

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: P85091

Luminaire Tested: **EL405827-TL422PS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P85091  
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: EL405827-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 2700K  
(1) 221 14 WATTS  
Ballast/Driver: ELECTRONIC DRIVER

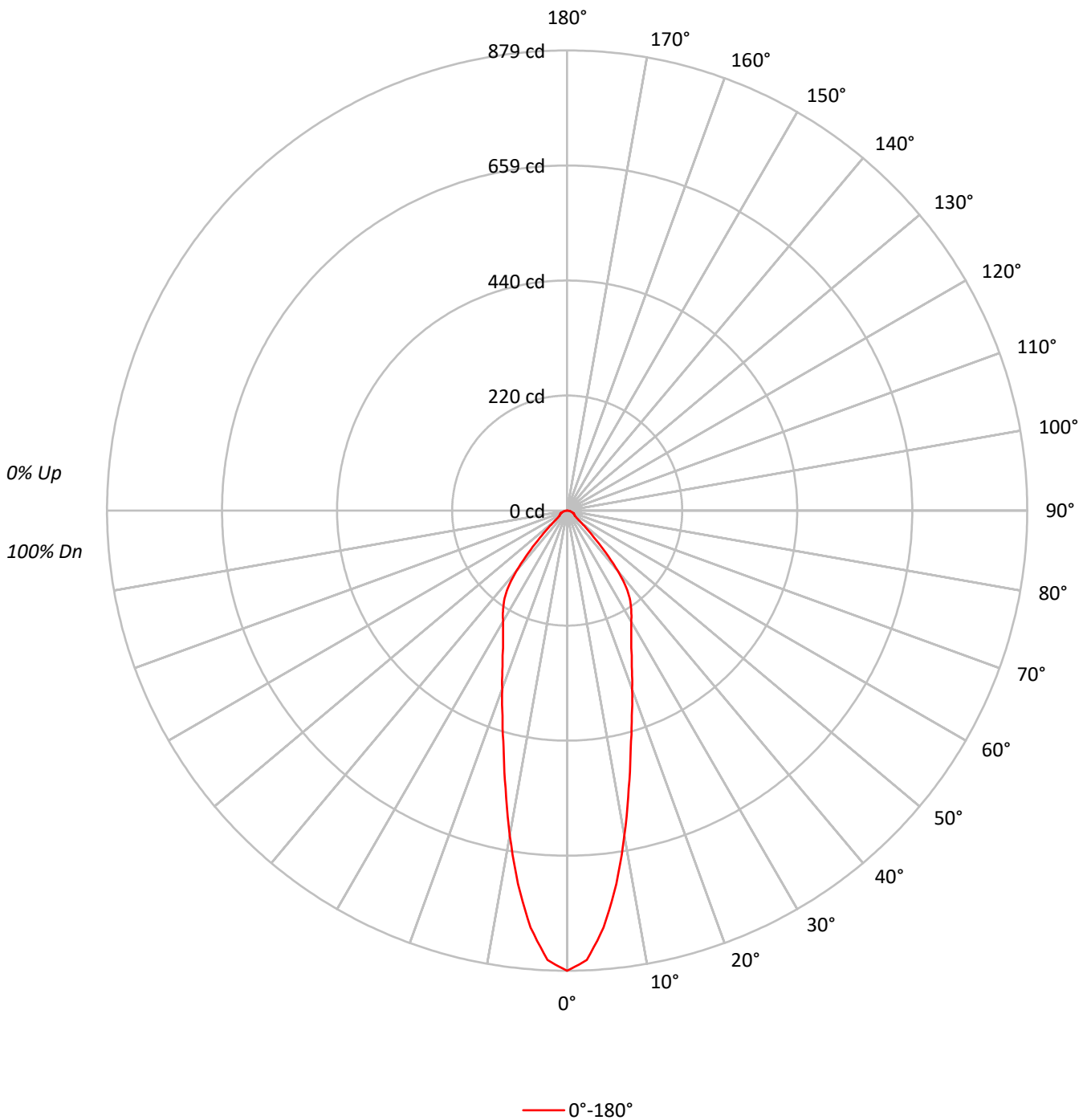
**Summary**

Lumens per Lamp: 569 (1 lamp)  
Luminaire Lumens: 568.7 lumens  
Efficiency: 99.9%  
Efficacy: 41.5 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 (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	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°	108433
5°	95802
10°	73963
15°	54271
20°	41821
25°	33489
30°	28590
35°	24996
40°	18363
45°	9202
50°	4075
55°	2602
60°	2361
65°	2246
70°	1971
75°	1474
80°	1054
85°	501



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture	% Lamp
0°-10°	70.9	12.5	12.5
10°-20°	132.1	23.2	23.2
20°-30°	135.1	23.8	23.7
30°-40°	128.1	22.5	22.5
40°-50°	60.6	10.7	10.7
50°-60°	18.1	3.2	3.2
60°-70°	13.6	2.4	2.4
70°-80°	8.0	1.4	1.4
80°-90°	2.2	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°	338.1	59.5	59.4
0°-40°	466.2	82.0	81.9
0°-60°	544.9	95.8	95.8
0°-90°	568.7	100.0	99.9
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°	568.7	100.0	99.9

**CANDELA DISTRIBUTION:**

	0°	Flux
0°	879	
5°	800	71
15°	468	132
25°	290	135
35°	210	128
45°	73	61
55°	19	18
65°	14	14
75°	8	8
85°	2	2
90°	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°
0°	879.1
2.5°	859.4
5°	799.6
7.5°	719.2
10°	630.3
12.5°	543.3
15°	468.5
17.5°	410.5
20°	362.9
22.5°	322.6
25°	289.9
27.5°	264.7
30°	245.0
32.5°	228.2
35°	210.4
37.5°	186.1
40°	150.6
42.5°	109.4
45°	72.9
47.5°	46.8
50°	30.9
52.5°	22.4
55°	18.7
57.5°	16.8
60°	15.9
62.5°	15.0
65°	14.0
67.5°	12.2
70°	11.2
72.5°	9.4
75°	7.5
77.5°	5.6
80°	4.7
82.5°	2.8
85°	1.9
87.5°	0.9
90°	0.0

(END OF REPORT)