

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: P123788

Luminaire Tested: **ELSG406935TBZ (35° BEAM - 0° TILT)**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P123788  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P13999)  
Test Lab: INNOVATION CENTER-P1  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO  
Catalog Number: ELSG406935TBZ (35° 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, 3500K CCT, 90CRI  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 810.1 lumens  
Efficiency: N/A  
Efficacy: 62.3 lumens/watt  
Spacing Criteria (0/90/45): 0.64 / 0.64 / 0.62  
Luminous Opening: Rectangular (W 0.17' x L: 0.17' x H: 0')  
CIE Type: Direct

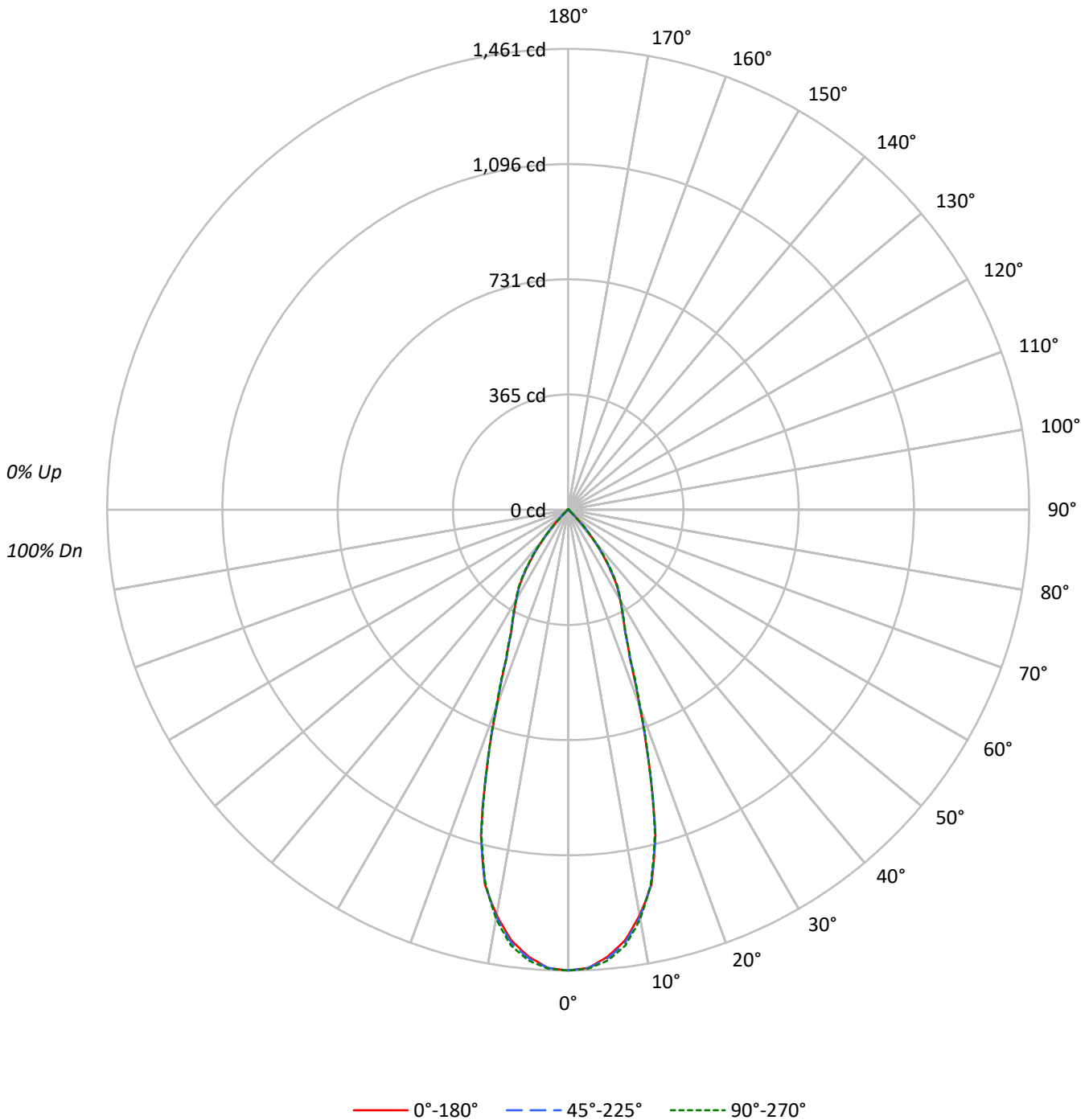
Input Watts (W): 13  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	114	111	109	107	111	109	107	105	105	104	102	101	100	99	98	97	96	94
2	109	104	101	97	107	103	99	96	99	97	94	96	94	92	94	92	90	89
3	104	98	93	90	102	97	92	89	94	91	88	92	89	86	89	87	85	83
4	99	92	87	83	98	91	87	83	89	85	82	87	84	81	85	82	80	79
5	95	87	82	78	93	86	81	78	85	80	77	83	79	76	81	78	76	74
6	91	83	77	73	89	82	77	73	80	76	72	79	75	72	78	74	71	70
7	87	78	73	69	85	78	72	69	76	72	68	75	71	68	74	70	68	66
8	83	74	69	65	82	74	69	65	73	68	65	72	68	64	71	67	64	63
9	80	71	65	62	79	70	65	62	69	65	61	69	64	61	68	64	61	60
10	76	68	62	59	75	67	62	59	66	62	58	66	61	58	65	61	58	57

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

	0°	45°	90°
0°	566020	566020	566020
5°	553479	555580	558108
10°	513566	515691	517816
15°	428328	427927	425761
20°	271586	272452	274678
25°	182781	181883	182781
30°	146852	147344	147836
35°	110315	112349	115424
40°	63888	64445	65001
45°	21865	20715	20112
50°	6511	5848	5848
55°	3648	3648	2905
60°	1705	1705	1705
65°	2017	2017	2017
70°	3626	2493	2493
75°	0	0	0
80°	0	0	0
85°	4891	0	4891



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	132.8	16.4
10°-20°	282.6	34.9
20°-30°	205.2	25.3
30°-40°	145.2	17.9
40°-50°	37.8	4.7
50°-60°	3.8	0.5
60°-70°	1.7	0.2
70°-80°	0.7	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°	620.5	76.6
0°-40°	765.8	94.5
0°-60°	807.3	99.7
0°-90°	810.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	810.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1461	1461	1461	1461	1461	
5°	1423	1427	1428	1433	1435	132
15°	1068	1069	1067	1064	1061	282
25°	428	424	425	426	428	205
35°	233	235	238	242	244	143
45°	40	40	38	39	37	38
55°	5	6	5	5	4	4
65°	2	1	2	1	2	2
75°	0	0	0	0	0	1
85°	1	1	0	0	1	1
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1460.7	1460.7	1460.7	1460.7	1460.7
2.5°	1454.2	1455.3	1454.2	1455.3	1456.4
5°	1422.9	1427.2	1428.3	1432.6	1434.8
7.5°	1377.6	1380.8	1384.1	1391.6	1392.7
10°	1305.2	1307.4	1310.6	1315.0	1316.0
12.5°	1217.8	1216.7	1215.6	1213.5	1212.4
15°	1067.7	1068.8	1066.7	1064.5	1061.3
17.5°	855.0	858.3	857.2	860.4	856.1
20°	658.6	658.6	660.7	662.9	666.1
22.5°	510.7	512.8	513.9	515.0	517.1
25°	427.5	424.3	425.4	426.4	427.5
27.5°	372.5	372.5	374.6	375.7	377.9
30°	328.2	327.1	329.3	330.4	330.4
32.5°	288.3	288.3	289.3	292.6	293.7
35°	233.2	235.4	237.5	241.8	244.0
37.5°	180.3	181.4	183.5	187.9	186.8
40°	126.3	125.2	127.4	128.5	128.5
42.5°	81.0	79.9	79.9	79.9	79.9
45°	39.9	39.9	37.8	38.9	36.7
47.5°	15.1	14.0	14.0	14.0	16.2
50°	10.8	10.8	9.7	9.7	9.7
52.5°	5.4	4.3	4.3	5.4	5.4
55°	5.4	6.5	5.4	5.4	4.3
57.5°	1.1	2.2	0.0	0.0	0.0
60°	2.2	2.2	2.2	2.2	2.2
62.5°	2.2	2.2	2.2	2.2	2.2
65°	2.2	1.1	2.2	1.1	2.2
67.5°	0.0	1.1	1.1	1.1	0.0
70°	3.2	2.2	2.2	2.2	2.2
72.5°	1.1	0.0	1.1	1.1	1.1
75°	0.0	0.0	0.0	0.0	0.0
77.5°	0.0	1.1	1.1	0.0	0.0
80°	0.0	0.0	0.0	0.0	0.0
82.5°	1.1	1.1	0.0	1.1	0.0
85°	1.1	1.1	0.0	0.0	1.1
87.5°	0.0	0.0	0.0	0.0	0.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)