

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: P20086

Luminaire Tested: **EL405840-TL402SCS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P20086  
Test Lab: INNOVATION CENTER P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO  
Catalog Number: EL405840-TL402SCS  
Description: HALO 4 INCH RECESSED LED DOWNLIGHT WITH SPECULAR UPPER AND LOWER REFLECTORS IN TRIM WITH PRISMATIC LENS IN UNIT 1 LED MODULE EL405840  
Light Source: (1)SURFACE MOUNT LED  
14 WATTS  
Ballast/Driver: 120 VOLT ELECTRONIC DRIVER

**Summary**

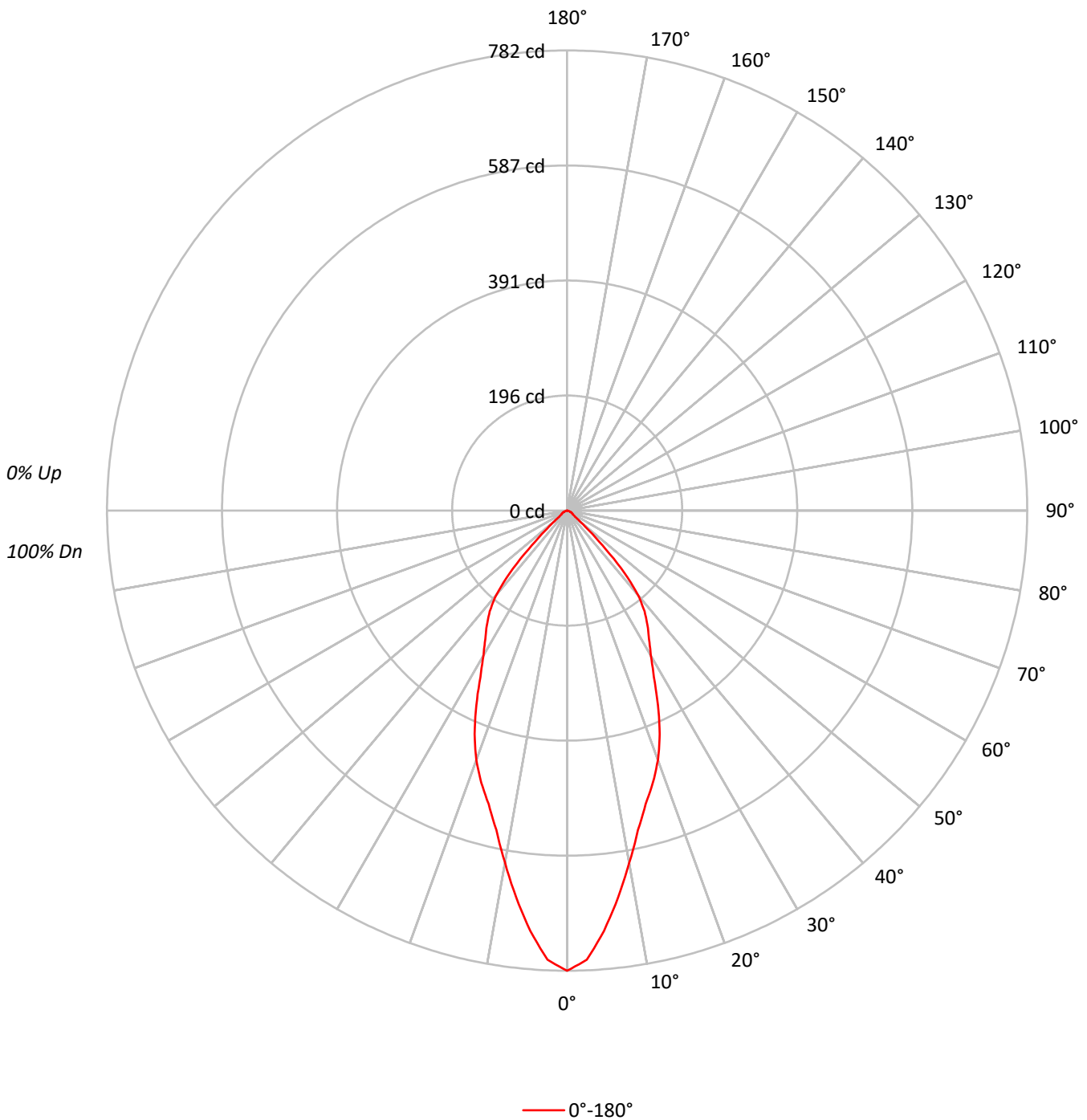
Lumens per Lamp: 623 (1 lamp)  
Luminaire Lumens: 624.3 lumens  
Efficiency: 100.2%  
Efficacy: 43.7 lumens/watt  
Spacing Criteria (0/90/45): 0.69 / 0.69 / 0.79  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

Input Watts (W): 14.3  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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: P20086  
CATALOG NUMBER: EL405840-TL402SCS

### Luminous Intensity Polar Plot





TEST NUMBER: P20086

CATALOG NUMBER: EL405840-TL402SCS

**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	103	104	102	100		100	99	97		97	96	94	93
2	107	102	97	94	105	100	96	93	97	93	91		94	91	89		91	89	87	85
3	101	94	89	85	99	93	88	84	90	86	82		88	84	81		85	82	80	78
4	95	87	81	77	94	86	81	76	84	79	75		82	78	75		80	77	74	72
5	90	81	75	70	89	80	74	70	78	73	69		77	72	69		75	71	68	66
6	85	76	69	65	84	75	69	64	73	68	64		72	67	64		71	66	63	62
7	81	71	64	60	79	70	64	60	69	63	59		68	63	59		66	62	59	57
8	76	66	60	56	75	66	60	55	65	59	55		64	59	55		63	58	55	53
9	73	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°	96456
5°	88777
10°	76151
15°	65892
20°	59199
25°	49675
30°	40449
35°	35837
40°	30271
45°	16223
50°	5181
55°	2796
60°	2467
65°	2043
70°	1803
75°	953
80°	710
85°	1415



TEST NUMBER: P20086

CATALOG NUMBER: EL405840-TL402SCS

**ZONAL LUMENS:**

Zone	Lumens	% Fixture	% Lamp
0°-10°	65.0	10.4	10.4
10°-20°	145.7	23.3	23.4
20°-30°	166.9	26.7	26.8
30°-40°	147.9	23.7	23.7
40°-50°	74.7	12.0	12.0
50°-60°	13.2	2.1	2.1
60°-70°	7.3	1.2	1.2
70°-80°	2.6	0.4	0.4
80°-90°	1.0	0.2	0.2
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°	377.6	60.5	60.6
0°-40°	525.5	84.2	84.3
0°-60°	613.4	98.3	98.5
0°-90°	624.3	100.0	100.2
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°	624.3	100.0	100.2

**CANDELA DISTRIBUTION:**

	0°	Flux
0°	782	
5°	717	65
15°	516	146
25°	365	167
35°	238	148
45°	93	75
55°	13	13
65°	7	7
75°	2	3
85°	1	1
90°	0	



TEST NUMBER: P20086

CATALOG NUMBER: EL405840-TL402SCS

**CANDELA DISTRIBUTION (FULL):**

	0°
0°	782
2.5°	764
5°	717
7.5°	663
10°	608
12.5°	556
15°	516
17.5°	485
20°	451
22.5°	411
25°	365
27.5°	319
30°	284
32.5°	259
35°	238
37.5°	216
40°	188
42.5°	145
45°	93
47.5°	50
50°	27
52.5°	17
55°	13
57.5°	11
60°	10
62.5°	9
65°	7
67.5°	6
70°	5
72.5°	4
75°	2
77.5°	1
80°	1
82.5°	1
85°	1
87.5°	1
90°	0

(END OF REPORT)