

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: P295529

Luminaire Tested: **HU1136D9SMB-4000K**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P295529
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1904-227-11)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO
Catalog Number: HU1136D9SMB-4000K
Description: HALO HU11 UNDERCABINET LED FIXTURE
36-INCH, SELECTABLE CCT, MATTE BLACK FINISH
Light Source: (168) 90 CRI LEDS TUNED TO 4000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

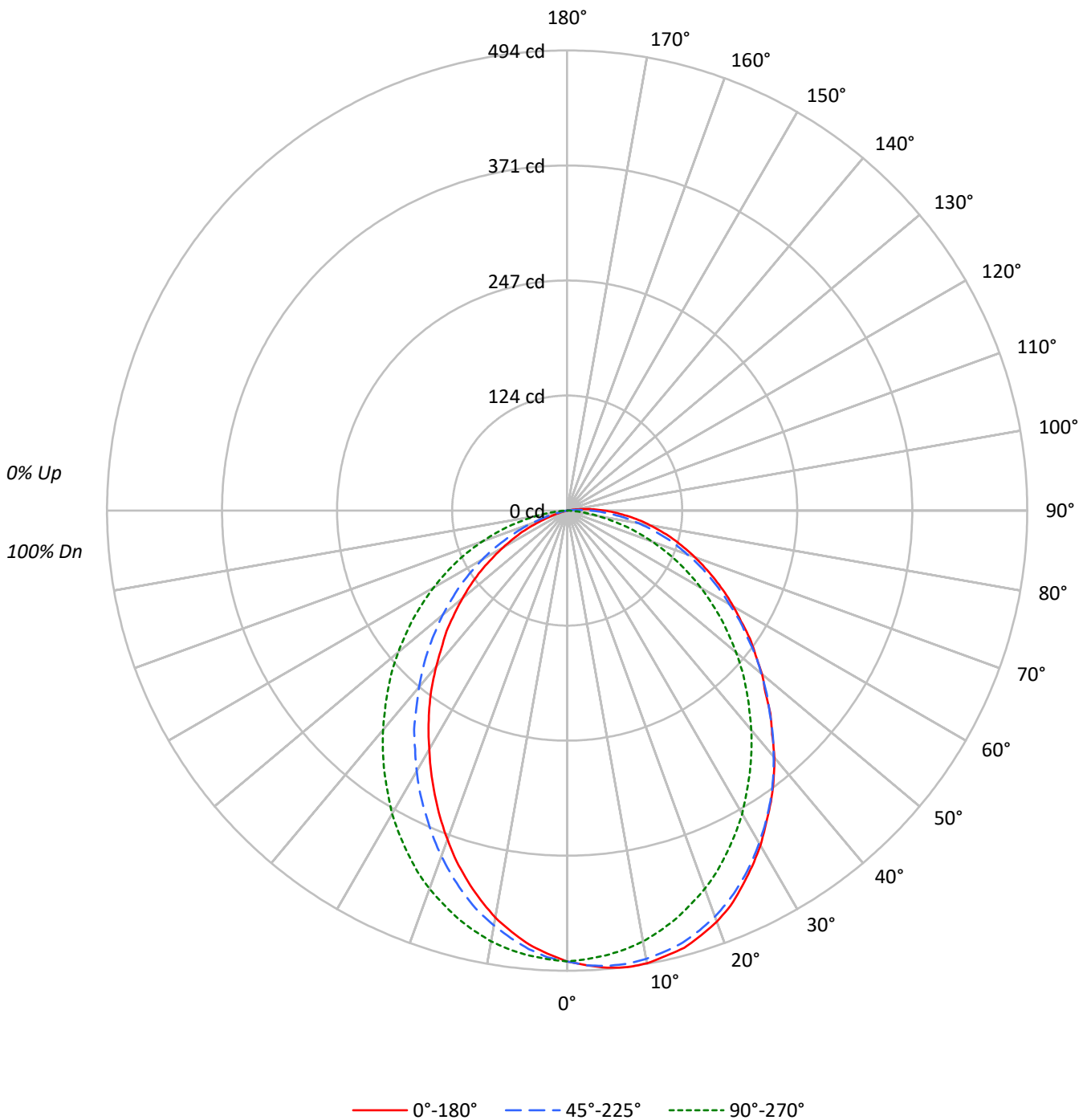
Lumens per Lamp: N/A
Luminaire Lumens: 1150.0 lumens
Efficiency: N/A
Efficacy: 74.2 lumens/watt
Spacing Criteria (0/90/45): 1.11 / 1.16 / 1.25
Luminous Opening: Rectangular w/ Sides (W: 2.92' x L: 0.08' x H: 0.04')
CIE Type: Direct

Input Watts (W): 15.5
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	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			
1	109	104	100	96	106	102	98	95	98	95	92	94	91	89	90	88	86	84					84			
2	100	92	85	79	97	90	84	78	86	81	77	83	78	75	80	76	73	71					71			
3	91	81	73	67	89	79	72	66	76	70	65	74	68	64	71	66	63	60					60			
4	84	72	64	57	81	71	63	57	68	61	56	66	60	55	64	59	54	52					52			
5	77	65	56	50	75	64	55	49	62	54	49	60	53	48	58	52	48	46					46			
6	72	59	50	44	70	58	49	43	56	49	43	54	48	43	53	47	42	40					40			
7	67	53	45	39	65	53	44	39	51	44	38	50	43	38	48	42	38	36					36			
8	62	49	41	35	60	48	40	35	47	40	35	46	39	34	44	38	34	32					32			
9	58	45	37	32	57	44	37	31	43	36	31	42	36	31	41	35	31	29					29			
10	55	42	34	29	53	41	34	29	40	33	29	39	33	28	38	32	28	27					27			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	21434	21434	21434
5°	20981	21276	19920
10°	20394	21064	18336
15°	19646	20704	16662
20°	18724	20263	14980
25°	17621	19678	13330
30°	16468	19055	11750
35°	15273	18312	10323
40°	14091	17572	8898
45°	12885	16808	7641
50°	11790	16035	6329
55°	10793	15224	5095
60°	9778	14331	3773
65°	8870	13350	2569
70°	7948	12061	1200
75°	7039	10429	227
80°	5991	8139	0
85°	4858	4586	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	45.5	4.0
10°-20°	127.2	11.1
20°-30°	183.7	16.0
30°-40°	207.4	18.0
40°-50°	199.9	17.4
50°-60°	168.2	14.6
60°-70°	120.1	10.4
70°-80°	66.4	5.8
80°-90°	26.3	2.3
90°-100°	5.3	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°	356.3	31.0
0°-40°	563.7	49.0
0°-60°	931.8	81.0
0°-90°	1144.6	99.5
90°-120°	5.4	0.5
90°-150°	5.4	0.5
90°-180°	5.0	0.4
0°-180°	1150.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	484	484	484	484	484	
5°	493	491	479	472	468	47
15°	486	480	453	426	412	137
25°	445	441	405	359	336	205
35°	381	380	342	286	258	238
45°	309	308	272	211	183	238
55°	240	236	201	140	113	214
65°	175	169	131	72	51	174
75°	118	107	64	15	4	124
85°	64	51	10	0	0	58
90°	40	26	0	0	0	22
95°	19	8	0	0	0	13
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°	484.0	484.0	484.0	484.0	484.0	484.0	484.0	484.0	484.0
2.5°	488.7	490.7	488.7	484.0	482.0	480.1	480.1	478.2	476.3
5°	492.6	493.5	490.7	484.0	479.2	474.4	472.5	468.6	467.7
7.5°	494.5	495.5	490.7	482.0	475.3	467.7	462.9	458.1	456.2
10°	493.5	494.5	488.7	479.2	469.6	460.0	452.3	445.6	443.7
12.5°	489.7	490.7	484.9	473.4	461.9	449.5	440.8	431.2	428.4
15°	485.9	485.9	480.1	466.7	453.3	438.9	426.5	415.9	412.1
17.5°	478.2	478.2	472.5	458.1	442.7	426.5	411.1	398.7	394.8
20°	469.6	469.6	463.8	449.5	432.2	413.0	394.8	380.5	375.7
22.5°	459.0	458.1	453.3	438.0	419.7	398.7	377.6	362.2	356.5
25°	444.7	446.6	440.8	426.5	405.4	381.4	359.4	342.1	336.4
27.5°	430.3	431.2	427.4	413.0	391.0	366.1	342.1	322.0	316.2
30°	415.0	415.9	412.1	398.7	375.7	349.8	323.0	303.8	296.1
32.5°	397.7	399.6	396.7	382.4	358.4	331.6	303.8	283.7	277.0
35°	381.4	381.4	380.5	367.0	342.1	313.4	286.5	264.5	257.8
37.5°	364.2	364.2	363.2	350.7	324.9	295.2	265.5	244.4	238.6
40°	346.0	345.0	345.0	333.5	307.6	277.0	247.2	226.2	218.5
42.5°	325.8	327.7	326.8	315.3	289.4	259.7	229.0	207.0	199.3
45°	308.6	308.6	307.6	298.0	272.2	241.5	210.8	189.7	183.0
47.5°	288.5	290.4	290.4	279.8	254.9	221.4	191.7	171.5	163.9
50°	273.1	272.2	272.2	261.6	236.7	204.1	174.4	153.3	146.6
52.5°	254.9	255.9	254.9	243.4	218.5	186.9	156.2	136.1	130.3
55°	239.6	237.7	235.7	226.2	201.2	167.7	139.9	119.8	113.1
57.5°	221.4	221.4	219.5	208.0	183.0	150.5	121.7	102.5	95.8
60°	206.0	205.1	201.2	189.7	165.8	133.2	105.4	86.2	79.5
62.5°	190.7	189.7	185.0	171.5	148.5	116.9	89.1	70.0	64.2
65°	175.4	173.5	168.7	155.2	131.3	98.7	71.9	55.6	50.8
67.5°	160.0	159.1	153.3	139.0	114.0	83.4	56.5	40.2	35.5
70°	145.7	143.7	137.0	121.7	96.8	66.1	42.2	27.8	22.0
72.5°	131.3	129.4	122.7	105.4	80.5	50.8	27.8	15.3	11.5
75°	117.9	115.0	107.3	90.1	64.2	36.4	15.3	6.7	3.8
77.5°	103.5	100.6	92.0	74.7	47.9	23.0	6.7	1.0	0.0
80°	90.1	88.2	77.6	59.4	34.5	11.5	1.0	0.0	0.0
82.5°	77.6	73.8	64.2	46.0	21.1	3.8	0.0	0.0	0.0
85°	64.2	60.4	50.8	31.6	10.5	0.0	0.0	0.0	0.0
87.5°	51.7	48.9	37.4	20.1	2.9	0.0	0.0	0.0	0.0
90°	40.2	36.4	25.9	9.6	0.0	0.0	0.0	0.0	0.0
92.5°	28.7	24.9	15.3	2.9	0.0	0.0	0.0	0.0	0.0
95°	19.2	16.3	7.7	0.0	0.0	0.0	0.0	0.0	0.0
97.5°	10.5	7.7	1.9	0.0	0.0	0.0	0.0	0.0	0.0
100°	3.8	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)