

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: P20069

Luminaire Tested: **EL405830-TL401WB**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P20069  
Test Lab: INNOVATION CENTER P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO  
Catalog Number: EL405830-TL401WB  
Description: HALO 4 INCH RECESSED LED DOWNLIGHT WITH WHITE PAINTED BAFFLED  
DESIGN REFLECTOR IN TRIM UNIT 1 LED MODULE EL405830  
Light Source: (1)SURFACE MOUNT LED  
14 WATTS  
Ballast/Driver: 120 VOLT ELECTRONIC DRIVER

**Summary**

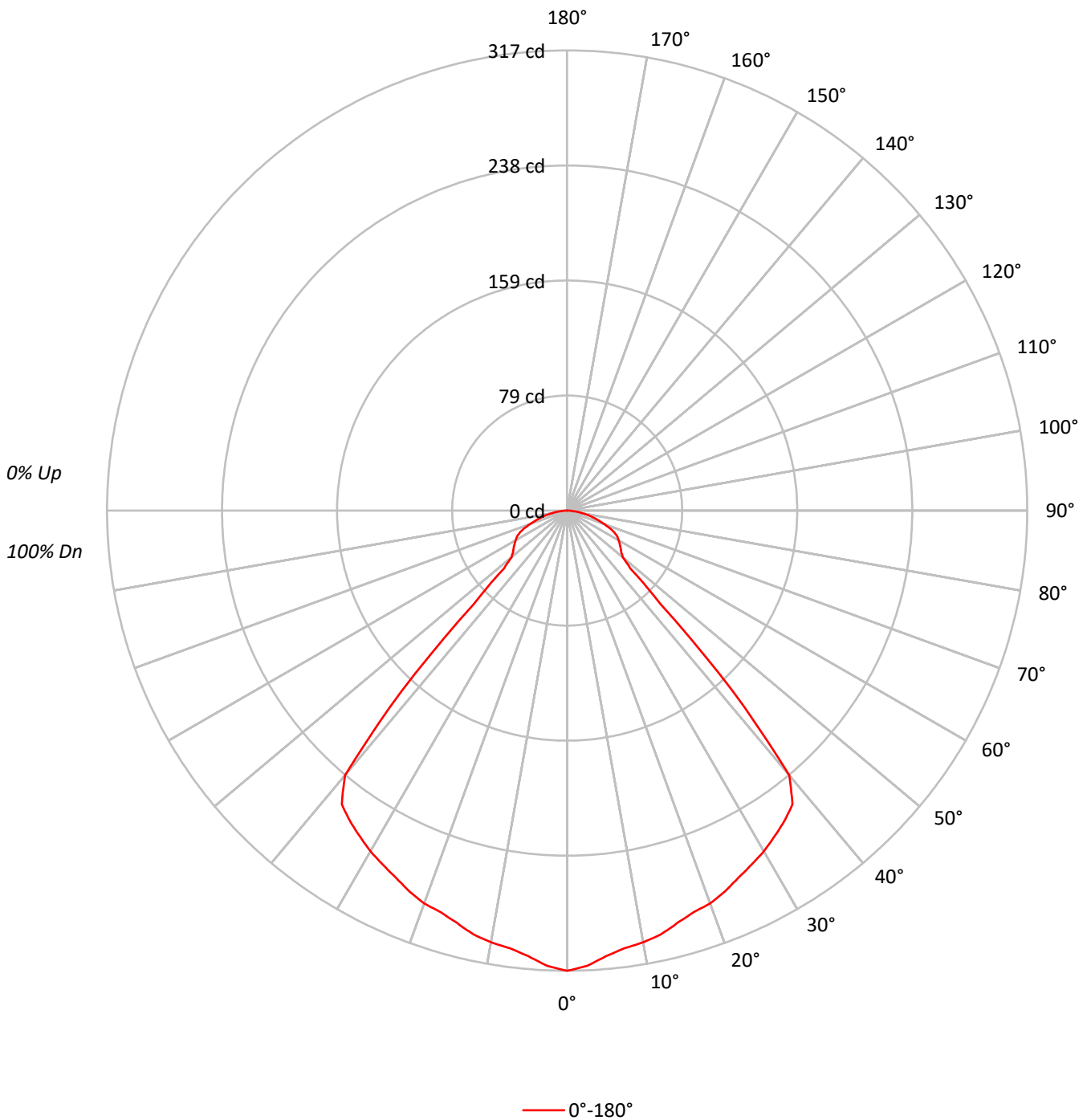
Lumens per Lamp: 591 (1 lamp)  
Luminaire Lumens: 592.2 lumens  
Efficiency: 100.2%  
Efficacy: 40.3 lumens/watt  
Spacing Criteria (0/90/45): 1.28 / 1.28 / 1.26  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

Input Watts (W): 14.7  
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	111	107	104	101	109	105	102	99	101	98	96		97	95	93		94	92	90	88
2	103	96	91	86	101	95	90	85	91	87	83		88	85	81		85	82	80	78
3	96	87	80	75	94	86	79	74	83	77	73		80	76	72		78	74	71	69
4	89	79	72	66	87	78	71	66	75	69	65		73	68	64		71	67	63	61
5	83	72	64	59	81	71	64	58	69	63	58		67	62	57		65	61	57	55
6	77	66	58	53	76	65	58	52	63	57	52		62	56	52		60	55	51	49
7	72	61	53	48	71	60	53	47	58	52	47		57	51	47		56	50	46	45
8	68	56	48	43	66	55	48	43	54	47	43		53	47	43		52	46	42	41
9	64	52	44	39	62	51	44	39	50	44	39		49	43	39		48	43	39	37
10	60	48	41	36	59	48	41	36	47	40	36		46	40	36		45	40	36	34

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

	0°
0°	39101
5°	38136
10°	37825
15°	37543
20°	37803
25°	37971
30°	38598
35°	39301
40°	38322
45°	15874
50°	9595
55°	9677
60°	10114
65°	10507
70°	9737
75°	9055
80°	7814
85°	5661



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture	% Lamp
0°-10°	29.2	4.9	4.9
10°-20°	83.3	14.1	14.1
20°-30°	129.1	21.8	21.8
30°-40°	162.4	27.4	27.5
40°-50°	87.5	14.8	14.8
50°-60°	40.4	6.8	6.8
60°-70°	34.9	5.9	5.9
70°-80°	20.0	3.4	3.4
80°-90°	5.3	0.9	0.9
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°	241.6	40.8	40.9
0°-40°	404.0	68.2	68.4
0°-60°	531.9	89.8	90.0
0°-90°	592.2	100.0	100.2
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°	592.2	100.0	100.2

**CANDELA DISTRIBUTION:**

	0°	Flux
0°	317	
5°	308	29
15°	294	83
25°	279	129
35°	261	162
45°	91	88
55°	45	40
65°	36	35
75°	19	20
85°	4	5
90°	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°
0°	317
2.5°	314
5°	308
7.5°	304
10°	302
12.5°	299
15°	294
17.5°	290
20°	288
22.5°	284
25°	279
27.5°	275
30°	271
32.5°	266
35°	261
37.5°	255
40°	238
42.5°	169
45°	91
47.5°	59
50°	50
52.5°	47
55°	45
57.5°	43
60°	41
62.5°	39
65°	36
67.5°	32
70°	27
72.5°	23
75°	19
77.5°	15
80°	11
82.5°	8
85°	4
87.5°	2
90°	0

(END OF REPORT)