

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: P123665

Luminaire Tested: **EL406927-TL410SBK**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P123665  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P13975)  
Test Lab: INNOVATION CENTER-P1  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO  
Catalog Number: EL406927-TL410SBK  
Description: HALO 4-INCH RECESSED LED DOWNLIGHT  
SPECULAR BLACK REFLECTOR, DIFFUSE DROP LENS AND WHITE TRIM RING  
Light Source: (1)SURFACE MOUNT LED, 2700K CCT, 90CRI  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

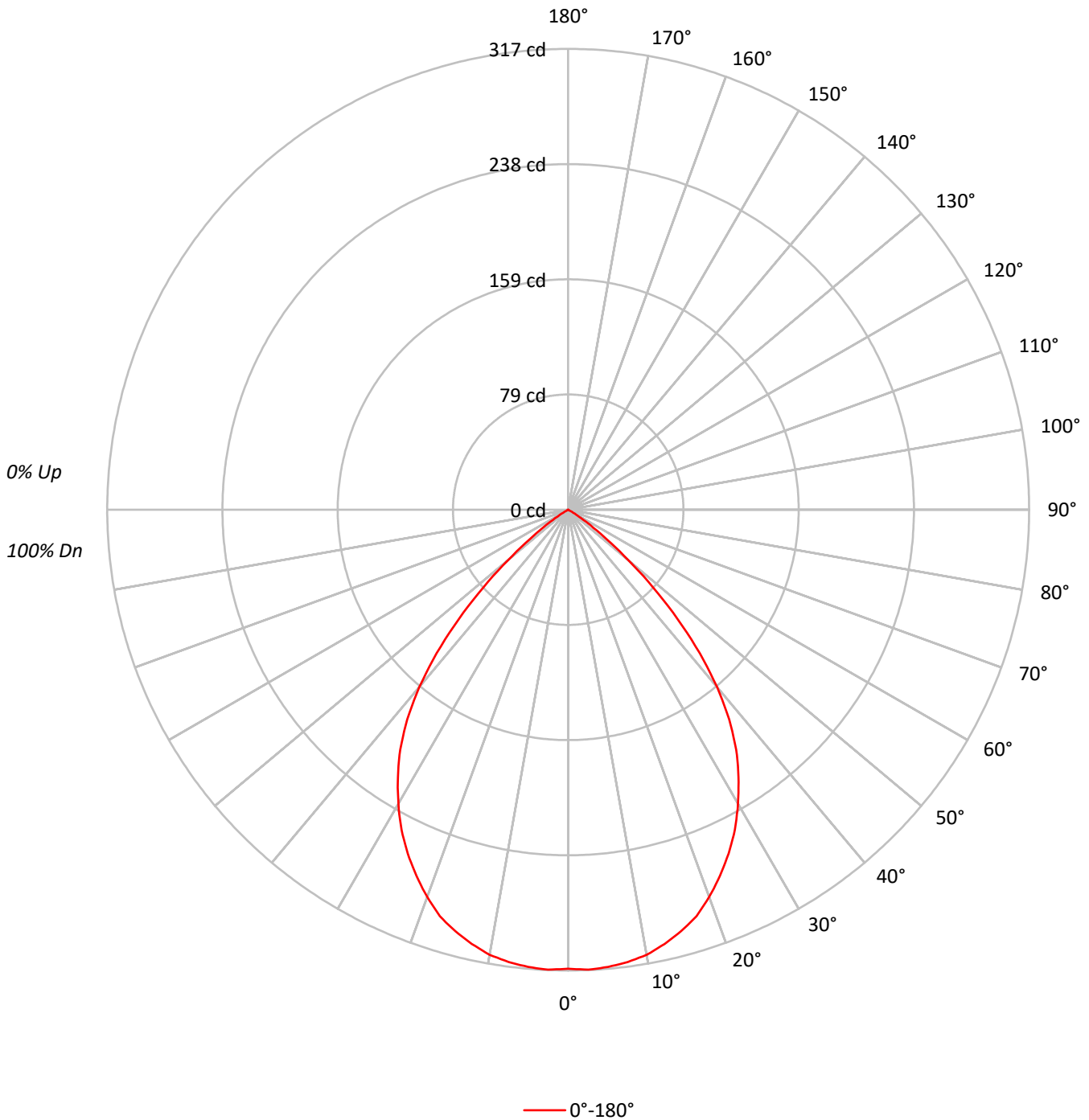
Lumens per Lamp: N/A  
Luminaire Lumens: 460.0 lumens  
Efficiency: N/A  
Efficacy: 35.4 lumens/watt  
Spacing Criteria (0/90/45): 1.12 / 1.12 / 1.15  
Luminous Opening: Circular (Dia: 0.29' x H: 0')  
CIE Type: Direct

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



TEST NUMBER: P123665  
CATALOG NUMBER: EL406927-TL410SBK

### Luminous Intensity Polar Plot





TEST NUMBER: P123665

CATALOG NUMBER: EL406927-TL410SBK

**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	110	107	104	110	107	105	103	103	101	100		100	98	97		96	95	94	92
2	106	101	96	92	104	99	95	91	96	92	89		92	90	87		90	87	85	84
3	100	92	87	82	98	91	86	81	88	84	80		86	82	79		83	80	77	76
4	93	85	78	74	92	84	78	73	81	76	72		79	75	71		77	74	70	69
5	88	78	71	66	86	77	71	66	75	70	65		73	69	65		72	68	64	62
6	82	72	65	60	81	71	65	60	70	64	59		68	63	59		67	62	59	57
7	77	67	60	55	76	66	59	55	65	59	54		63	58	54		62	57	54	52
8	73	62	55	50	71	61	55	50	60	54	50		59	54	50		58	53	49	48
9	69	57	51	46	67	57	50	46	56	50	46		55	50	46		54	49	46	44
10	65	54	47	43	64	53	47	43	52	46	42		51	46	42		51	46	42	41

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

	0°
0°	50860
5°	51055
10°	50860
15°	50053
20°	48604
25°	46395
30°	43456
35°	39610
40°	33502
45°	24287
50°	13484
55°	5224
60°	934
65°	0
70°	0
75°	0
80°	0
85°	0



TEST NUMBER: P123665

CATALOG NUMBER: EL406927-TL410SBK

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	30.0	6.5
10°-20°	84.4	18.4
20°-30°	119.7	26.0
30°-40°	124.4	27.0
40°-50°	81.4	17.7
50°-60°	19.5	4.2
60°-70°	0.6	0.1
70°-80°	0.0	0.0
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°	234.1	50.9
0°-40°	358.5	77.9
0°-60°	459.4	99.9
0°-90°	460.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	460.0	100.0

**CANDELA DISTRIBUTION:**

	0°	Flux
0°	316	
5°	316	30
15°	300	84
25°	261	120
35°	201	124
45°	107	81
55°	19	20
65°	0	1
75°	0	0
85°	0	0
90°	0	



TEST NUMBER: P123665

CATALOG NUMBER: EL406927-TL410SBK

**CANDELA DISTRIBUTION (FULL):**

	0°
0°	315.7
2.5°	316.7
5°	315.7
7.5°	313.8
10°	310.9
12.5°	306.0
15°	300.1
17.5°	293.3
20°	283.5
22.5°	272.7
25°	261.0
27.5°	248.3
30°	233.6
32.5°	218.0
35°	201.4
37.5°	181.8
40°	159.3
42.5°	133.9
45°	106.6
47.5°	79.2
50°	53.8
52.5°	33.2
55°	18.6
57.5°	8.8
60°	2.9
62.5°	1.0
65°	0.0
67.5°	0.0
70°	0.0
72.5°	0.0
75°	0.0
77.5°	0.0
80°	0.0
82.5°	0.0
85°	0.0
87.5°	0.0
90°	0.0

(END OF REPORT)