

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: P20087

Luminaire Tested: **EL405840-TL402HS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P20087
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO
Catalog Number: EL405840-TL402HS
Description: HALO 4 INCH RECESSED LED DOWNLIGHT WITH HAZE SEMI-SPECULAR REFLECTOR AND PRISMATIC LENS IN TRIM UNIT 1 LED MODULE EL405840
Light Source: (1)SURFACE MOUNT LED
14 WATTS
Ballast/Driver: 120 VOLT ELECTRONIC DRIVER

Summary

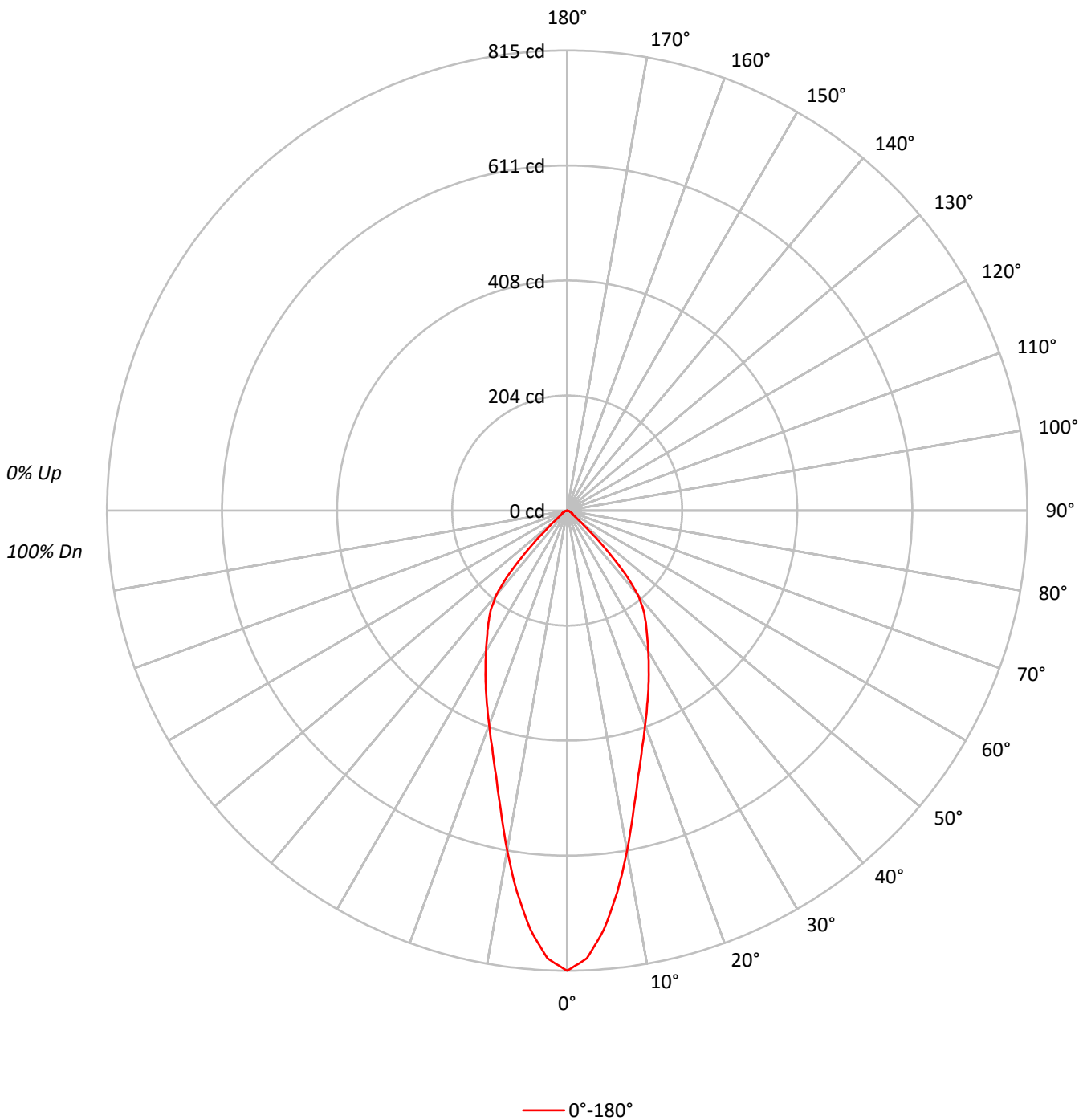
Lumens per Lamp: 613 (1 lamp)
Luminaire Lumens: 614.8 lumens
Efficiency: 100.3%
Efficacy: 43.0 lumens/watt
Spacing Criteria (0/90/45): 0.59 / 0.59 / 0.77
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 14.3
Input Voltage (V): NR
Input Current (A_{in}): 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: P20087
CATALOG NUMBER: EL405840-TL402HS

Luminous Intensity Polar Plot





TEST NUMBER: P20087

CATALOG NUMBER: EL405840-TL402HS

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	84	99	93	88	84	90	86	82		87	84	81		85	82	80	78
4	95	87	81	77	93	86	80	76	84	79	75		82	78	74		80	76	73	72
5	90	81	75	70	88	80	74	70	78	73	69		76	72	68		75	71	68	66
6	85	75	69	64	84	75	69	64	73	68	64		72	67	63		70	66	63	61
7	80	70	64	59	79	70	64	59	68	63	59		67	62	59		66	62	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	51	71	61	55	51	61	55	51		60	55	51		59	54	51	49
10	69	58	52	48	68	58	52	48	57	52	48		56	51	48		56	51	48	46

AVERAGE LUMINANCE (cd/sqm):

	0°
0°	100527
5°	92244
10°	76527
15°	62061
20°	53030
25°	46409
30°	40877
35°	36590
40°	31398
45°	17095
50°	5373
55°	2796
60°	2467
65°	2043
70°	1803
75°	953
80°	710
85°	1415



TEST NUMBER: P20087

CATALOG NUMBER: EL405840-TL402HS

ZONAL LUMENS:

Zone	Lumens	% Fixture	% Lamp
0°-10°	66.8	10.9	10.9
10°-20°	137.2	22.3	22.4
20°-30°	157.0	25.5	25.6
30°-40°	151.3	24.6	24.7
40°-50°	78.4	12.7	12.8
50°-60°	13.3	2.2	2.2
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°	361.0	58.7	58.9
0°-40°	512.3	83.3	83.6
0°-60°	603.9	98.2	98.5
0°-90°	614.8	100.0	100.3
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°	614.8	100.0	100.3

CANDELA DISTRIBUTION:

	0°	Flux
0°	815	
5°	745	67
15°	486	137
25°	341	157
35°	243	151
45°	98	78
55°	13	13
65°	7	7
75°	2	3
85°	1	1
90°	0	



TEST NUMBER: P20087

CATALOG NUMBER: EL405840-TL402HS

CANDELA DISTRIBUTION (FULL):

	0°
0°	815
2.5°	794
5°	745
7.5°	681
10°	611
12.5°	543
15°	486
17.5°	441
20°	404
22.5°	371
25°	341
27.5°	313
30°	287
32.5°	264
35°	243
37.5°	222
40°	195
42.5°	152
45°	98
47.5°	53
50°	28
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)