

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: P30059

Luminaire Tested: **ML706830-493WBS06**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P30059  
Test Lab: METALUX RESEARCH LABS  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO  
Catalog Number: ML706830-493WBS06  
Description: HALO RECESSED LED RETROFIT MODULE WITH TRIM THAT INCLUDES  
SHOWER RATED,SOLITE LENS,WHITE BAFFLED DESIGN REFLECTOR IN  
TRIM  
Light Source: HIGH OUPUT LED PACKAGE  
LED 14 WATTS  
Ballast/Driver: 120V ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: 681 (1 lamp)  
Luminaire Lumens: 683.7 lumens  
Efficiency: 100.4%  
Efficacy: 48.8 lumens/watt  
Spacing Criteria (0/90/45): 0.65 / 0.65 / 0.92  
Luminous Opening: Circular (Dia: 0.4' x H: 0')  
CIE Type: Direct

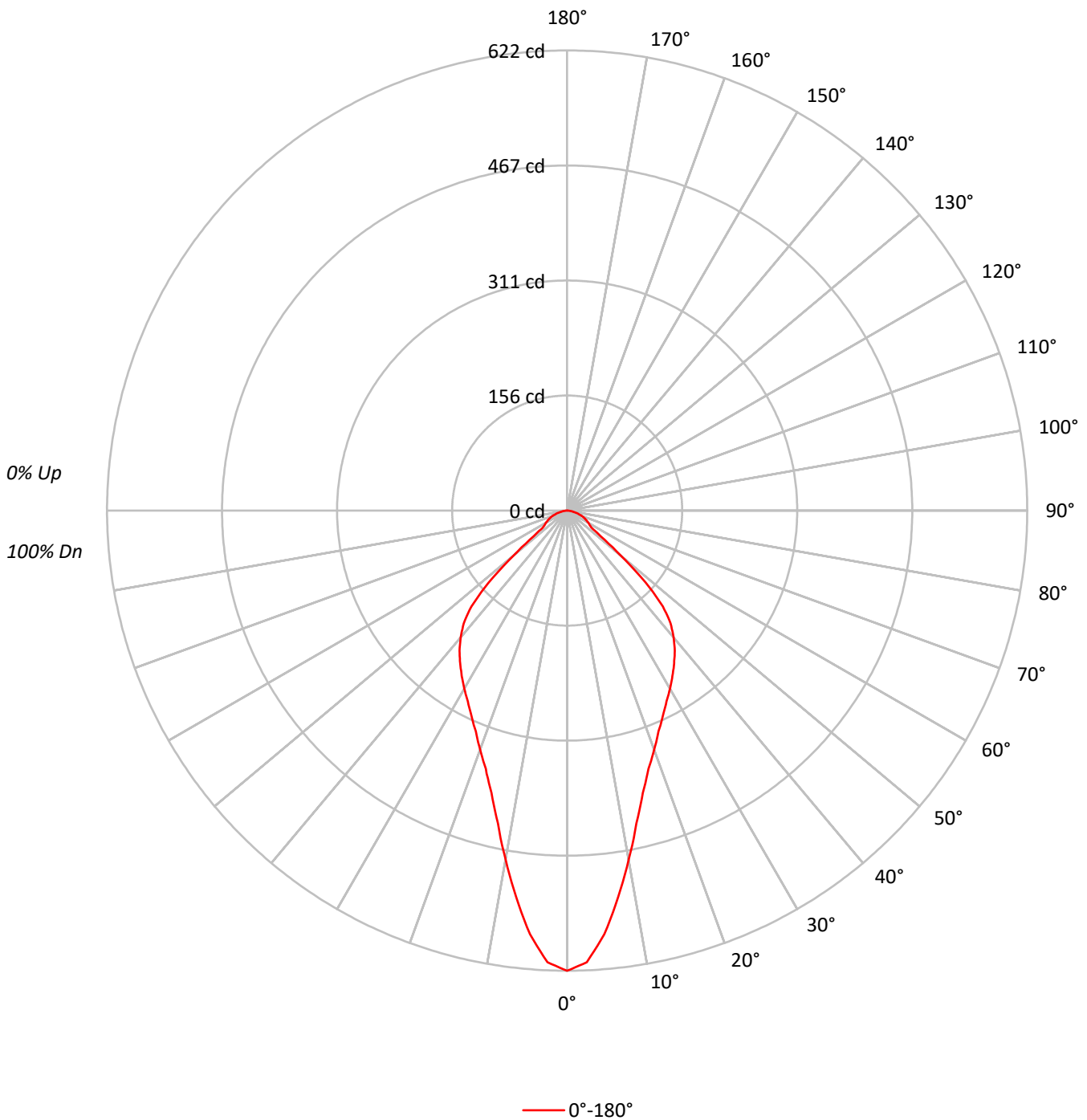
Input Watts (W): 14  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P30059

CATALOG NUMBER: ML706830-493WBS06

### Luminous Intensity Polar Plot





TEST NUMBER: P30059

CATALOG NUMBER: ML706830-493WBS06

**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	120	120	120	120	117	117	117	117	112	112	112	107	107	107	102	102	102	100
1	112	109	105	102	110	106	103	101	102	100	98	98	96	95	95	93	92	90
2	105	98	93	89	102	96	92	88	93	89	86	90	87	84	87	84	82	80
3	98	89	83	78	95	88	82	77	85	80	76	82	78	75	80	76	73	72
4	91	81	74	69	89	80	74	69	78	72	68	76	71	67	74	69	66	64
5	85	75	67	62	83	73	67	61	72	66	61	70	64	60	68	63	60	58
6	80	69	61	56	78	68	61	56	66	60	55	64	59	55	63	58	54	53
7	75	63	56	51	73	63	55	51	61	55	50	60	54	50	59	53	50	48
8	70	59	51	46	69	58	51	46	57	50	46	56	50	46	55	49	46	44
9	66	55	47	43	65	54	47	42	53	47	42	52	46	42	51	46	42	40
10	62	51	44	39	61	50	44	39	49	43	39	49	43	39	48	43	39	37

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

	0°
0°	54406
5°	50487
10°	42544
15°	35769
20°	32021
25°	29533
30°	28078
35°	26909
40°	25577
45°	22637
50°	12791
55°	6100
60°	5773
65°	5588
70°	5371
75°	4731
80°	3526
85°	3011



TEST NUMBER: P30059

CATALOG NUMBER: ML706830-493WBS06

**ZONAL LUMENS:**

Zone	Lumens	% Fixture	% Lamp
0°-10°	51.7	7.6	7.6
10°-20°	111.8	16.4	16.4
20°-30°	141.6	20.7	20.8
30°-40°	157.5	23.0	23.1
40°-50°	132.8	19.4	19.5
50°-60°	43.6	6.4	6.4
60°-70°	26.7	3.9	3.9
70°-80°	14.5	2.1	2.1
80°-90°	3.4	0.5	0.5
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°	305.1	44.6	44.8
0°-40°	462.6	67.7	67.9
0°-60°	639.1	93.5	93.8
0°-90°	683.7	100.0	100.4
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°	683.7	100.0	100.4

**CANDELA DISTRIBUTION:**

	0°	Flux
0°	622	
5°	575	52
15°	395	112
25°	306	142
35°	252	157
45°	183	133
55°	40	44
65°	27	27
75°	14	14
85°	3	3
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



TEST NUMBER: P30059

CATALOG NUMBER: ML706830-493WBS06

**CANDELA DISTRIBUTION (FULL):**

0°	
0°	622
2.5°	611
5°	575
7.5°	527
10°	479
12.5°	433
15°	395
17.5°	366
20°	344
22.5°	323
25°	306
27.5°	291
30°	278
32.5°	265
35°	252
37.5°	239
40°	224
42.5°	207
45°	183
47.5°	144
50°	94
52.5°	57
55°	40
57.5°	36
60°	33
62.5°	30
65°	27
67.5°	24
70°	21
72.5°	17
75°	14
77.5°	10
80°	7
82.5°	5
85°	3
87.5°	1
90°	0
92.5°	0
95°	0
97.5°	0
100°	0
102.5°	0
105°	0
107.5°	0
110°	0



TEST NUMBER: P30059

CATALOG NUMBER: ML706830-493WBS06

**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)