

Scaled data based on original data using

LM-41-14 Approved Method for Photometric Testing Of Indoor Fluorescent Luminaires

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: HALO

Report Number: P21272

Luminaire Tested: **ML709827ICAT120D-495WW06-H750ICAT**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P21272
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO
Catalog Number: ML709827ICAT120D-495WW06-H750ICAT
Description: HALO 6 INCH LED DOWNLIGHT WITH 900 Lmn MODULE, DIFFUSE LENS AND SEMISPECULAR REFLECTOR WITH PLASTIC SPECULAR KICKER---ABSOLUTE PHOTOMETRY IS BASED ON CALIBRATION FACTORS CREATED USING A 500 WATT, NIST TRACEABLE, OMNI-DIRECTIONAL LAB LUMEN STANDARD IN THE GONIOPHOTOMETER WITH TEST DISTANCE OF 28.75 FEET----
Light Source: (1)SMT LED 2700K
(1)CL-L241-C26L2-A
Ballast/Driver: (1)ELECTRONIC DRIVER
(1)RHPS311BL-CLO

Summary

Lumens per Lamp: 661 (1 lamp)
Luminaire Lumens: 661.4 lumens
Efficiency: 100.1%
Efficacy: 47.2 lumens/watt
Spacing Criteria (0/90/45): 1.29 / 1.31 / 1.33
Luminous Opening: Circular (Dia: 0.48' x H: 0')
CIE Type: Direct

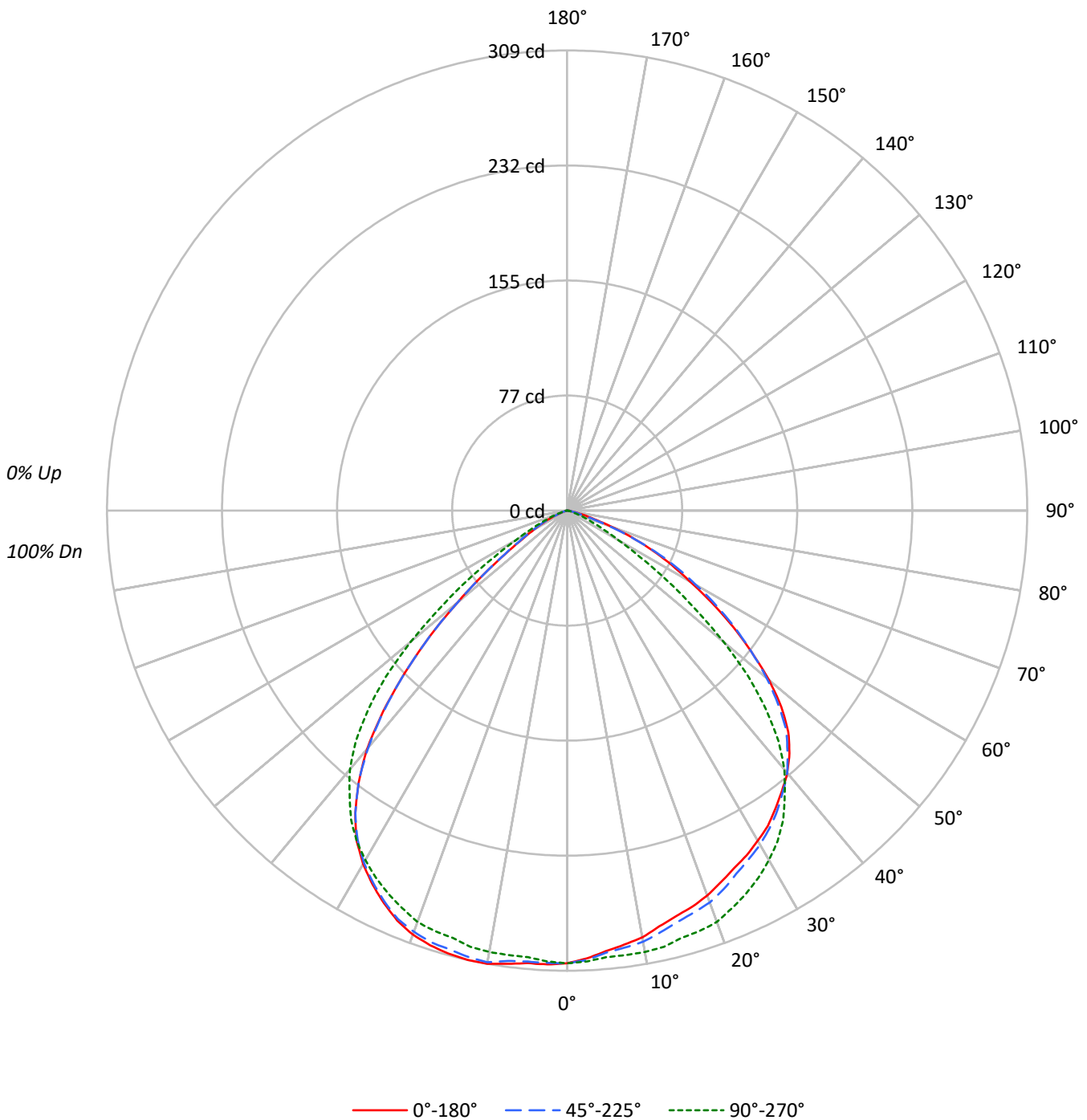
Input Watts (W): 14.01
Input Voltage (V): NR
Input Current (A_{in}): 0.12081
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	111	108	104	101	109	106	103	100	101	99	97	98	96	94	94	93	91	89
2	103	97	91	87	101	95	90	86	91	87	84	88	85	82	85	83	80	78
3	96	87	80	75	93	85	79	74	82	77	73	80	75	71	77	74	70	68
4	88	78	71	65	86	77	70	64	75	68	64	72	67	63	70	66	62	60
5	82	71	63	57	80	70	62	57	68	61	56	66	60	56	64	59	55	53
6	76	64	56	51	74	63	56	50	62	55	50	60	54	50	59	53	49	47
7	71	59	51	45	69	58	50	45	56	50	45	55	49	44	54	48	44	42
8	66	54	46	41	65	53	46	41	52	45	40	51	45	40	50	44	40	38
9	62	50	42	37	61	49	42	37	48	41	37	47	41	36	46	40	36	35
10	58	46	38	34	57	45	38	34	44	38	33	43	37	33	43	37	33	31

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	18146	18146	18146
5°	17796	18036	18275
10°	17638	18244	18729
15°	17427	18354	19033
20°	17468	18675	19247
25°	17453	18705	19166
30°	17645	18679	18885
35°	17780	18436	18071
40°	17922	17688	16285
45°	17727	15955	13000
50°	16437	12722	8915
55°	14153	8534	5203
60°	11341	4775	3104
65°	8898	2684	1836
70°	5410	1396	698
75°	2537	692	231
80°	1031	344	344
85°	1370	685	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture	% Lamp
0°-10°	28.7	4.3	4.3
10°-20°	83.8	12.7	12.7
20°-30°	129.2	19.5	19.6
30°-40°	154.3	23.3	23.3
40°-50°	139.4	21.1	21.1
50°-60°	83.5	12.6	12.6
60°-70°	35.3	5.3	5.3
70°-80°	6.4	1.0	1.0
80°-90°	0.8	0.1	0.1
90°-100°	0.0	0.0	0.0
100°-110°	0.0	0.0	0.0
110°-120°	0.0	0.0	0.0
120°-130°	0.0	0.0	0.0
130°-140°	0.0	0.0	0.0
140°-150°	0.0	0.0	0.0
150°-160°	0.0	0.0	0.0
160°-170°	0.0	0.0	0.0
170°-180°	0.0	0.0	0.0
0°-30°	241.8	36.6	36.6
0°-40°	396.0	59.9	59.9
0°-60°	618.9	93.6	93.6
0°-90°	661.4	100.0	100.1
90°-120°	0.0	0.0	0.0
90°-150°	0.0	0.0	0.0
90°-180°	0.0	0.0	0.0
0°-180°	661.4	100.0	100.1

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	304	304	304	304	304	
5°	297	298	301	304	305	28
15°	282	286	297	305	308	80
25°	265	269	284	290	291	123
35°	244	246	253	248	248	153
45°	210	208	189	154	154	160
55°	136	138	82	51	50	121
65°	63	65	19	14	13	62
75°	11	8	3	1	1	14
85°	2	1	1	0	0	2
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	304	304	304	304	304	304	304	304	304	304	304
2.5°	301	301	301	301	301	301	301	301	302	302	302
5°	297	296	296	297	297	297	297	297	297	298	298
7.5°	294	294	294	294	294	295	295	295	296	296	296
10°	291	291	291	291	292	292	292	293	293	294	295
12.5°	286	286	286	286	287	287	288	288	289	290	291
15°	282	282	282	282	282	283	284	284	285	286	287
17.5°	279	279	279	279	279	280	281	281	282	283	284
20°	275	275	275	275	276	276	277	278	279	280	281
22.5°	270	270	270	271	271	272	272	273	274	275	276
25°	265	265	265	265	266	266	267	267	268	269	271
27.5°	261	260	260	261	261	261	262	262	263	264	265
30°	256	256	256	256	257	257	257	258	258	259	260
32.5°	251	251	251	251	251	251	252	252	252	253	254
35°	244	244	244	244	245	245	245	245	245	246	246
37.5°	237	237	237	237	237	237	237	237	237	238	238
40°	230	230	230	230	230	230	230	229	229	230	230
42.5°	221	221	221	221	221	220	220	220	220	219	219
45°	210	210	210	209	209	209	209	208	208	208	207
47.5°	195	195	195	195	195	194	194	194	193	192	192
50°	177	177	177	177	177	177	176	176	176	175	174
52.5°	156	156	157	157	157	157	157	157	157	156	156
55°	136	136	136	137	137	138	138	138	138	138	138
57.5°	115	115	116	117	117	118	118	119	119	119	119
60°	95	96	96	97	98	99	99	100	100	100	100
62.5°	79	79	80	80	81	81	82	82	82	83	83
65°	63	63	63	64	64	64	64	64	64	65	65
67.5°	47	47	47	47	47	46	46	46	46	46	46
70°	31	31	31	31	30	30	29	29	28	28	28
72.5°	19	19	18	18	18	17	17	16	15	15	15
75°	11	11	10	10	10	9	9	9	8	8	8
77.5°	6	6	6	6	5	5	5	5	5	5	4
80°	3	3	3	3	3	3	3	3	3	3	3
82.5°	2	2	2	2	2	2	2	2	2	2	2
85°	2	2	2	2	2	2	2	2	2	1	1
87.5°	1	1	1	1	1	1	1	1	1	1	1
90°	0	0	0	0	0	0	0	0	0	0	0



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	304	304	304	304	304	304	304	304	304	304	304
2.5°	302	302	302	302	303	303	303	303	303	303	304
5°	298	299	299	299	300	300	300	301	301	302	302
7.5°	297	297	298	299	299	300	301	301	302	302	303
10°	296	296	297	298	299	300	300	301	302	303	304
12.5°	292	293	294	295	296	297	298	300	301	301	303
15°	288	289	291	292	293	295	296	297	299	300	301
17.5°	286	287	288	290	292	293	295	296	297	299	300
20°	283	284	286	287	289	291	292	294	295	296	298
22.5°	278	279	281	283	285	286	288	289	291	292	293
25°	272	274	276	278	279	281	283	284	285	286	287
27.5°	267	268	270	272	274	275	277	278	279	280	281
30°	261	263	264	266	268	269	270	271	272	273	273
32.5°	255	256	258	259	260	262	262	263	264	264	264
35°	247	248	249	250	251	252	252	253	253	252	251
37.5°	239	239	240	241	241	241	241	240	239	238	236
40°	230	230	230	230	230	229	228	227	224	222	218
42.5°	219	219	218	217	216	214	212	210	206	202	197
45°	207	206	204	202	200	197	193	189	184	178	172
47.5°	191	190	187	184	179	175	170	165	159	152	145
50°	173	171	168	163	156	150	143	137	130	123	116
52.5°	155	152	147	141	132	124	115	108	102	95	88
55°	137	133	128	120	110	99	89	82	76	70	64
57.5°	118	115	109	100	88	76	66	58	53	49	45
60°	100	97	91	81	70	58	47	40	36	33	31
62.5°	82	80	74	66	55	43	34	28	24	23	22
65°	65	63	58	51	41	32	24	19	17	16	15
67.5°	46	45	42	36	29	22	16	13	11	10	10
70°	28	28	26	23	18	14	10	8	7	6	6
72.5°	15	15	14	13	10	8	6	4	4	4	3
75°	7	7	7	6	5	4	3	3	2	2	2
77.5°	4	4	4	3	3	3	2	2	2	1	1
80°	3	3	2	2	2	2	1	1	1	1	1
82.5°	2	2	2	2	1	1	1	1	1	1	1
85°	1	1	1	1	1	1	1	1	0	0	0
87.5°	1	1	1	1	0	0	0	0	0	0	0
90°	0	0	0	0	0	0	0	0	0	0	0



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CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	304	304	304	304	304	304	304	304	304	304	304
2.5°	304	304	304	304	304	304	304	304	305	305	305
5°	303	303	303	303	304	304	304	304	304	305	305
7.5°	304	304	304	305	305	305	306	306	306	307	307
10°	305	305	306	307	307	308	308	308	309	309	309
12.5°	304	304	305	306	306	307	307	308	308	308	309
15°	302	303	304	304	305	305	306	306	307	307	307
17.5°	301	301	302	303	303	304	304	305	305	306	306
20°	299	299	300	300	301	301	302	302	302	303	303
22.5°	294	295	295	296	296	297	297	297	297	298	298
25°	288	289	289	289	290	290	290	290	290	291	291
27.5°	281	281	281	282	282	282	282	282	282	283	283
30°	273	273	273	273	273	273	273	273	273	274	274
32.5°	263	263	263	262	262	262	262	262	262	262	262
35°	250	249	249	248	248	248	248	248	248	248	248
37.5°	234	232	231	230	230	230	230	230	230	230	230
40°	215	212	210	209	208	208	208	208	208	208	208
42.5°	192	188	185	183	183	182	183	183	183	183	183
45°	166	160	157	155	154	154	154	154	154	154	154
47.5°	138	132	128	126	125	125	125	125	125	125	125
50°	109	104	100	98	97	96	96	96	96	97	96
52.5°	82	77	74	72	72	71	71	71	71	71	71
55°	59	56	53	52	52	51	51	51	51	51	50
57.5°	42	40	38	38	37	37	37	36	36	36	36
60°	30	29	28	28	28	27	27	27	27	26	26
62.5°	22	21	21	20	20	20	20	19	19	19	19
65°	15	15	14	14	14	14	13	13	13	13	13
67.5°	9	9	9	9	8	8	8	8	8	8	8
70°	5	5	5	5	5	5	5	4	4	4	4
72.5°	3	3	3	3	3	3	3	3	2	2	2
75°	2	2	2	2	1	1	1	1	1	1	1
77.5°	1	1	1	1	1	1	1	1	1	1	1
80°	1	1	1	1	1	1	1	1	1	1	1
82.5°	0	0	0	0	0	0	0	0	0	0	0
85°	0	0	0	0	0	0	0	0	0	0	0
87.5°	0	0	0	0	0	0	0	0	0	0	0
90°	0	0	0	0	0	0	0	0	0	0	0



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CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	304	304	304	304
2.5°	305	305	305	305
5°	305	305	305	305
7.5°	307	307	307	307
10°	309	309	309	309
12.5°	309	309	309	309
15°	307	307	307	308
17.5°	306	306	306	306
20°	303	303	303	303
22.5°	298	298	298	298
25°	291	291	291	291
27.5°	283	283	283	283
30°	274	274	274	274
32.5°	262	262	262	263
35°	248	248	248	248
37.5°	230	230	230	230
40°	209	209	209	209
42.5°	183	180	183	183
45°	154	154	154	154
47.5°	125	125	125	125
50°	96	96	96	96
52.5°	71	71	71	71
55°	50	50	50	50
57.5°	36	36	35	35
60°	26	26	26	26
62.5°	19	19	19	19
65°	13	13	13	13
67.5°	8	8	8	8
70°	4	4	4	4
72.5°	2	2	2	2
75°	1	1	1	1
77.5°	1	1	1	1
80°	1	1	1	1
82.5°	0	0	0	0
85°	0	0	0	0
87.5°	0	0	0	0
90°	0	0	0	0

(END OF REPORT)