

Scaled data based on original data using  
LM-46-04 Photometric Testing of Indoor Luminaires Using High Intensity Discharge or  
Incandescent Filament Lamps (Reaffirmed 2012)

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: HALO

Report Number: E395441

Luminaire Tested: **H242-12**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-46-04  
Report Number: E395441  
Test Lab:  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO  
Catalog Number: H242-12  
Description: HALO RECESSED FLUOR - SQUARE DROP OPAQUE LENS  
Light Source: 2-PL13, 1800 LUMENS  
Ballast/Driver: -

**Summary**

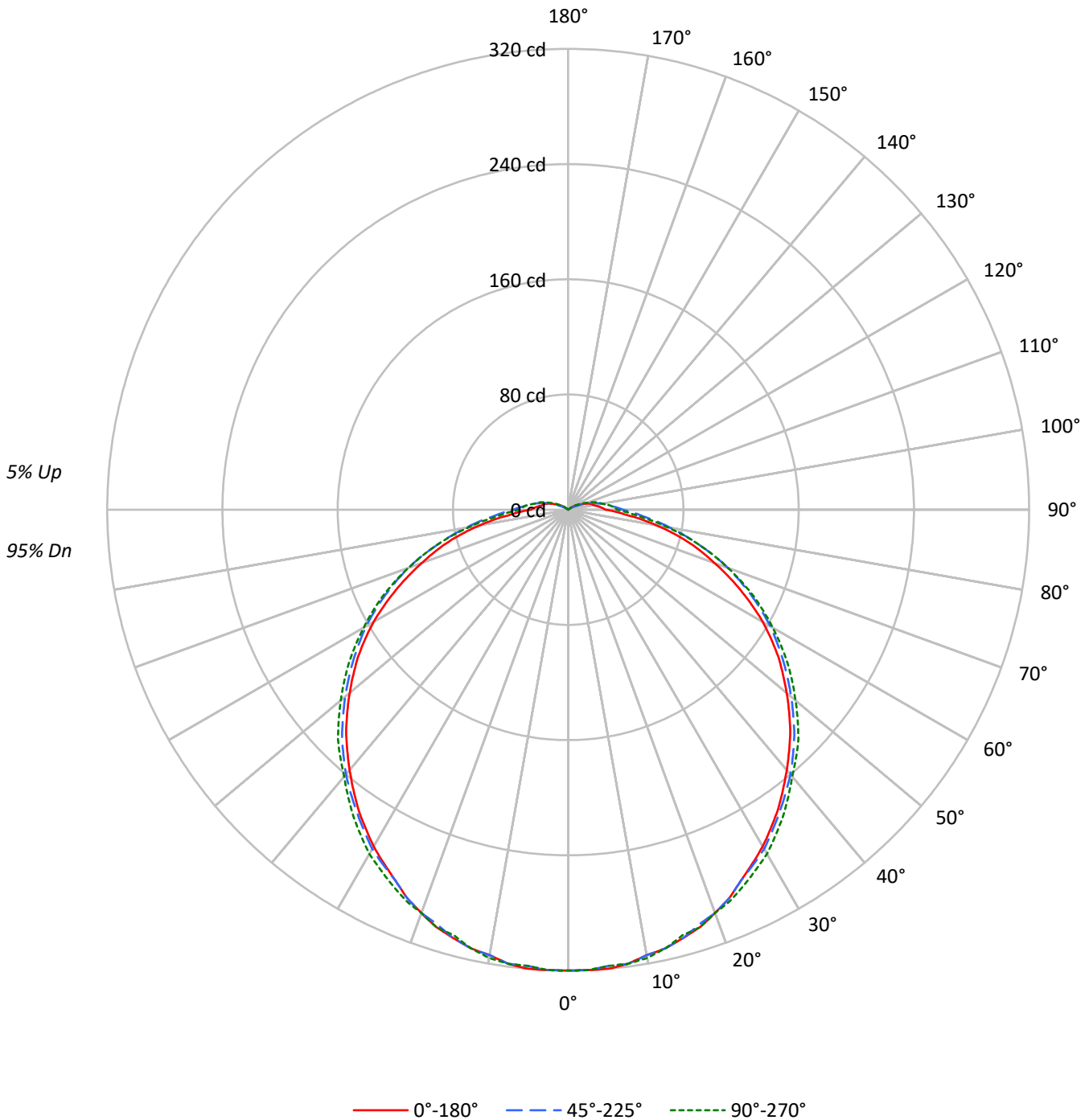
Lumens per Lamp: 900 (2 lamps)  
Luminaire Lumens: 1094.6 lumens  
Efficiency: 60.8%  
Efficacy: 34.2 lumens/watt  
Spacing Criteria (0/90/45): 1.25 / 1.28 / 1.4  
Luminous Opening: Rectangular w/ Sides (W: 0.61' x L: 0.61' x H: 0.08')  
CIE Type: Direct

Input Watts (W): 32  
Input Voltage (V): NR  
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	72	72	72	72	70	70	70	70	66	66	66	62	62	62	59	59	59	57
1	64	61	58	55	62	59	56	54	56	54	52	53	51	49	50	49	47	46
2	58	52	48	44	56	51	47	43	48	45	42	46	43	40	43	41	39	37
3	53	46	40	36	51	44	40	36	42	38	35	40	36	33	38	35	32	31
4	48	40	35	30	46	39	34	30	37	33	29	35	32	28	34	30	28	26
5	44	36	30	26	43	35	30	26	33	29	25	32	28	24	30	27	24	22
6	41	32	27	22	39	31	26	22	30	25	22	29	24	21	27	24	21	19
7	38	29	24	20	36	28	23	20	27	23	19	26	22	19	25	21	18	17
8	35	27	21	18	34	26	21	17	25	20	17	24	20	17	23	19	16	15
9	33	24	19	16	32	24	19	16	23	18	15	22	18	15	21	17	15	14
10	31	22	17	14	30	22	17	14	21	17	14	20	16	14	20	16	13	12

**AVERAGE LUMINANCE (cd/sqm):**

	0°	90°	180°
0°	9257	9257	9257
5°	9187	9129	9187
10°	9015	9072	9015
15°	8911	8853	8911
20°	8756	8756	8756
25°	8542	8663	8542
30°	8384	8570	8384
35°	8215	8409	8215
40°	8028	8232	8028
45°	7884	8174	7884
50°	7706	8018	7706
55°	7561	7901	7561
60°	7355	7732	7355
65°	7052	7586	7052
70°	6715	7337	6715
75°	6453	7054	6453
80°	5923	6687	5923
85°	5313	6375	5313



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture	% Lamp
0°-10°	30.3	2.8	1.7
10°-20°	86.8	7.9	4.8
20°-30°	131.9	12.0	7.3
30°-40°	160.8	14.7	8.9
40°-50°	171.0	15.6	9.5
50°-60°	162.9	14.9	9.0
60°-70°	137.8	12.6	7.7
70°-80°	98.0	9.0	5.4
80°-90°	55.1	5.0	3.1
90°-100°	31.2	2.9	1.7
100°-110°	18.4	1.7	1.0
110°-120°	8.4	0.8	0.5
120°-130°	2.1	0.2	0.1
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°	249.0	22.7	13.8
0°-40°	409.7	37.4	22.8
0°-60°	743.7	67.9	41.3
0°-90°	1034.5	94.5	57.5
90°-120°	58.0	5.3	3.2
90°-150°	60.1	5.5	3.3
90°-180°	60.0	5.5	3.3
0°-180°	1094.6	100.0	60.8

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	320	320	320	320	320	
5°	320	318	318	318	320	30
15°	308	308	306	308	308	87
25°	284	284	288	284	284	131
35°	254	256	260	256	254	159
45°	218	222	226	222	218	168
55°	178	182	186	182	178	159
65°	132	140	142	140	132	131
75°	86	94	94	94	86	90
85°	40	52	48	52	40	38
90°	26	38	34	38	26	16
95°	22	30	30	30	22	17
105°	16	18	20	18	16	16
115°	8	6	10	6	8	8
125°	2	2	4	2	2	2
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°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	320	320	320	320	320	320	320	320	320	320	320
2.5°	320	320	320	320	320	320	320	320	320	320	320
5°	320	318	318	318	318	318	320	318	318	320	318
7.5°	318	318	316	318	318	318	318	318	318	318	318
10°	314	314	314	314	314	314	314	314	316	316	316
12.5°	312	312	310	310	312	312	312	312	312	312	312
15°	308	306	306	308	308	308	308	308	308	308	306
17.5°	304	302	302	302	302	302	304	304	304	304	304
20°	298	296	296	298	298	298	298	298	298	300	298
22.5°	292	290	292	292	292	292	292	294	294	294	294
25°	284	284	284	286	286	284	286	286	288	288	288
30°	270	270	270	270	270	272	274	274	274	276	276
35°	254	254	254	256	256	256	258	258	260	260	260
40°	236	236	236	238	238	240	242	242	242	244	242
45°	218	218	218	218	220	222	224	224	224	226	226
50°	198	198	198	200	202	202	204	204	206	206	206
55°	178	176	178	180	182	182	184	184	186	186	186
60°	156	156	158	158	160	162	164	164	164	164	164
65°	132	134	136	138	138	140	142	142	142	142	142
70°	108	110	112	116	116	118	120	120	118	118	118
75°	86	86	90	92	94	94	96	96	94	94	94
80°	62	62	64	68	70	72	72	72	70	70	70
85°	40	42	44	50	52	52	52	52	50	50	48
90°	26	28	30	34	36	38	38	38	36	36	34
95°	22	24	26	28	30	30	30	30	30	30	30
100°	18	18	20	22	22	24	24	24	24	24	24
105°	16	16	16	16	16	18	18	18	18	18	20
110°	12	12	12	12	12	12	12	14	14	14	14
115°	8	8	8	8	6	6	8	8	10	10	10
120°	6	6	6	4	4	2	4	6	6	6	6
125°	2	2	2	2	2	2	2	2	2	4	4
130°	0	0	0	0	0	0	0	0	0	0	0
135°	0	0	0	0	0	0	0	0	0	0	0
140°	0	0	0	0	0	0	0	0	0	0	0
145°	0	0	0	0	0	0	0	0	0	0	0
150°	0	0	0	0	0	0	0	0	0	0	0
155°	0	0	0	0	0	0	0	0	0	0	0
160°	0	0	0	0	0	0	0	0	0	0	0
165°	0	0	0	0	0	0	0	0	0	0	0
170°	0	0	0	0	0	0	0	0	0	0	0
175°	0	0	0	0	0	0	0	0	0	0	0
180°	0	0	0	0	0	0	0	0	0	0	0



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**CANDELA DISTRIBUTION (continued):**

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	320	320	320	320	320	320	320	320	320	320
2.5°	320	320	320	320	320	320	320	320	320	320
5°	320	318	318	320	318	318	318	318	318	320
7.5°	318	318	318	318	318	318	318	316	318	318
10°	316	316	314	314	314	314	314	314	314	314
12.5°	312	312	312	312	312	312	310	310	312	312
15°	308	308	308	308	308	308	308	306	306	308
17.5°	304	304	304	304	302	302	302	302	302	304
20°	300	298	298	298	298	298	298	296	296	298
22.5°	294	294	294	292	292	292	292	292	290	292
25°	288	288	286	286	284	286	286	284	284	284
30°	276	274	274	274	272	270	270	270	270	270
35°	260	260	258	258	256	256	256	254	254	254
40°	244	242	242	242	240	238	238	236	236	236
45°	226	224	224	224	222	220	218	218	218	218
50°	206	206	204	204	202	202	200	198	198	198
55°	186	186	184	184	182	182	180	178	176	178
60°	164	164	164	164	162	160	158	158	156	156
65°	142	142	142	142	140	138	138	136	134	132
70°	118	118	120	120	118	116	116	112	110	108
75°	94	94	96	96	94	94	92	90	86	86
80°	70	70	72	72	72	70	68	64	62	62
85°	50	50	52	52	52	52	50	44	42	40
90°	36	36	38	38	38	36	34	30	28	26
95°	30	30	30	30	30	30	28	26	24	22
100°	24	24	24	24	24	22	22	20	18	18
105°	18	18	18	18	18	16	16	16	16	16
110°	14	14	14	12	12	12	12	12	12	12
115°	10	10	8	8	6	6	8	8	8	8
120°	6	6	6	4	2	4	4	6	6	6
125°	4	2	2	2	2	2	2	2	2	2
130°	0	0	0	0	0	0	0	0	0	0
135°	0	0	0	0	0	0	0	0	0	0
140°	0	0	0	0	0	0	0	0	0	0
145°	0	0	0	0	0	0	0	0	0	0
150°	0	0	0	0	0	0	0	0	0	0
155°	0	0	0	0	0	0	0	0	0	0
160°	0	0	0	0	0	0	0	0	0	0
165°	0	0	0	0	0	0	0	0	0	0
170°	0	0	0	0	0	0	0	0	0	0
175°	0	0	0	0	0	0	0	0	0	0
180°	0	0	0	0	0	0	0	0	0	0

(END OF REPORT)