

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: P295527

Luminaire Tested: **HU1136D9SMB-2700K**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P295527
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-2700K
Description: HALO HU11 UNDERCABINET LED FIXTURE
36-INCH, SELECTABLE CCT, MATTE BLACK FINISH
Light Source: (168) 90 CRI LEDS TUNED TO 2700K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1105.0 lumens
Efficiency: N/A
Efficacy: 71.3 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

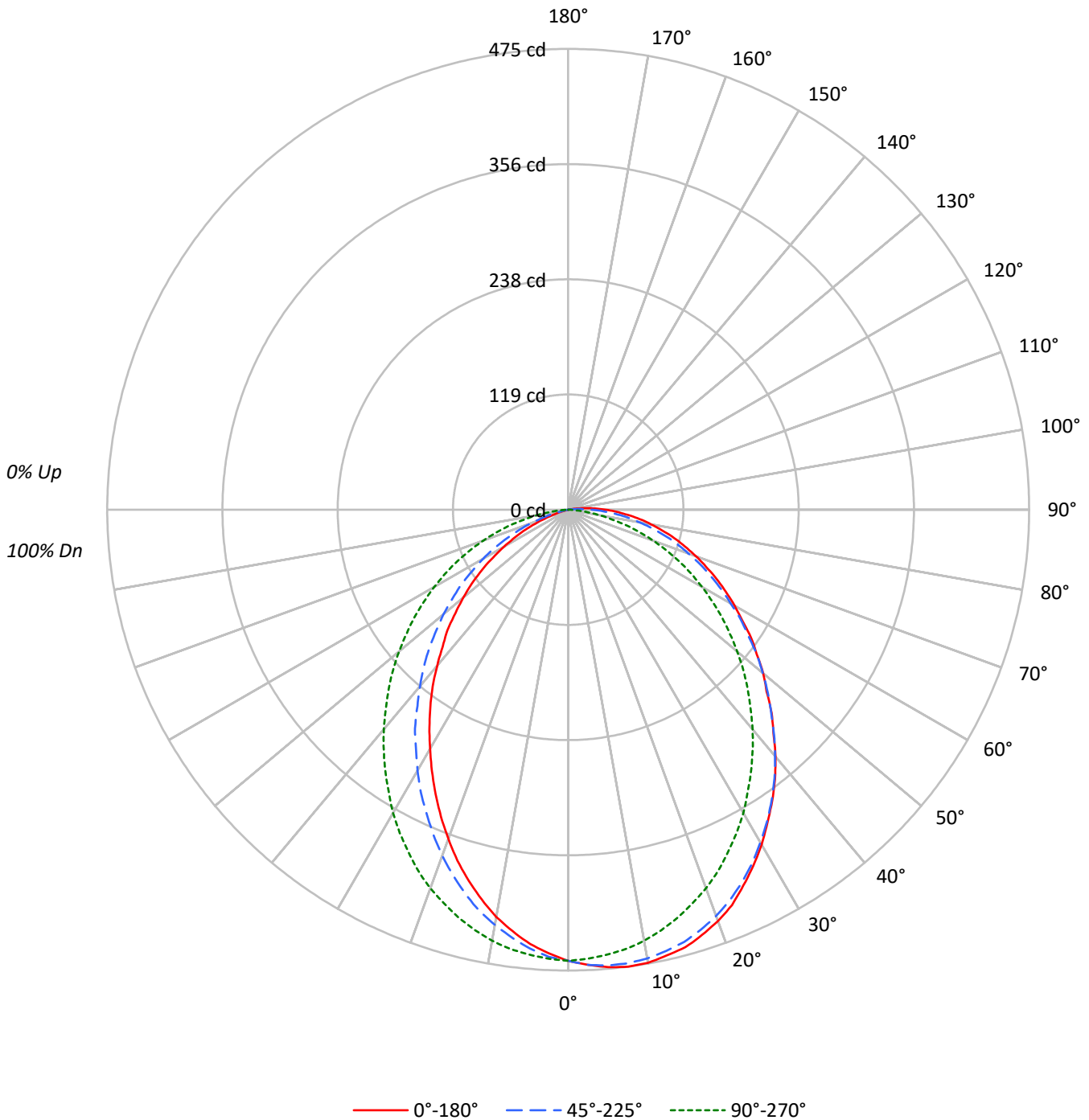
Input Watts (W): 15.5
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	77	83	78	75	80	76	73	71
3	91	81	73	67	89	79	72	66	76	70	65	74	68	64	71	66	63	60
4	84	72	64	57	81	71	63	57	68	61	56	66	60	55	64	59	54	52
5	77	65	56	50	75	64	55	49	62	54	49	60	53	48	58	52	48	46
6	72	59	50	44	70	58	49	43	56	49	43	54	48	43	53	47	42	40
7	67	53	45	39	65	53	44	39	51	44	38	50	43	38	48	42	38	36
8	62	49	41	35	60	48	40	35	47	40	35	46	39	34	44	38	34	32
9	58	45	37	32	57	44	37	31	43	36	31	42	36	31	41	35	31	29
10	55	42	34	29	53	41	34	29	40	33	29	39	33	28	38	32	28	27

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	20593	20593	20593
5°	20159	20442	19141
10°	19597	20239	17617
15°	18877	19891	16011
20°	17990	19471	14394
25°	16932	18907	12807
30°	15821	18309	11289
35°	14676	17595	9919
40°	13537	16887	8548
45°	12380	16147	7344
50°	11328	15405	6083
55°	10369	14634	4896
60°	9398	13769	3626
65°	8521	12831	2468
70°	7637	11587	1156
75°	6764	10023	221
80°	5758	7809	0
85°	4669	4412	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	43.7	4.0
10°-20°	122.2	11.1
20°-30°	176.5	16.0
30°-40°	199.2	18.0
40°-50°	192.1	17.4
50°-60°	161.6	14.6
60°-70°	115.4	10.4
70°-80°	63.8	5.8
80°-90°	25.3	2.3
90°-100°	5.1	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°	342.4	31.0
0°-40°	541.6	49.0
0°-60°	895.4	81.0
0°-90°	1099.8	99.5
90°-120°	5.2	0.5
90°-150°	5.2	0.5
90°-180°	5.0	0.5
0°-180°	1105.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	465	465	465	465	465	
5°	473	472	460	454	449	45
15°	467	461	436	410	396	131
25°	427	424	390	345	323	197
35°	366	366	329	275	248	229
45°	296	296	262	203	176	229
55°	230	226	193	134	109	205
65°	168	162	126	69	49	167
75°	113	103	62	15	4	119
85°	62	49	10	0	0	56
90°	39	25	0	0	0	21
95°	18	7	0	0	0	12
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°	465.0	465.0	465.0	465.0	465.0	465.0	465.0	465.0	465.0
2.5°	469.6	471.5	469.6	465.0	463.2	461.3	461.3	459.5	457.6
5°	473.3	474.2	471.5	465.0	460.4	455.8	454.0	450.3	449.4
7.5°	475.1	476.1	471.5	463.2	456.7	449.4	444.8	440.2	438.3
10°	474.2	475.1	469.6	460.4	451.2	442.0	434.6	428.2	426.3
12.5°	470.5	471.5	465.9	454.9	443.8	431.9	423.6	414.4	411.6
15°	466.9	466.9	461.3	448.4	435.5	421.7	409.8	399.6	396.0
17.5°	459.5	459.5	454.0	440.2	425.4	409.8	395.0	383.1	379.4
20°	451.2	451.2	445.7	431.9	415.3	396.9	379.4	365.6	361.0
22.5°	441.1	440.2	435.5	420.8	403.3	383.1	362.8	348.1	342.5
25°	427.3	429.1	423.6	409.8	389.5	366.5	345.3	328.7	323.2
27.5°	413.4	414.4	410.7	396.9	375.7	351.8	328.7	309.4	303.9
30°	398.7	399.6	396.0	383.1	361.0	336.1	310.3	291.9	284.5
32.5°	382.1	384.0	381.2	367.4	344.4	318.6	291.9	272.6	266.1
35°	366.5	366.5	365.6	352.7	328.7	301.1	275.3	254.1	247.7
37.5°	349.9	349.9	349.0	337.0	312.2	283.6	255.1	234.8	229.3
40°	332.4	331.5	331.5	320.4	295.6	266.1	237.6	217.3	209.9
42.5°	313.1	314.9	314.0	302.9	278.1	249.5	220.1	198.9	191.5
45°	296.5	296.5	295.6	286.4	261.5	232.0	202.6	182.3	175.9
47.5°	277.2	279.0	279.0	268.9	244.9	212.7	184.2	164.8	157.5
50°	262.4	261.5	261.5	251.4	227.4	196.1	167.6	147.3	140.9
52.5°	244.9	245.9	244.9	233.9	209.9	179.6	150.1	130.8	125.2
55°	230.2	228.4	226.5	217.3	193.4	161.1	134.4	115.1	108.7
57.5°	212.7	212.7	210.9	199.8	175.9	144.6	116.9	98.5	92.1
60°	198.0	197.1	193.4	182.3	159.3	128.0	101.3	82.9	76.4
62.5°	183.2	182.3	177.7	164.8	142.7	112.3	85.6	67.2	61.7
65°	168.5	166.7	162.1	149.2	126.2	94.8	69.1	53.4	48.8
67.5°	153.8	152.9	147.3	133.5	109.6	80.1	54.3	38.7	34.1
70°	140.0	138.1	131.7	116.9	93.0	63.5	40.5	26.7	21.2
72.5°	126.2	124.3	117.9	101.3	77.3	48.8	26.7	14.7	11.0
75°	113.3	110.5	103.1	86.6	61.7	35.0	14.7	6.4	3.7
77.5°	99.4	96.7	88.4	71.8	46.0	22.1	6.4	0.9	0.0
80°	86.6	84.7	74.6	57.1	33.1	11.0	0.9	0.0	0.0
82.5°	74.6	70.9	61.7	44.2	20.3	3.7	0.0	0.0	0.0
85°	61.7	58.0	48.8	30.4	10.1	0.0	0.0	0.0	0.0
87.5°	49.7	47.0	35.9	19.3	2.8	0.0	0.0	0.0	0.0
90°	38.7	35.0	24.9	9.2	0.0	0.0	0.0	0.0	0.0
92.5°	27.6	23.9	14.7	2.8	0.0	0.0	0.0	0.0	0.0
95°	18.4	15.7	7.4	0.0	0.0	0.0	0.0	0.0	0.0
97.5°	10.1	7.4	1.8	0.0	0.0	0.0	0.0	0.0	0.0
100°	3.7	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



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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)