

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: P30070

Luminaire Tested: **ML706840-493BBS06**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P30070  
Test Lab: METALUX RESEARCH LABS  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO  
Catalog Number: ML706840-493BBS06  
Description: HALO RECESSED LED RETROFIT MODULE WITH TRIM THAT INCLUDES  
SHOWER RATED,SOLITE LENS,BLACK BAFFLED DESIGN REFLECTOR IN  
Light Source: HIGH OUPUT LED PACKAGE  
LED 14 WATTS  
Ballast/Driver: 120V ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: 595 (1 lamp)  
Luminaire Lumens: 596.7 lumens  
Efficiency: 100.3%  
Efficacy: 43.2 lumens/watt  
Spacing Criteria (0/90/45): 0.56 / 0.56 / 0.83  
Luminous Opening: Circular (Dia: 0.42' x H: 0')  
CIE Type: Direct

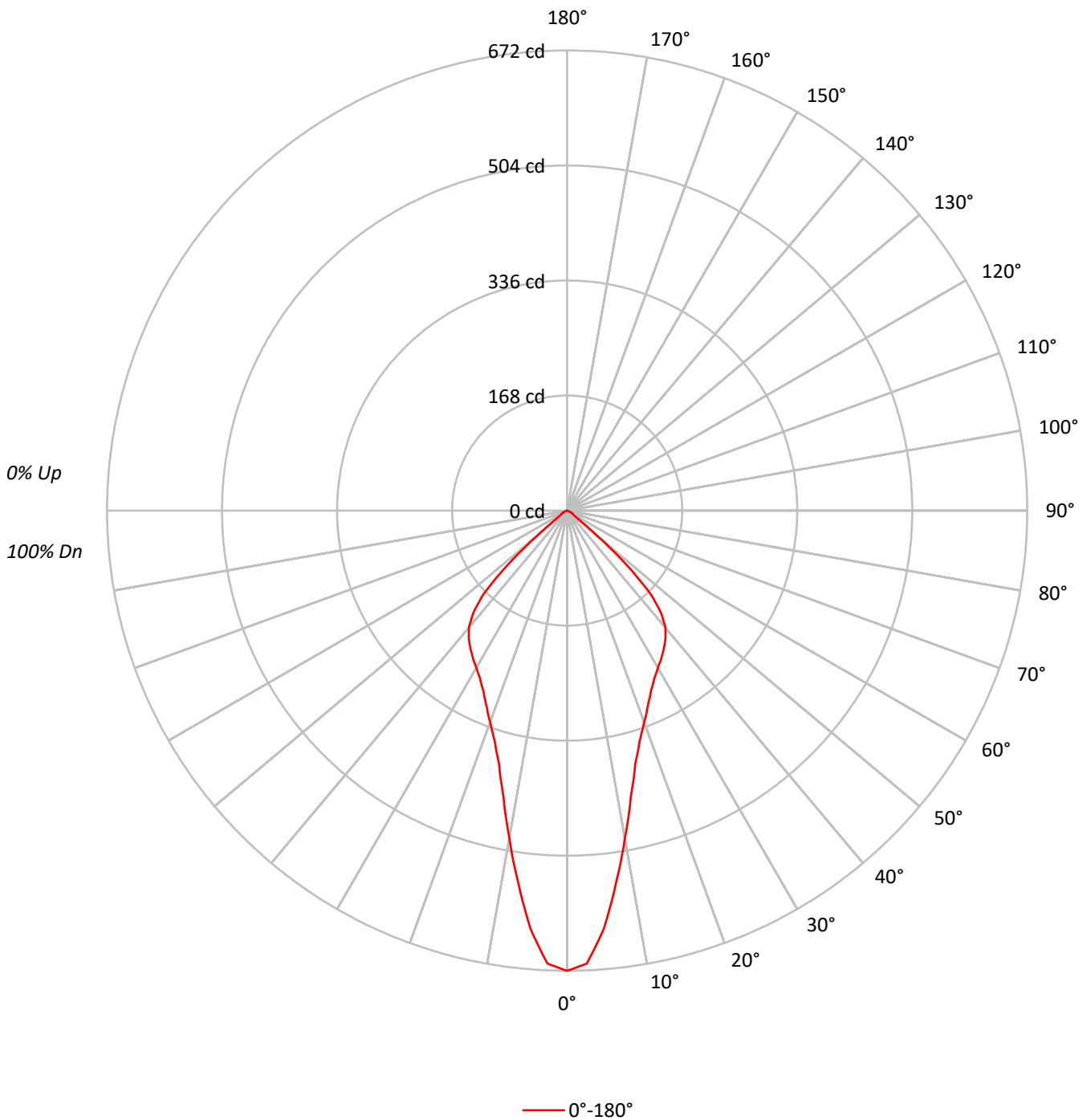
Input Watts (W): 13.8  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	119	119	119	119	117	117	117	117	111	111	111		107	107	107		102	102	102	100
1	113	110	107	105	111	108	105	103	104	102	100		100	98	97		96	95	94	92
2	106	101	96	92	104	99	95	91	96	92	89		93	90	87		90	88	86	84
3	100	93	87	82	98	91	86	82	88	84	80		86	82	79		84	80	78	76
4	94	85	79	74	92	84	78	73	82	77	73		80	75	72		78	74	71	69
5	88	78	72	67	86	77	71	66	76	70	66		74	69	65		72	68	65	63
6	83	73	66	61	81	72	65	61	70	64	60		69	64	60		67	63	59	58
7	78	67	60	56	76	67	60	55	65	59	55		64	59	55		63	58	54	53
8	73	63	56	51	72	62	55	51	61	55	51		60	54	50		59	54	50	49
9	69	58	52	47	68	58	51	47	57	51	47		56	50	47		55	50	46	45
10	66	55	48	44	64	54	48	44	53	47	43		52	47	43		52	47	43	42

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

	0°
0°	53048
5°	48576
10°	38957
15°	31383
20°	27638
25°	25259
30°	24156
35°	23707
40°	22980
45°	19314
50°	7000
55°	1789
60°	1421
65°	1121
70°	462
75°	0
80°	0
85°	0



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture	% Lamp
0°-10°	54.3	9.1	9.1
10°-20°	109.2	18.3	18.4
20°-30°	134.6	22.6	22.6
30°-40°	153.7	25.8	25.8
40°-50°	121.4	20.3	20.4
50°-60°	17.4	2.9	2.9
60°-70°	5.5	0.9	0.9
70°-80°	0.5	0.1	0.1
80°-90°	0.0	0.0	0.0
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°	298.1	50.0	50.1
0°-40°	451.8	75.7	75.9
0°-60°	590.6	99.0	99.3
0°-90°	596.7	100.0	100.3
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°	596.7	100.0	100.3

**CANDELA DISTRIBUTION:**

	0°	Flux
0°	672	
5°	613	54
15°	384	109
25°	290	135
35°	246	154
45°	173	121
55°	13	17
65°	6	6
75°	0	1
85°	0	0
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°	672
2.5°	662
5°	613
7.5°	548
10°	486
12.5°	429
15°	384
17.5°	352
20°	329
22.5°	308
25°	290
27.5°	276
30°	265
32.5°	256
35°	246
37.5°	236
40°	223
42.5°	203
45°	173
47.5°	120
50°	57
52.5°	23
55°	13
57.5°	10
60°	9
62.5°	7
65°	6
67.5°	4
70°	2
72.5°	1
75°	0
77.5°	0
80°	0
82.5°	0
85°	0
87.5°	0
90°	0
92.5°	0
95°	0
97.5°	0
100°	0
102.5°	0
105°	0
107.5°	0
110°	0



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**CANDELA DISTRIBUTION (continued):**

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

(END OF REPORT)