

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: P123813

Luminaire Tested: **ELSG406940TBZ (50° BEAM - 0° TILT)**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P123813  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P14001)  
Test Lab: INNOVATION CENTER-P1  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO  
Catalog Number: ELSG406940TBZ (50° BEAM - 0° TILT)  
Description: HALO 4 INCH RECESSED FIXTURE WITH SQUARE TUSCAN BRONZE TRIM,  
TUSCAN BRONZE GIMBAL, NARROW UPPER REFLECTOR AND CLEAR LENS.  
Light Source: (1)SURFACE MOUNT LED, 4000K CCT, 90CRI  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 849.9 lumens  
Efficiency: N/A  
Efficacy: 65.4 lumens/watt  
Spacing Criteria (0/90/45): 0.88 / 0.89 / 0.82  
Luminous Opening: Circular (Dia: 0.17' x H: 0')  
CIE Type: Direct

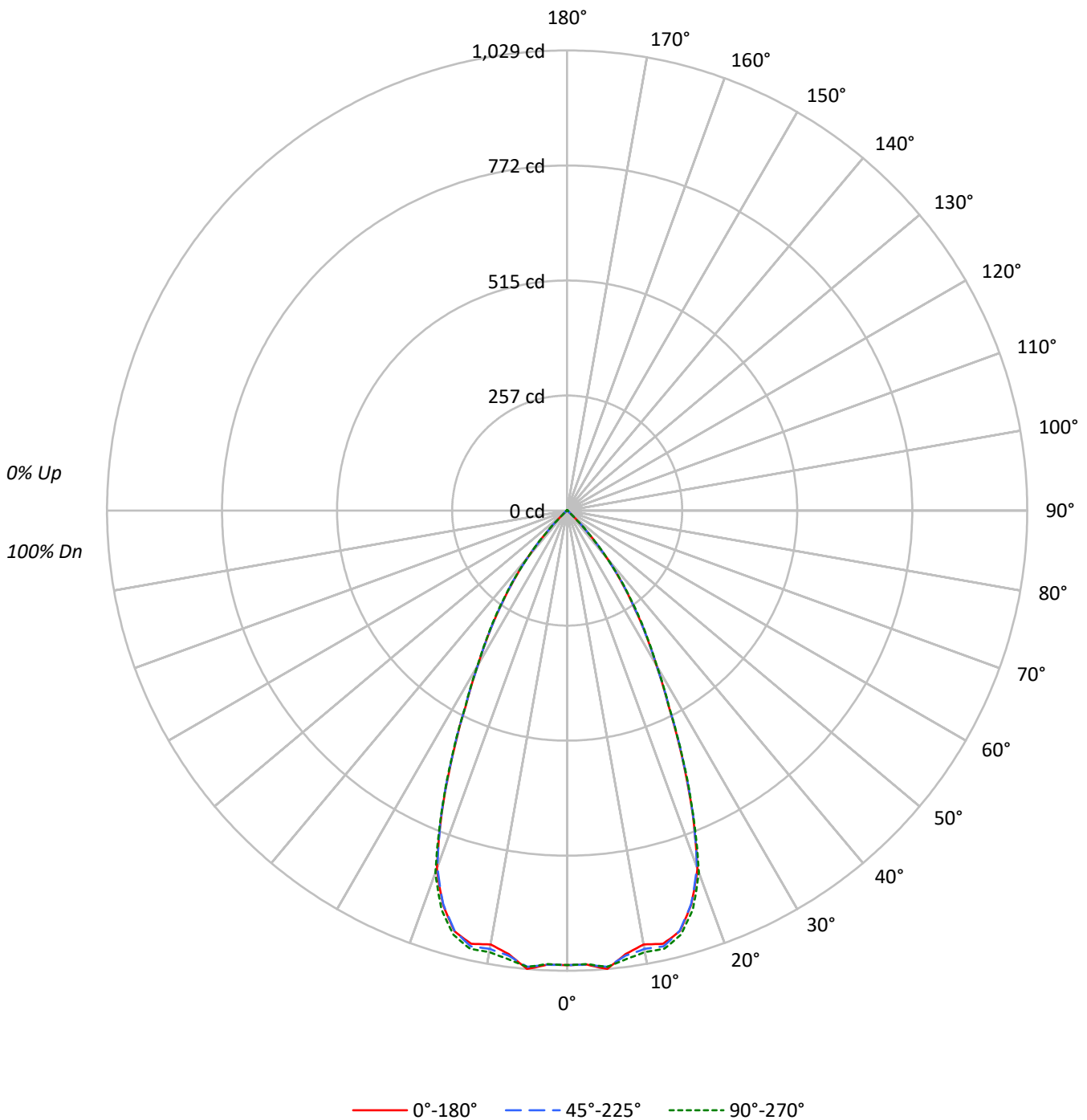
Input Watts (W): 13  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	50	30	10	0	
RCR																						
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100	100	100	100	
1	114	111	109	106	111	109	107	105	105	103	102	101	100	99	98	97	96	94	94	94	94	
2	108	104	100	97	106	102	98	95	99	96	93	96	93	91	93	91	90	88	88	88	88	
3	103	97	92	88	101	96	91	88	93	89	86	91	88	85	88	86	84	82	82	82	82	
4	98	91	86	82	96	90	85	81	88	84	80	86	82	79	84	81	78	77	77	77	77	
5	94	86	80	76	92	85	79	75	83	78	75	81	77	74	80	76	74	72	72	72	72	
6	89	81	75	71	88	80	74	70	78	74	70	77	73	69	76	72	69	68	68	68	68	
7	85	76	70	66	84	75	70	66	74	69	66	73	69	65	72	68	65	64	64	64	64	
8	81	72	66	62	80	71	66	62	70	65	62	69	65	61	68	64	61	60	60	60	60	
9	77	68	62	58	76	68	62	58	67	62	58	66	61	58	65	61	58	57	57	57	57	
10	74	64	59	55	73	64	59	55	63	58	55	63	58	55	62	58	55	53	53	53	53	

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

	0°	45°	90°
0°	501372	501372	501372
5°	509528	507250	507250
10°	493576	498736	502193
15°	497402	496789	501488
20°	447442	445604	452273
25°	330931	332183	332782
30°	227370	227370	228680
35°	153347	154732	157503
40°	88623	88623	88623
45°	26375	26375	25607
50°	6140	6140	6140
55°	2925	1978	2925
60°	3355	3355	2270
65°	2685	2685	1284
70°	0	0	0
75°	0	0	0
80°	0	0	0
85°	0	6227	0



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	96.4	11.3
10°-20°	269.0	31.7
20°-30°	278.4	32.8
30°-40°	161.6	19.0
40°-50°	38.3	4.5
50°-60°	4.0	0.5
60°-70°	1.5	0.2
70°-80°	0.4	0.1
80°-90°	0.3	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°	643.8	75.7
0°-40°	805.4	94.8
0°-60°	847.7	99.7
0°-90°	849.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	849.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1016	1016	1016	1016	1016	
5°	1029	1029	1024	1024	1024	96
15°	974	974	973	982	982	268
25°	608	607	610	608	611	278
35°	255	256	257	260	262	161
45°	38	38	38	38	37	38
55°	3	3	2	3	3	4
65°	2	2	2	2	1	2
75°	0	0	0	0	0	1
85°	0	0	1	1	0	1
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1016.2	1016.2	1016.2	1016.2	1016.2
2.5°	1016.2	1017.3	1016.2	1016.2	1015.0
5°	1028.8	1028.8	1024.2	1024.2	1024.2
7.5°	1000.1	1001.3	1003.6	1009.3	1011.6
10°	985.2	988.7	995.5	1003.6	1002.4
12.5°	992.1	993.2	997.8	1007.0	1003.6
15°	973.8	973.8	972.6	981.8	981.8
17.5°	923.3	923.3	922.1	930.2	934.8
20°	852.2	851.0	848.7	852.2	861.4
22.5°	732.9	735.2	735.2	735.2	736.3
25°	607.9	606.7	610.2	607.9	611.3
27.5°	489.7	488.6	490.9	492.0	492.0
30°	399.1	399.1	399.1	400.3	401.4
32.5°	325.7	324.6	325.7	328.0	329.2
35°	254.6	255.8	256.9	260.4	261.5
37.5°	195.0	195.0	197.3	198.4	198.4
40°	137.6	136.5	137.6	137.6	137.6
42.5°	82.6	82.6	82.6	82.6	83.7
45°	37.8	37.8	37.8	37.8	36.7
47.5°	12.6	12.6	12.6	11.5	12.6
50°	8.0	6.9	8.0	8.0	8.0
52.5°	5.7	5.7	5.7	5.7	5.7
55°	3.4	3.4	2.3	3.4	3.4
57.5°	3.4	4.6	3.4	3.4	3.4
60°	3.4	3.4	3.4	2.3	2.3
62.5°	1.1	1.1	2.3	1.1	1.1
65°	2.3	2.3	2.3	2.3	1.1
67.5°	1.1	1.1	1.1	1.1	0.0
70°	0.0	0.0	0.0	0.0	0.0
72.5°	2.3	1.1	2.3	1.1	1.1
75°	0.0	0.0	0.0	0.0	0.0
77.5°	1.1	0.0	0.0	0.0	0.0
80°	0.0	0.0	0.0	0.0	0.0
82.5°	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	1.1	1.1	0.0
87.5°	1.1	0.0	1.1	0.0	1.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)