

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: P30060

Luminaire Tested: **ML706830-493SCS06**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P30060  
Test Lab: METALUX RESEARCH LABS  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO  
Catalog Number: ML706830-493SCS06  
Description: HALO RECESSED LED RETROFIT MODULE WITH TRIM THAT INCLUDES  
SHOWER RATED,SOLITE LENS, SPECULAR DESIGN REFLECTOR IN TRIM  
Light Source: HIGH OUPUT LED PACKAGE  
LED 14 WATTS  
Ballast/Driver: 120V ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: 673 (1 lamp)  
Luminaire Lumens: 674.9 lumens  
Efficiency: 100.3%  
Efficacy: 48.2 lumens/watt  
Spacing Criteria (0/90/45): 0.86 / 0.86 / 1.01  
Luminous Opening: Circular (Dia: 0.35' x H: 0')  
CIE Type: Direct

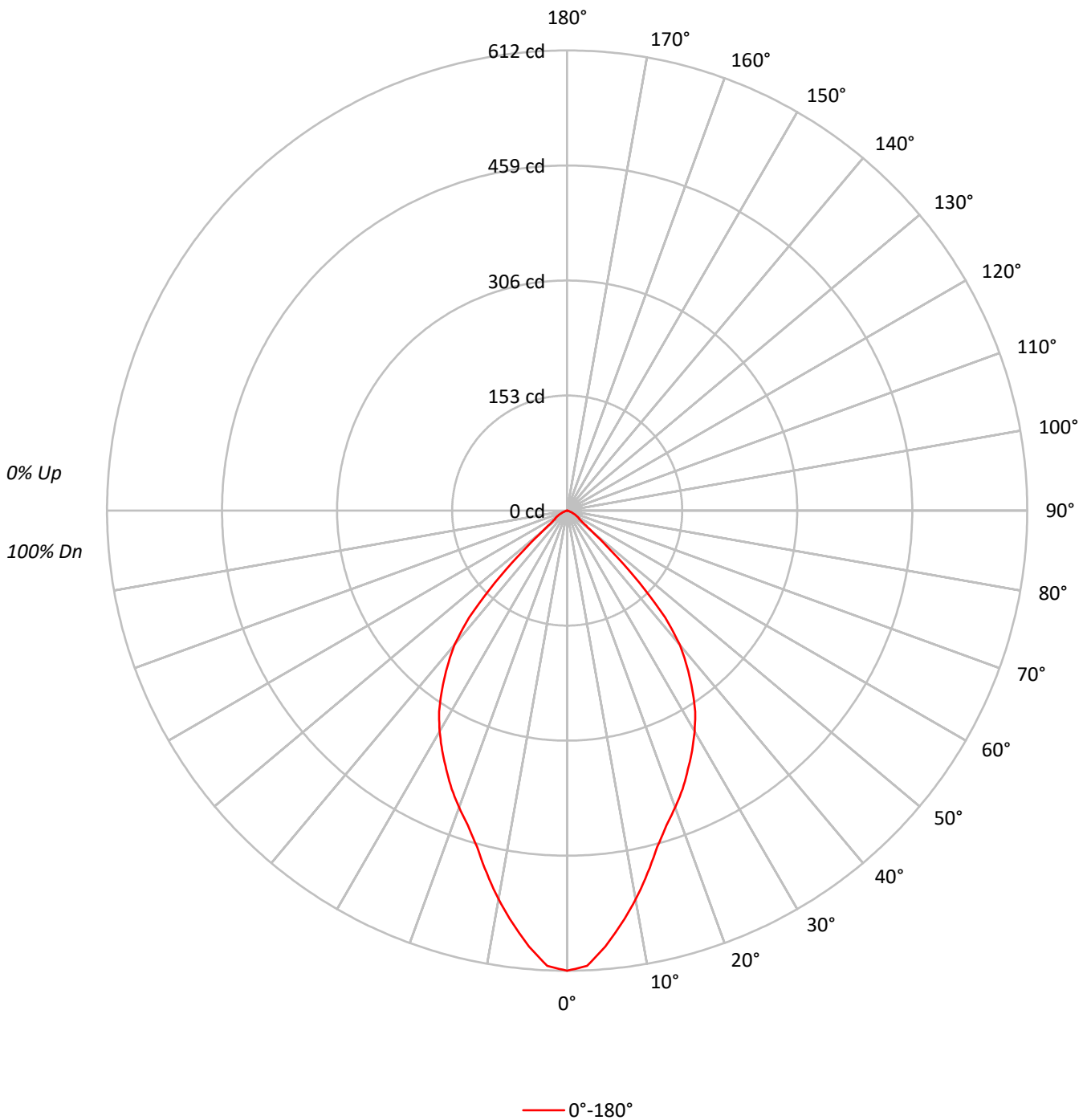
Input Watts (W): 14  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	93	104	99	95	91	96	92	89		93	90	88		90	88	86	84
3	100	93	87	83	98	91	86	82	89	84	81		86	82	79		84	81	78	76
4	94	85	79	74	92	84	78	74	82	77	73		80	76	72		78	74	71	70
5	88	79	72	67	87	78	72	67	76	71	66		74	70	66		73	69	65	64
6	83	73	66	61	82	72	66	61	71	65	61		69	64	60		68	63	60	58
7	78	68	61	56	77	67	61	56	66	60	56		64	59	55		63	59	55	54
8	74	63	56	52	73	63	56	52	61	56	51		60	55	51		59	54	51	49
9	70	59	52	48	69	58	52	48	57	52	48		56	51	47		56	51	47	46
10	66	55	49	44	65	55	48	44	54	48	44		53	48	44		52	47	44	42

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

	0°
0°	66868
5°	63833
10°	58247
15°	52372
20°	48835
25°	45811
30°	42769
35°	38681
40°	33233
45°	21014
50°	7139
55°	3810
60°	3278
65°	2327
70°	1278
75°	422
80°	629
85°	0



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture	% Lamp
0°-10°	53.7	8.0	8.0
10°-20°	130.9	19.4	19.4
20°-30°	174.8	25.9	26.0
30°-40°	180.1	26.7	26.8
40°-50°	103.4	15.3	15.4
50°-60°	20.6	3.0	3.1
60°-70°	9.2	1.4	1.4
70°-80°	2.0	0.3	0.3
80°-90°	0.1	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°	359.5	53.3	53.4
0°-40°	539.5	79.9	80.2
0°-60°	663.5	98.3	98.6
0°-90°	674.9	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°	674.9	100.0	100.3

**CANDELA DISTRIBUTION:**

	0°	Flux
0°	612	
5°	582	54
15°	463	131
25°	380	175
35°	290	180
45°	136	103
55°	20	21
65°	9	9
75°	1	2
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	



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**CANDELA DISTRIBUTION (FULL):**

	0°
0°	612
2.5°	606
5°	582
7.5°	554
10°	525
12.5°	494
15°	463
17.5°	439
20°	420
22.5°	401
25°	380
27.5°	360
30°	339
32.5°	317
35°	290
37.5°	262
40°	233
42.5°	193
45°	136
47.5°	79
50°	42
52.5°	26
55°	20
57.5°	18
60°	15
62.5°	12
65°	9
67.5°	7
70°	4
72.5°	3
75°	1
77.5°	1
80°	1
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)