

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: P20349

Luminaire Tested: **EL405830-TL402SNS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P20349  
Test Lab: INNOVATION CENTER P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO  
Catalog Number: EL405830-TL402SNS  
Description: HALO 4 INCH RECESSED LED DOWNLIGHT WITH SATIN NICKEL FINISH  
REFLECTOR AND PRISMATIC LENS IN TRIM EL405830-TL402SNS  
Light Source: (1)SURFACE MOUNT LED  
14 WATTS  
Ballast/Driver: 120 VOLT ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: 579 (1 lamp)  
Luminaire Lumens: 580.5 lumens  
Efficiency: 100.3%  
Efficacy: 41.5 lumens/watt  
Spacing Criteria (0/90/45): 0.53 / 0.53 / 0.72  
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')  
CIE Type: Direct

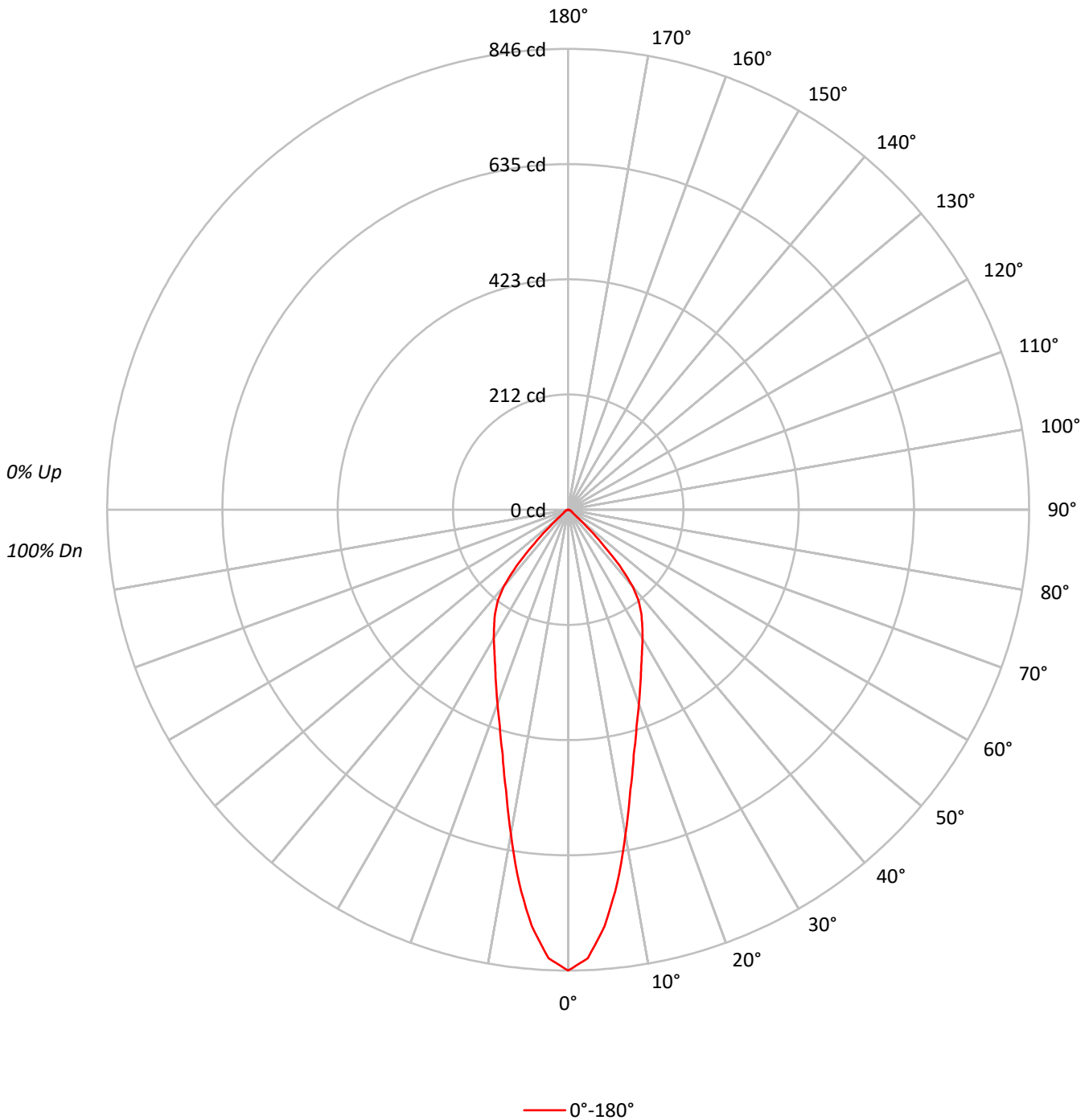
Input Watts (W): 14  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	101		100	99	98		97	96	95	93
2	107	102	98	94	105	100	96	93	97	94	91		94	91	89		91	89	87	86
3	101	95	89	85	99	93	88	84	90	86	83		88	85	82		86	83	80	79
4	96	88	82	77	94	87	81	77	84	80	76		82	78	75		80	77	74	73
5	91	82	75	71	89	81	75	70	79	74	70		77	73	69		76	72	69	67
6	86	76	70	65	84	75	69	65	74	68	65		72	68	64		71	67	64	62
7	81	71	65	60	80	71	64	60	69	64	60		68	63	60		67	62	59	58
8	77	67	60	56	76	66	60	56	65	60	56		64	59	55		63	59	55	54
9	73	63	57	52	72	62	56	52	61	56	52		60	55	52		60	55	52	50
10	69	59	53	49	68	59	53	49	58	53	49		57	52	49		56	52	49	47

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

	0°
0°	81957
5°	74587
10°	59514
15°	46636
20°	39072
25°	33884
30°	30538
35°	27674
40°	23269
45°	12056
50°	3466
55°	1689
60°	1356
65°	1375
70°	1133
75°	374
80°	0
85°	0



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture	% Lamp
0°-10°	68.0	11.7	11.8
10°-20°	131.5	22.6	22.7
20°-30°	146.9	25.3	25.4
30°-40°	144.8	24.9	25.0
40°-50°	71.3	12.3	12.3
50°-60°	10.6	1.8	1.8
60°-70°	5.6	1.0	1.0
70°-80°	1.8	0.3	0.3
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°	346.4	59.7	59.8
0°-40°	491.2	84.6	84.8
0°-60°	573.1	98.7	99.0
0°-90°	580.5	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°	580.5	100.0	100.3

**CANDELA DISTRIBUTION:**

	0°	Flux
0°	846	
5°	767	68
15°	465	131
25°	317	147
35°	234	145
45°	88	71
55°	10	11
65°	6	6
75°	1	2
85°	0	0
90°	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°
0°	846
2.5°	824
5°	767
7.5°	691
10°	605
12.5°	527
15°	465
17.5°	417
20°	379
22.5°	346
25°	317
27.5°	293
30°	273
32.5°	253
35°	234
37.5°	213
40°	184
42.5°	140
45°	88
47.5°	46
50°	23
52.5°	14
55°	10
57.5°	9
60°	7
62.5°	6
65°	6
67.5°	5
70°	4
72.5°	3
75°	1
77.5°	1
80°	0
82.5°	0
85°	0
87.5°	0
90°	0

(END OF REPORT)