	54	52
5	77	65	56	49	75	64	55	49	61	54	49		59	53	48		57	52	47	45
6	71	58	50	44	70	58	49	43	56	48	43		54	47	42		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°	22981	22981	22981
5°	22685	22687	21317
10°	22199	22421	19489
15°	21411	21982	17646
20°	20447	21552	15818
25°	19410	20965	14032
30°	18230	20351	12355
35°	16928	19587	10755
40°	15537	18714	9259
45°	14270	17863	7840
50°	13179	17016	6524
55°	12030	16113	5155
60°	11008	15107	3843
65°	9957	14063	2393
70°	8990	12681	1079
75°	8022	10862	91
80°	6799	8326	0
85°	5654	4335	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	32.1	3.9
10°-20°	89.6	11.0
20°-30°	129.5	15.9
30°-40°	146.5	18.0
40°-50°	141.3	17.3
50°-60°	119.1	14.6
60°-70°	85.1	10.4
70°-80°	47.7	5.8
80°-90°	19.8	2.4
90°-100°	4.3	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°	251.2	30.8
0°-40°	397.7	48.8
0°-60°	658.1	80.7
0°-90°	810.6	99.5
90°-120°	4.4	0.5
90°-150°	4.4	0.5
90°-180°	4.0	0.5
0°-180°	815.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	341	341	341	341	341	
5°	350	347	336	331	329	33
15°	348	341	317	296	287	98
25°	322	315	285	249	233	148
35°	278	273	242	196	176	173
45°	225	222	192	143	123	174
55°	176	172	141	94	75	157
65°	129	123	92	48	31	129
75°	88	78	45	10	1	93
85°	49	38	7	0	0	44
90°	31	20	0	0	0	17
95°	16	6	0	0	0	11
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: P295526

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	341.0	341.0	341.0	341.0	341.0	341.0	341.0	341.0	341.0
2.5°	347.0	347.0	345.0	341.0	337.0	337.0	336.0	336.0	335.0
5°	350.0	350.0	347.0	342.0	336.0	334.0	330.9	328.9	328.9
7.5°	352.0	352.0	348.0	341.0	333.0	328.9	323.9	320.9	319.9
10°	353.0	352.0	347.0	339.0	328.9	322.9	315.9	311.9	309.9
12.5°	351.0	350.0	344.0	335.0	322.9	315.9	306.9	300.9	298.9
15°	348.0	347.0	341.0	329.9	316.9	306.9	295.8	289.8	286.8
17.5°	344.0	342.0	336.0	324.9	310.9	298.9	285.8	276.8	274.8
20°	337.0	336.0	329.9	317.9	302.9	288.8	273.8	263.8	260.7
22.5°	329.9	329.9	322.9	310.9	293.8	277.8	261.7	250.7	245.7
25°	321.9	320.9	314.9	302.9	284.8	266.8	248.7	236.7	232.7
27.5°	311.9	310.9	305.9	293.8	274.8	255.7	235.7	223.6	217.6
30°	301.9	299.9	295.8	283.8	264.8	243.7	222.6	208.6	204.6
32.5°	288.8	288.8	283.8	272.8	251.7	230.7	209.6	194.6	190.5
35°	277.8	275.8	272.8	260.7	241.7	218.6	195.6	181.5	176.5
37.5°	264.8	264.8	260.7	249.7	229.7	205.6	183.5	167.5	163.5
40°	250.7	251.7	247.7	236.7	216.6	192.6	169.5	154.4	149.4
42.5°	237.7	237.7	234.7	224.6	204.6	179.5	156.4	141.4	137.4
45°	224.6	224.6	221.6	212.6	191.5	167.5	143.4	128.4	123.4
47.5°	211.6	212.6	209.6	199.6	179.5	154.4	130.4	116.3	111.3
50°	200.6	199.6	196.6	186.5	166.5	141.4	119.3	104.3	99.3
52.5°	187.5	187.5	183.5	174.5	154.4	129.4	106.3	92.3	87.2
55°	175.5	174.5	171.5	161.5	141.4	116.3	94.3	80.2	75.2
57.5°	163.5	162.5	158.5	149.4	128.4	103.3	82.2	69.2	63.2
60°	152.4	150.4	146.4	135.4	116.3	91.3	70.2	57.2	53.2
62.5°	141.4	139.4	134.4	123.4	104.3	79.2	58.2	46.1	42.1
65°	129.4	127.4	123.4	111.3	92.3	68.2	48.1	36.1	31.1
67.5°	118.3	117.3	111.3	100.3	80.2	56.2	37.1	25.1	22.1
70°	108.3	107.3	100.3	87.2	68.2	44.1	26.1	16.0	13.0
72.5°	98.3	96.3	89.3	76.2	56.2	34.1	17.0	8.0	6.0
75°	88.3	86.2	78.2	65.2	45.1	24.1	10.0	2.0	1.0
77.5°	78.2	76.2	68.2	54.2	34.1	15.0	3.0	0.0	0.0
80°	67.2	66.2	58.2	43.1	24.1	7.0	0.0	0.0	0.0
82.5°	59.2	56.2	48.1	34.1	15.0	2.0	0.0	0.0	0.0
85°	49.1	47.1	38.1	24.1	7.0	0.0	0.0	0.0	0.0
87.5°	40.1	37.1	29.1	15.0	2.0	0.0	0.0	0.0	0.0
90°	31.1	28.1	20.1	7.0	0.0	0.0	0.0	0.0	0.0
92.5°	23.1	21.1	12.0	3.0	0.0	0.0	0.0	0.0	0.0
95°	16.0	14.0	6.0	0.0	0.0	0.0	0.0	0.0	0.0
97.5°	9.0	7.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0
100°	4.0	2.0	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)