

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: P30057

Luminaire Tested: **ML706830-493TBZSO6**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P30057  
Test Lab: METALUX RESEARCH LABS  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO  
Catalog Number: ML706830-493TBZSO6  
Description: HALO RECESSED LED RETROFIT MODULE WITH TRIM THAT INCLUDES  
SHOWER RATED,SOLITE LENS,TUSCAN BRONZE DESIGN REFLECTOR IN  
TRIM  
Light Source: CITIZEN HIGH OUPUT LED PACKAGE  
14 WATTS  
Ballast/Driver: 120V ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: 541 (1 lamp)  
Luminaire Lumens: 542.5 lumens  
Efficiency: 100.3%  
Efficacy: 38.8 lumens/watt  
Spacing Criteria (0/90/45): 0.57 / 0.57 / 0.84  
Luminous Opening: Circular (Dia: 0.35' x H: 0')  
CIE Type: Direct

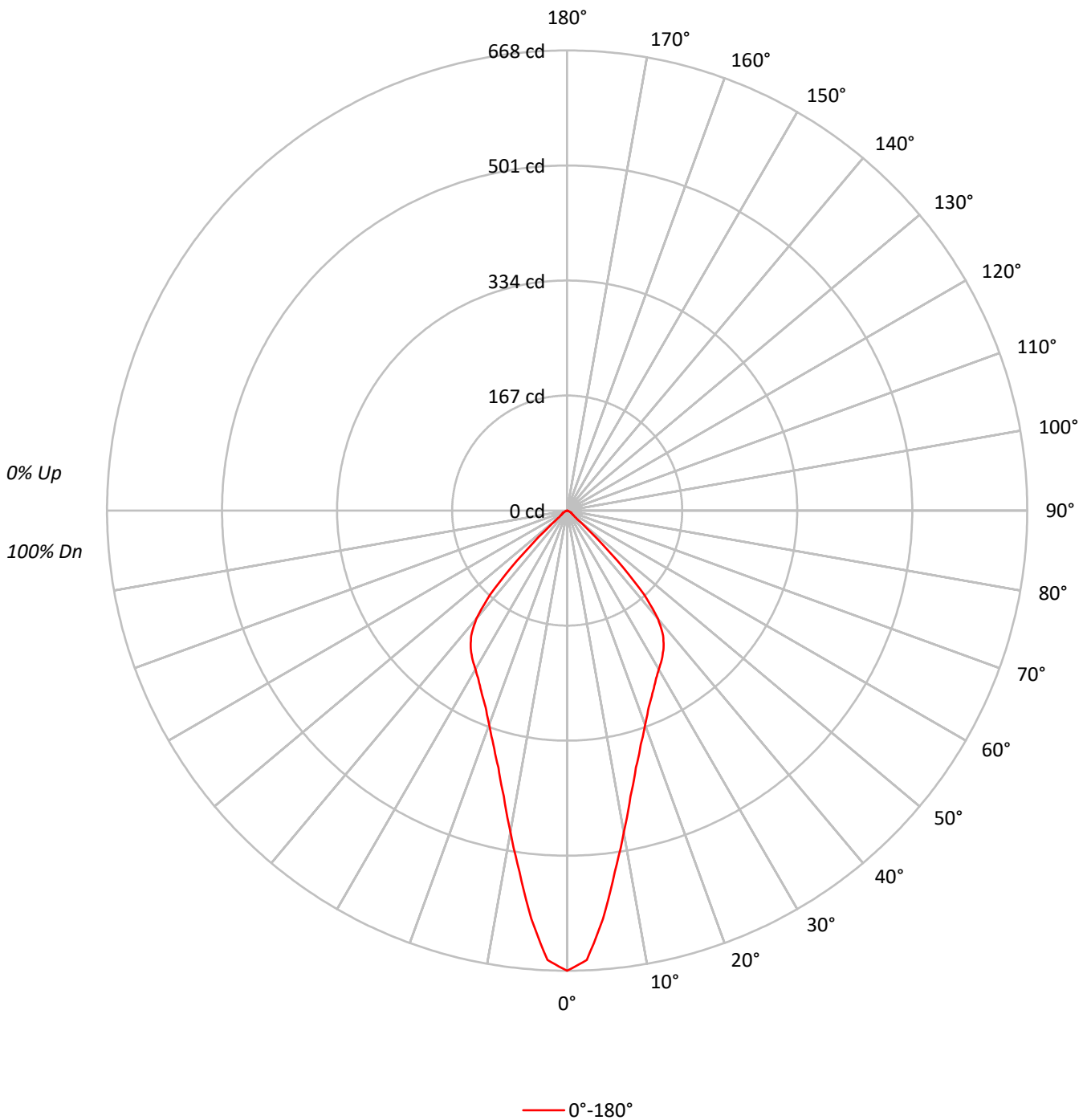
Input Watts (W): 14  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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

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

	0°
0°	72986
5°	65258
10°	52589
15°	43662
20°	38486
25°	35323
30°	33559
35°	32545
40°	29239
45°	15915
50°	3060
55°	1905
60°	1530
65°	1034
70°	639
75°	0
80°	0
85°	0



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture	% Lamp
0°-10°	52.8	9.7	9.8
10°-20°	109.2	20.1	20.2
20°-30°	135.5	25.0	25.0
30°-40°	150.8	27.8	27.9
40°-50°	80.2	14.8	14.8
50°-60°	9.2	1.7	1.7
60°-70°	4.3	0.8	0.8
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°	297.5	54.8	55.0
0°-40°	448.3	82.6	82.9
0°-60°	537.7	99.1	99.4
0°-90°	542.5	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°	542.5	100.0	100.3

**CANDELA DISTRIBUTION:**

	0°	Flux
0°	668	
5°	595	53
15°	386	109
25°	293	136
35°	244	151
45°	103	80
55°	10	9
65°	4	4
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°	668
2.5°	653
5°	595
7.5°	529
10°	474
12.5°	425
15°	386
17.5°	356
20°	331
22.5°	309
25°	293
27.5°	278
30°	266
32.5°	256
35°	244
37.5°	229
40°	205
42.5°	166
45°	103
47.5°	45
50°	18
52.5°	11
55°	10
57.5°	8
60°	7
62.5°	6
65°	4
67.5°	3
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)