

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: H24024

Luminaire Tested: **H1-F-113**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-46-04  
Report Number: H24024  
Test Lab:  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO  
Catalog Number: H1-F-113  
Description: HALO 8" SQ. RECESSED DOWNLIGHT  
WHITE REFLECTOR - REGRESSED FRESNEL LENS  
Light Source: (2) 18WQT 18 WATTS 1250 LUMENS EACH  
13mm QUAD TUBE COMPACT FLUORESCENT  
Ballast/Driver: -

**Summary**

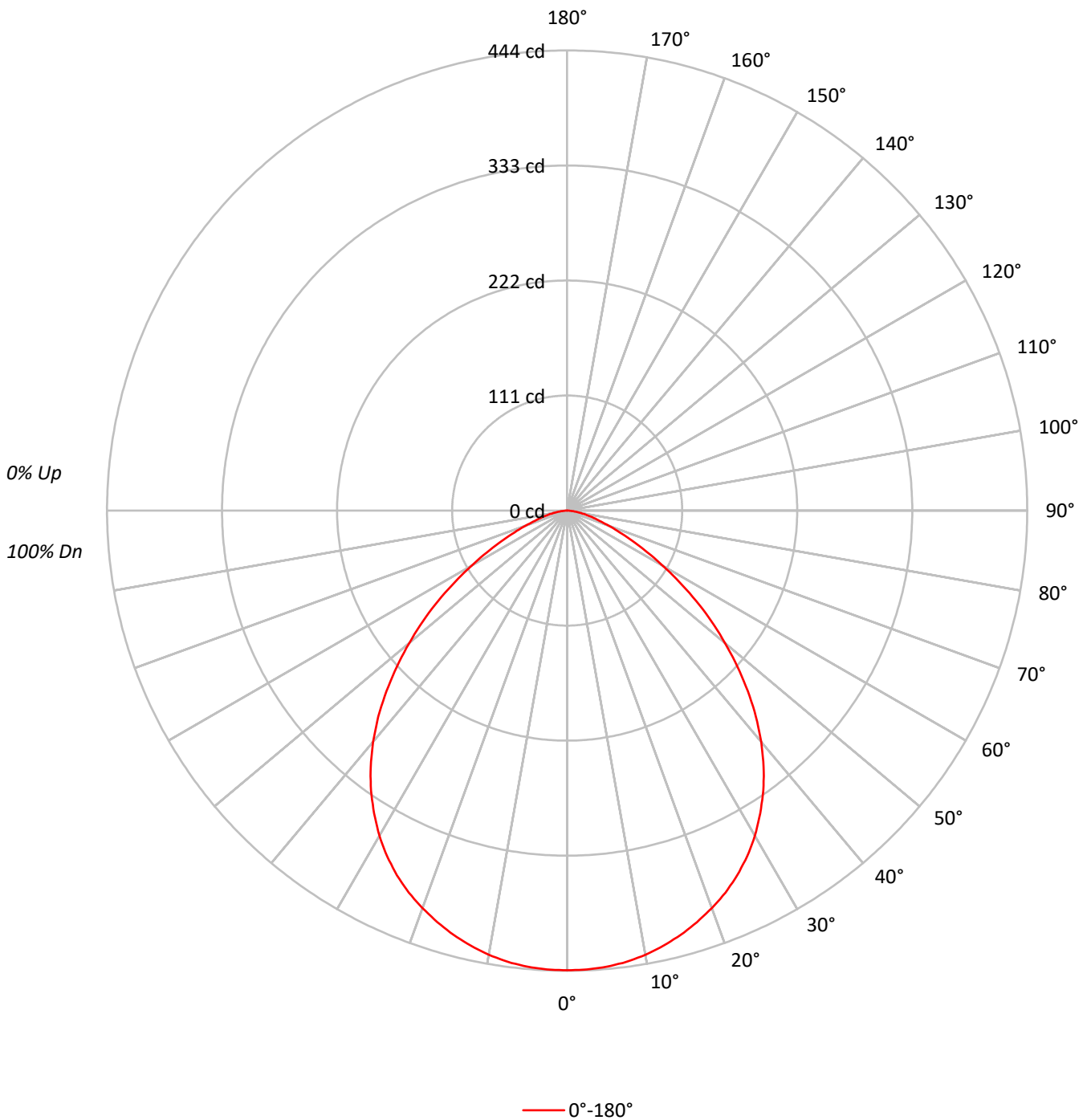
Lumens per Lamp: 1250 (2 lamps)  
Luminaire Lumens: 974.6 lumens  
Efficiency: 39.0%  
Efficacy: 20.3 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.21 / 1.28  
Luminous Opening: Rectangular (W 0.64' x L: 0.64' x H: 0')  
CIE Type: Direct

Input Watts (W): 48  
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	46	46	46	46	45	45	45	45	43	43	43	41	41	41	40	40	40	39
1	43	42	40	39	42	41	39	38	39	38	37	38	37	36	36	36	35	34
2	40	37	35	33	39	36	34	32	35	33	32	34	32	31	33	31	30	30
3	37	33	30	28	36	32	30	28	31	29	27	30	28	27	29	28	26	26
4	34	30	27	24	33	29	26	24	28	26	24	27	25	23	27	25	23	22
5	31	27	24	21	31	26	23	21	26	23	21	25	22	21	24	22	20	20
6	29	24	21	19	28	24	21	19	23	21	19	23	20	18	22	20	18	17
7	27	22	19	17	26	22	19	17	21	19	17	21	18	16	20	18	16	16
8	25	20	17	15	25	20	17	15	20	17	15	19	17	15	19	16	15	14
9	24	19	16	14	23	18	16	14	18	15	14	18	15	13	17	15	13	13
10	22	17	14	12	22	17	14	12	17	14	12	16	14	12	16	14	12	12

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

	0°
0°	11655
5°	11654
10°	11613
15°	11530
20°	11416
25°	11259
30°	10997
35°	10583
40°	9990
45°	9165
50°	8136
55°	6955
60°	5618
65°	4340
70°	3258
75°	2559
80°	1952
85°	1327



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture	% Lamp
0°-10°	42.0	4.3	1.7
10°-20°	119.5	12.3	4.8
20°-30°	178.6	18.3	7.1
30°-40°	205.6	21.1	8.2
40°-50°	189.6	19.5	7.6
50°-60°	135.7	13.9	5.4
60°-70°	70.7	7.3	2.8
70°-80°	27.4	2.8	1.1
80°-90°	5.5	0.6	0.2
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°	340.1	34.9	13.6
0°-40°	545.7	56.0	21.8
0°-60°	871.0	89.4	34.8
0°-90°	974.6	100.0	39.0
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°	974.6	100.0	39.0

**CANDELA DISTRIBUTION:**

	0°	Flux
0°	444	
5°	442	42
15°	424	120
25°	388	179
35°	330	206
45°	247	190
55°	152	136
65°	70	71
75°	25	27
85°	4	5
90°	0	0
95°	0	0
105°	0	0
115°	0	0
125°	0	0
135°	0	0
145°	0	0
155°	0	0
165°	0	0
175°	0	0
180°	0	0



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**CANDELA DISTRIBUTION (FULL):**

0°	
0°	443.5
2.5°	443.2
5°	441.8
7.5°	439.2
10°	435.2
12.5°	430.0
15°	423.8
17.5°	416.4
20°	408.2
22.5°	399.1
25°	388.3
27.5°	376.1
30°	362.4
32.5°	346.6
35°	329.9
37.5°	311.5
40°	291.2
42.5°	269.7
45°	246.6
47.5°	222.8
50°	199.0
52.5°	175.5
55°	151.8
57.5°	128.3
60°	106.9
62.5°	87.4
65°	69.8
67.5°	54.9
70°	42.4
72.5°	32.7
75°	25.2
77.5°	18.4
80°	12.9
82.5°	8.2
85°	4.4
87.5°	1.3
90°	0.0
92.5°	0.0
95°	0.0
97.5°	0.0
100°	0.0
102.5°	0.0
105°	0.0
107.5°	0.0
110°	0.0



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**CANDELA DISTRIBUTION (continued):**

	0°
112.5°	0.0
115°	0.0
117.5°	0.0
120°	0.0
122.5°	0.0
125°	0.0
127.5°	0.0
130°	0.0
132.5°	0.0
135°	0.0
137.5°	0.0
140°	0.0
142.5°	0.0
145°	0.0
147.5°	0.0
150°	0.0
152.5°	0.0
155°	0.0
157.5°	0.0
160°	0.0
162.5°	0.0
165°	0.0
167.5°	0.0
170°	0.0
172.5°	0.0
175°	0.0
177.5°	0.0
180°	0.0

(END OF REPORT)