

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: P123674

Luminaire Tested: **EL406930-TL410SN**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P123674  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P13977)  
Test Lab: INNOVATION CENTER-P1  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO  
Catalog Number: EL406930-TL410SN  
Description: HALO 4-INCH RECESSED LED DOWNLIGHT  
SATIN NICKEL REFLECTOR, DIFFUSE DROP LENS AND SATIN NICKEL TRIM RING  
Light Source: (1)SURFACE MOUNT LED, 3000K CCT, 90CRI  
Ballast/Driver: ELECTRONIC DRIVER

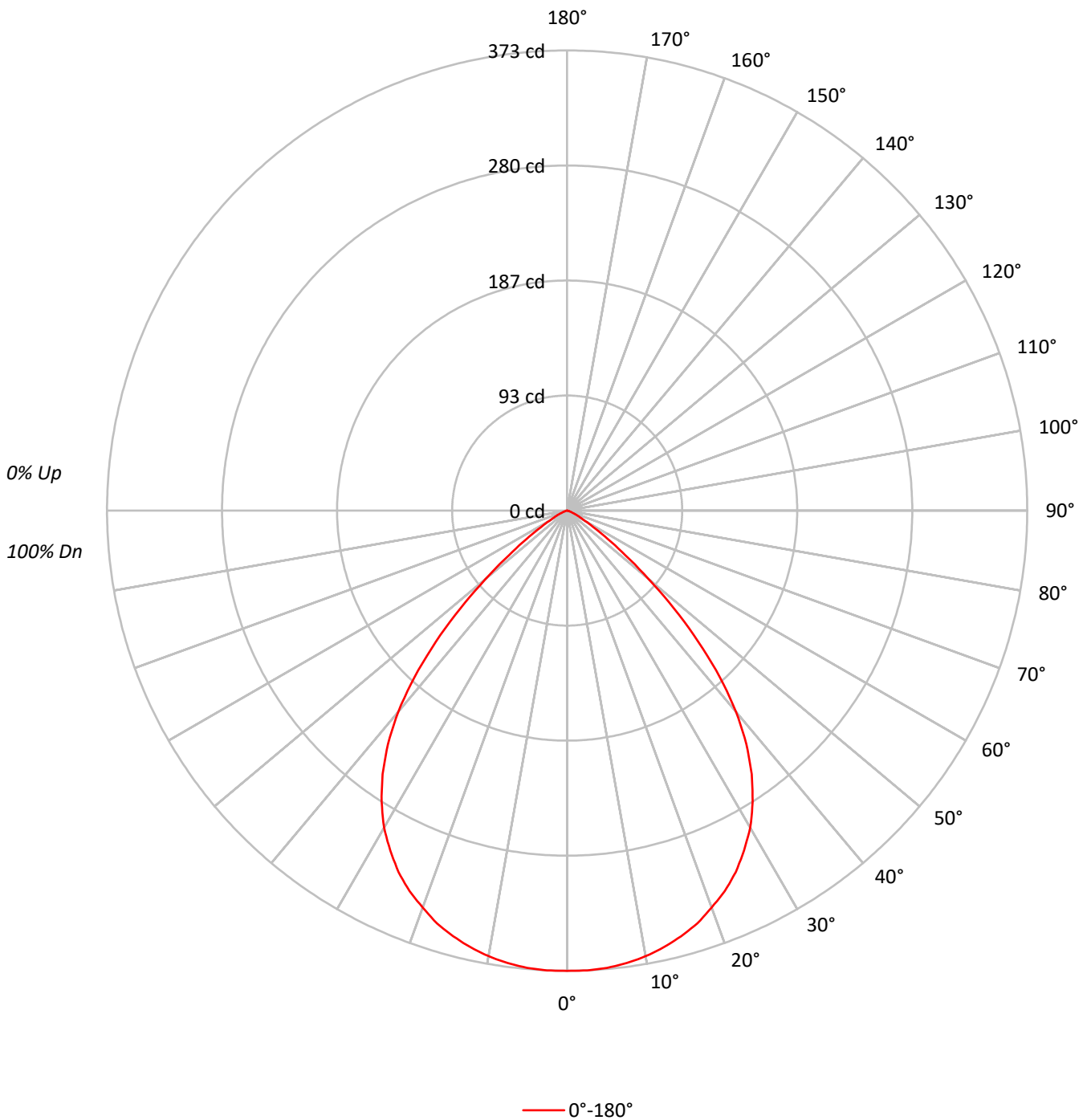
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 610.1 lumens  
Efficiency: N/A  
Efficacy: 46.9 lumens/watt  
Spacing Criteria (0/90/45): 1.18 / 1.18 / 1.2  
Luminous Opening: Circular (Dia: 0.29' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 13  
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	116	116	116	116	111	111	111		106	106	106		102	102	102	100
1	112	109	106	104	110	107	104	102	103	101	99		99	97	96		96	94	93	91
2	105	99	95	91	103	98	93	90	94	91	88		91	88	86		88	86	84	82
3	98	91	85	80	96	89	84	79	87	82	78		84	80	77		82	78	76	74
4	92	83	76	71	90	82	75	71	79	74	70		77	73	69		75	71	68	66
5	86	76	69	64	84	75	68	63	73	67	63		71	66	62		70	65	62	60
6	81	70	63	57	79	69	62	57	67	61	57		66	60	56		64	60	56	54
7	75	64	57	52	74	64	57	52	62	56	52		61	55	51		60	55	51	49
8	71	59	52	47	69	59	52	47	58	51	47		57	51	47		55	50	47	45
9	67	55	48	43	65	55	48	43	54	47	43		53	47	43		52	47	43	41
10	63	51	45	40	62	51	44	40	50	44	40		49	44	40		48	43	39	38

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

	0°
0°	60108
5°	60176
10°	60004
15°	59576
20°	58702
25°	57469
30°	55213
35°	51292
40°	44816
45°	34289
50°	21529
55°	11319
60°	5478
65°	3240
70°	1507
75°	685
80°	0
85°	0



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	35.3	5.8
10°-20°	100.7	16.5
20°-30°	148.4	24.3
30°-40°	161.4	26.5
40°-50°	115.0	18.9
50°-60°	39.0	6.4
60°-70°	8.7	1.4
70°-80°	1.5	0.3
80°-90°	0.0	0.0
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	284.4	46.6
0°-40°	445.7	73.1
0°-60°	599.8	98.3
0°-90°	610.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	610.1	100.0

**CANDELA DISTRIBUTION:**

	0°	Flux
0°	373	
5°	372	35
15°	357	101
25°	323	148
35°	261	161
45°	150	115
55°	40	39
65°	8	9
75°	1	2
85°	0	0
90°	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°
0°	373.1
2.5°	373.1
5°	372.1
7.5°	370.0
10°	366.8
12.5°	362.5
15°	357.2
17.5°	350.9
20°	342.4
22.5°	333.9
25°	323.3
27.5°	310.6
30°	296.8
32.5°	279.9
35°	260.8
37.5°	238.5
40°	213.1
42.5°	183.4
45°	150.5
47.5°	117.7
50°	85.9
52.5°	59.4
55°	40.3
57.5°	25.4
60°	17.0
62.5°	11.7
65°	8.5
67.5°	5.3
70°	3.2
72.5°	2.1
75°	1.1
77.5°	1.1
80°	0.0
82.5°	0.0
85°	0.0
87.5°	0.0
90°	0.0

(END OF REPORT)