

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: P85092

Luminaire Tested: **EL405835-TL422PS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P85092  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P21176)  
Test Lab: INNOVATION CENTER P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO  
Catalog Number: EL405835-TL422PS  
Description: \*\*\*THIS IS A REVISION OF P21161 TO UPDATE CATALOG NUMBER\*\*\*HALO 4 INCH RECESSED FIXTURE WITH WHITE TRIM, REGRESSED FROSTED LENS, SPECULAR UPPER REFLECTOR AND LOWER WHITE BAFFLE. ---ABSOLUTE PHOTOMETRY IS BASED ON CALIBRATION FACTORS CREATED USING A 500 WATT, NIST TRACEABLE, OMNI-DIRECTIONAL LAB LUMEN STANDARD IN THE GONIOPHOTOMETER WITH TEST DISTANCE OF 28.75 FEET---  
Light Source: (1) SMT LED 3500K  
(1) 221 14 WATTS  
Ballast/Driver: ELECTRONIC DRIVER

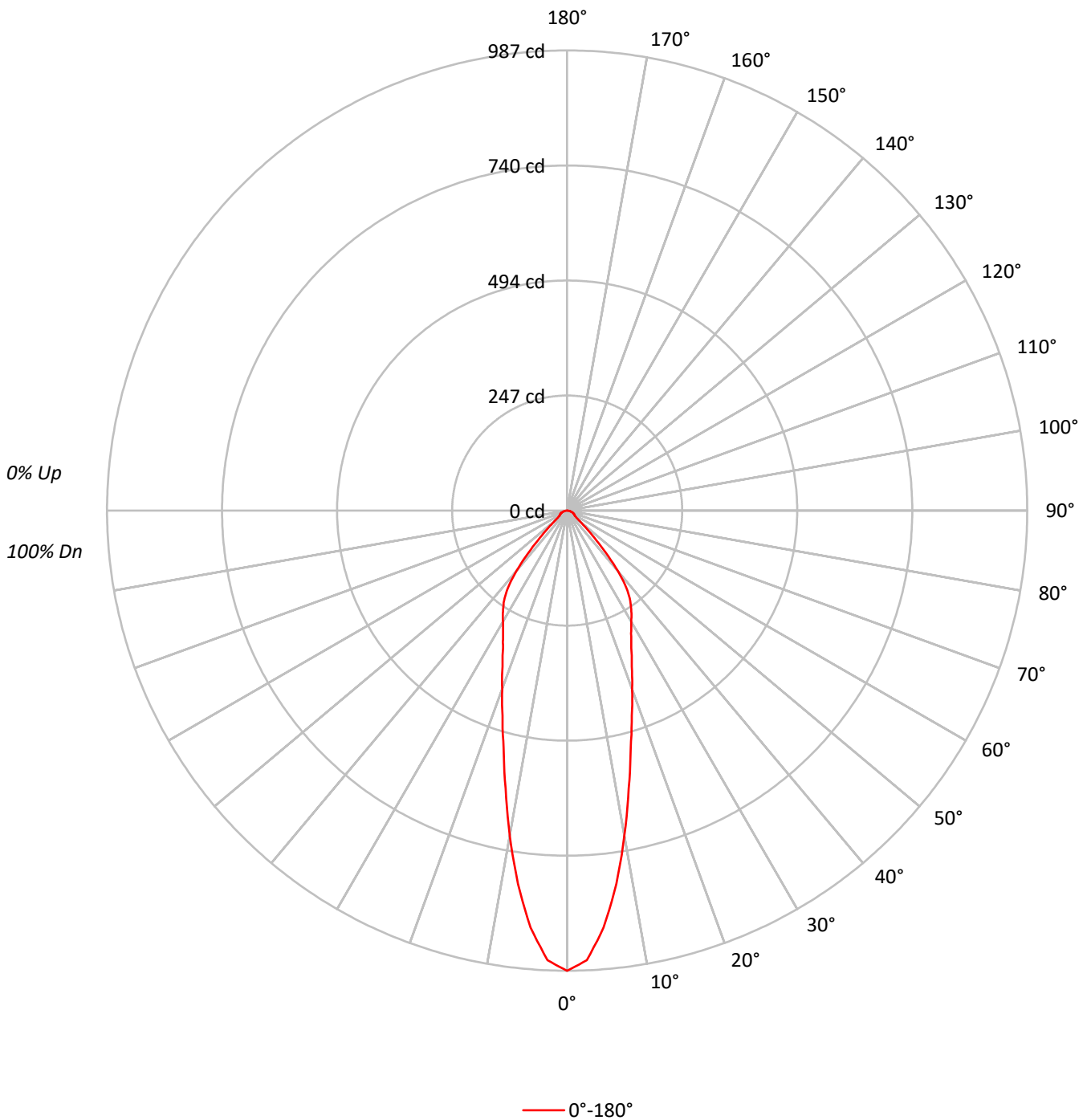
**Summary**

Lumens per Lamp: 639 (1 lamp)  
Luminaire Lumens: 638.7 lumens  
Efficiency: 100.0%  
Efficacy: 46.6 lumens/watt  
Spacing Criteria (0/90/45): 0.52 / 0.52 / 0.65  
Luminous Opening: Vertical Cylinder (Dia: 0.33' x H: 0.1')  
CIE Type: Direct  
  
Input Watts (W): 13.7  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 0.12013  
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	113	109	107	104	110	107	105	102	103	101	99	99	98	96	96	95	94	92
2	106	101	96	92	104	99	95	91	96	92	89	93	90	87	90	88	86	84
3	100	93	88	83	98	92	87	82	89	85	81	86	83	80	84	81	79	77
4	95	86	80	76	93	85	79	75	83	78	74	81	77	73	79	75	72	71
5	89	80	74	69	88	79	73	69	77	72	68	76	71	68	74	70	67	65
6	85	75	68	64	83	74	68	64	73	67	63	71	66	63	70	66	62	61
7	80	70	64	59	79	70	63	59	68	63	59	67	62	58	66	61	58	57
8	76	66	60	55	75	65	59	55	64	59	55	63	58	55	62	58	54	53
9	72	62	56	52	71	62	56	52	61	55	51	60	55	51	59	54	51	50
10	69	59	53	48	68	58	52	48	57	52	48	57	52	48	56	51	48	47

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

	0°
0°	121767
5°	107580
10°	83057
15°	60955
20°	46960
25°	37614
30°	32114
35°	28073
40°	20619
45°	10338
50°	4576
55°	2922
60°	2658
65°	2535
70°	2217
75°	1650
80°	1189
85°	554



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture	% Lamp
0°-10°	79.6	12.5	12.5
10°-20°	148.4	23.2	23.2
20°-30°	151.7	23.8	23.7
30°-40°	143.8	22.5	22.5
40°-50°	68.1	10.7	10.7
50°-60°	20.4	3.2	3.2
60°-70°	15.2	2.4	2.4
70°-80°	9.0	1.4	1.4
80°-90°	2.5	0.4	0.4
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°	379.7	59.4	59.4
0°-40°	523.5	82.0	81.9
0°-60°	612.0	95.8	95.8
0°-90°	638.7	100.0	100.0
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°	638.7	100.0	100.0

**CANDELA DISTRIBUTION:**

	0°	Flux
0°	987	
5°	898	80
15°	526	148
25°	326	152
35°	236	144
45°	82	68
55°	21	20
65°	16	15
75°	8	9
85°	2	2
90°	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°
0°	987.2
2.5°	965.1
5°	897.9
7.5°	807.6
10°	707.8
12.5°	610.2
15°	526.2
17.5°	461.0
20°	407.5
22.5°	362.3
25°	325.6
27.5°	297.2
30°	275.2
32.5°	256.3
35°	236.3
37.5°	209.0
40°	169.1
42.5°	122.9
45°	81.9
47.5°	52.5
50°	34.7
52.5°	25.2
55°	21.0
57.5°	18.9
60°	17.9
62.5°	16.8
65°	15.8
67.5°	13.7
70°	12.6
72.5°	10.5
75°	8.4
77.5°	6.3
80°	5.3
82.5°	3.2
85°	2.1
87.5°	1.1
90°	0.0

(END OF REPORT)