

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: P295528

Luminaire Tested: **HU1136D9SMB-3000K**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P295528
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-3000K
Description: HALO HU11 UNDERCABINET LED FIXTURE
36-INCH, SELECTABLE CCT, MATTE BLACK FINISH
Light Source: (168) 90 CRI LEDS TUNED TO 3000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

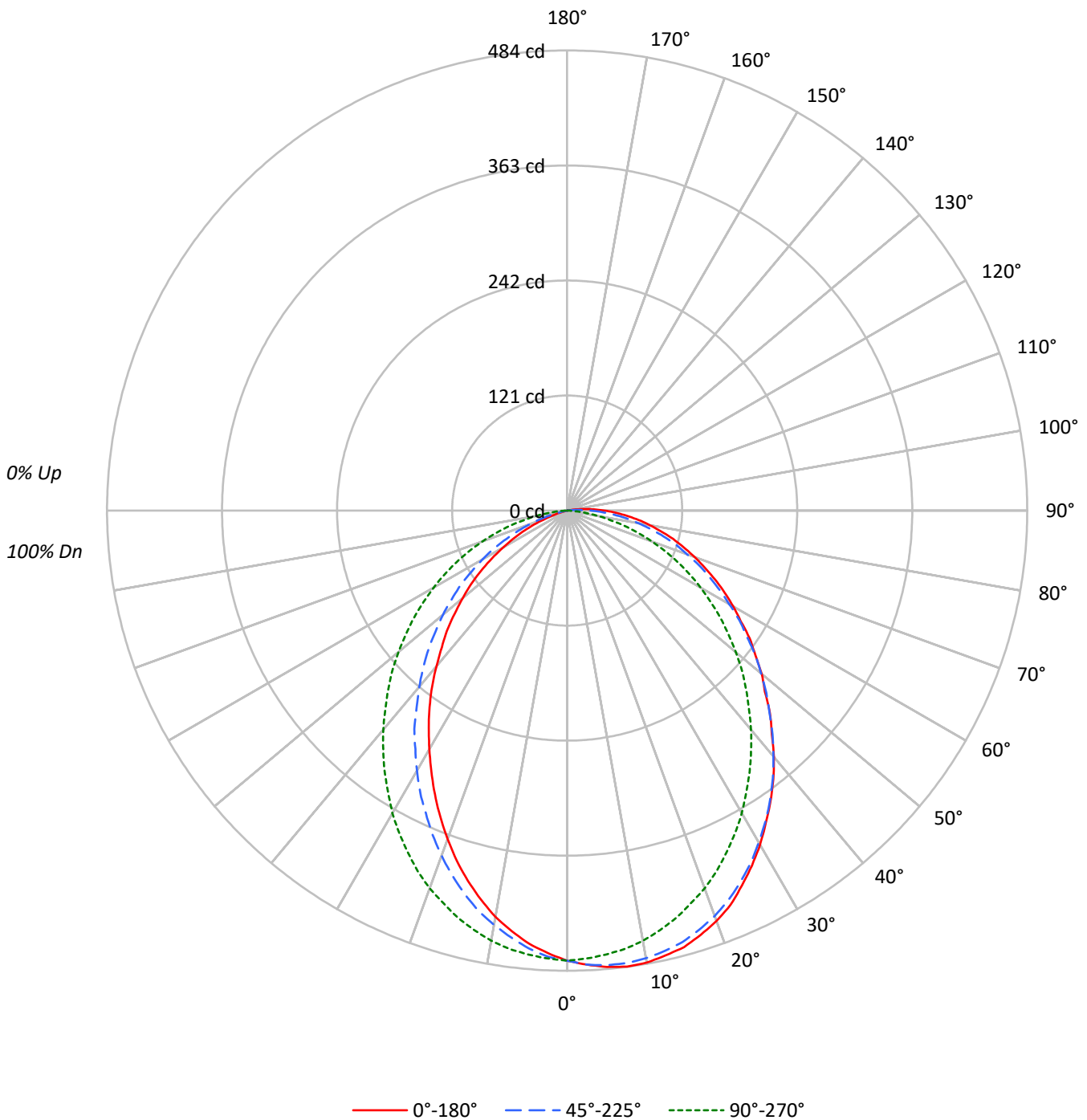
Lumens per Lamp: N/A
Luminaire Lumens: 1125.0 lumens
Efficiency: N/A
Efficacy: 72.6 lumens/watt
Spacing Criteria (0/90/45): 1.11 / 1.16 / 1.25
Luminous Opening: Rectangular w/ Sides (W: 2.92' x L: 0.08' x H: 0.04')
CIE Type: Direct

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



TEST NUMBER: P295528
CATALOG NUMBER: HU1136D9SMB-3000K

Luminous Intensity Polar Plot





TEST NUMBER: P295528

CATALOG NUMBER: HU1136D9SMB-3000K

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°	20965	20965	20965
5°	20525	20810	19486
10°	19952	20607	17939
15°	19217	20252	16298
20°	18317	19823	14653
25°	17237	19251	13041
30°	16107	18639	11496
35°	14940	17916	10099
40°	13781	17189	8703
45°	12605	16437	7478
50°	11535	15689	6191
55°	10558	14899	4982
60°	9569	14019	3693
65°	8677	13055	2513
70°	7773	11799	1178
75°	6884	10202	221
80°	5858	7950	0
85°	4752	4499	0



TEST NUMBER: P295528

CATALOG NUMBER: HU1136D9SMB-3000K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	44.5	4.0
10°-20°	124.4	11.1
20°-30°	179.7	16.0
30°-40°	202.8	18.0
40°-50°	195.6	17.4
50°-60°	164.6	14.6
60°-70°	117.5	10.4
70°-80°	65.0	5.8
80°-90°	25.7	2.3
90°-100°	5.2	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°	348.6	31.0
0°-40°	551.4	49.0
0°-60°	911.6	81.0
0°-90°	1119.7	99.5
90°-120°	5.3	0.5
90°-150°	5.3	0.5
90°-180°	5.0	0.4
0°-180°	1125.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	473	473	473	473	473	
5°	482	480	469	462	458	46
15°	475	470	443	417	403	134
25°	435	431	397	352	329	200
35°	373	372	335	280	252	233
45°	302	301	266	206	179	233
55°	234	231	197	137	111	209
65°	172	165	128	70	50	170
75°	115	105	63	15	4	122
85°	63	50	10	0	0	57
90°	39	25	0	0	0	22
95°	19	8	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



TEST NUMBER: P295528

CATALOG NUMBER: HU1136D9SMB-3000K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	473.4	473.4	473.4	473.4	473.4	473.4	473.4	473.4	473.4
2.5°	478.1	480.0	478.1	473.4	471.6	469.7	469.7	467.8	465.9
5°	481.9	482.8	480.0	473.4	468.7	464.1	462.2	458.4	457.5
7.5°	483.7	484.7	480.0	471.6	465.0	457.5	452.8	448.1	446.2
10°	482.8	483.7	478.1	468.7	459.4	450.0	442.5	435.9	434.1
12.5°	479.1	480.0	474.4	463.1	451.9	439.7	431.2	421.9	419.1
15°	475.3	475.3	469.7	456.6	443.4	429.4	417.2	406.9	403.1
17.5°	467.8	467.8	462.2	448.1	433.1	417.2	402.2	390.0	386.2
20°	459.4	459.4	453.7	439.7	422.8	404.1	386.2	372.2	367.5
22.5°	449.1	448.1	443.4	428.4	410.6	390.0	369.4	354.4	348.7
25°	435.0	436.9	431.2	417.2	396.6	373.1	351.6	334.7	329.1
27.5°	420.9	421.9	418.1	404.1	382.5	358.1	334.7	315.0	309.4
30°	405.9	406.9	403.1	390.0	367.5	342.2	315.9	297.2	289.7
32.5°	389.1	390.9	388.1	374.1	350.6	324.4	297.2	277.5	270.9
35°	373.1	373.1	372.2	359.1	334.7	306.6	280.3	258.7	252.2
37.5°	356.2	356.2	355.3	343.1	317.8	288.7	259.7	239.1	233.4
40°	338.4	337.5	337.5	326.2	300.9	270.9	241.9	221.2	213.7
42.5°	318.7	320.6	319.7	308.4	283.1	254.1	224.1	202.5	195.0
45°	301.9	301.9	300.9	291.6	266.2	236.2	206.2	185.6	179.1
47.5°	282.2	284.1	284.1	273.7	249.4	216.6	187.5	167.8	160.3
50°	267.2	266.2	266.2	255.9	231.6	199.7	170.6	150.0	143.4
52.5°	249.4	250.3	249.4	238.1	213.7	182.8	152.8	133.1	127.5
55°	234.4	232.5	230.6	221.2	196.9	164.1	136.9	117.2	110.6
57.5°	216.6	216.6	214.7	203.4	179.1	147.2	119.1	100.3	93.7
60°	201.6	200.6	196.9	185.6	162.2	130.3	103.1	84.4	77.8
62.5°	186.6	185.6	180.9	167.8	145.3	114.4	87.2	68.4	62.8
65°	171.6	169.7	165.0	151.9	128.4	96.6	70.3	54.4	49.7
67.5°	156.6	155.6	150.0	135.9	111.6	81.6	55.3	39.4	34.7
70°	142.5	140.6	134.1	119.1	94.7	64.7	41.2	27.2	21.6
72.5°	128.4	126.6	120.0	103.1	78.7	49.7	27.2	15.0	11.2
75°	115.3	112.5	105.0	88.1	62.8	35.6	15.0	6.6	3.7
77.5°	101.2	98.4	90.0	73.1	46.9	22.5	6.6	0.9	0.0
80°	88.1	86.2	75.9	58.1	33.7	11.2	0.9	0.0	0.0
82.5°	75.9	72.2	62.8	45.0	20.6	3.7	0.0	0.0	0.0
85°	62.8	59.1	49.7	30.9	10.3	0.0	0.0	0.0	0.0
87.5°	50.6	47.8	36.6	19.7	2.8	0.0	0.0	0.0	0.0
90°	39.4	35.6	25.3	9.4	0.0	0.0	0.0	0.0	0.0
92.5°	28.1	24.4	15.0	2.8	0.0	0.0	0.0	0.0	0.0
95°	18.7	15.9	7.5	0.0	0.0	0.0	0.0	0.0	0.0
97.5°	10.3	7.5	1.9	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



TEST NUMBER: P295528

CATALOG NUMBER: HU1136D9SMB-3000K

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)