

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: P123805

Luminaire Tested: **ELSG406940SN (35° BEAM - 0° TILT)**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P123805  
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: ELSG406940SN (35° BEAM - 0° TILT)  
Description: HALO 4 INCH RECESSED FIXTURE WITH SQUARE SATIN NICKEL TRIM,  
SATIN NICKEL 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: 860.0 lumens  
Efficiency: N/A  
Efficacy: 66.2 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

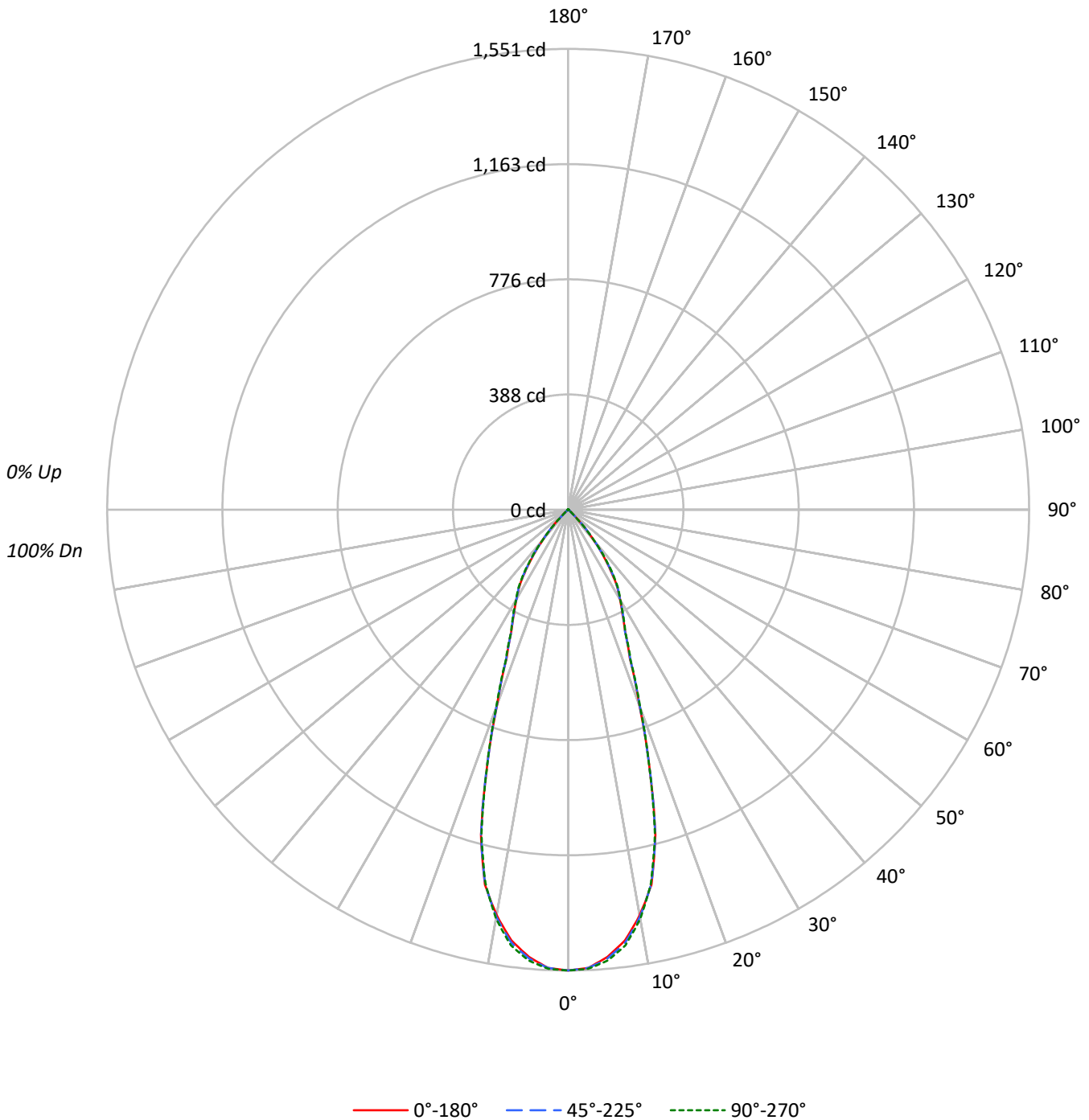
Input Watts (W): 13  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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
1	114	111	109	107	111	109	107	105	105	104	102	101	100	99	98	97	96	94				94
2	109	104	101	97	107	103	99	96	99	97	94	96	94	92	94	92	90	89				89
3	104	98	93	90	102	97	92	89	94	91	88	92	89	86	89	87	85	84				84
4	99	92	87	83	98	91	87	83	89	85	82	87	84	81	85	82	80	79				79
5	95	87	82	78	93	86	81	78	85	80	77	83	79	76	81	78	76	74				74
6	91	83	77	73	89	82	77	73	80	76	72	79	75	72	78	74	71	70				70
7	87	78	73	69	85	78	72	69	76	72	68	75	71	68	74	70	68	66				66
8	83	74	69	65	82	74	69	65	73	68	65	72	68	64	71	67	64	63				63
9	80	71	65	62	79	70	65	62	69	65	61	69	64	61	68	64	61	60				60
10	76	68	62	59	75	67	62	59	66	62	58	66	61	58	65	61	58	57				57

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

	0°	45°	90°
0°	600973	600973	600973
5°	587670	589888	592571
10°	545281	547524	549806
15°	454765	454324	452037
20°	288328	289276	291627
25°	194069	193085	194069
30°	155935	156427	156964
35°	117127	119303	122567
40°	67834	68441	68997
45°	23235	21975	21372
50°	6933	6209	6209
55°	3851	3851	3108
60°	1782	1782	1782
65°	2109	2109	2109
70°	3852	2606	2606
75°	0	0	0
80°	0	0	0
85°	4891	0	4891



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	141.0	16.4
10°-20°	300.0	34.9
20°-30°	217.8	25.3
30°-40°	154.2	17.9
40°-50°	40.1	4.7
50°-60°	4.0	0.5
60°-70°	1.8	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°	658.9	76.6
0°-40°	813.0	94.5
0°-60°	857.2	99.7
0°-90°	860.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	860.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1551	1551	1551	1551	1551	
5°	1511	1515	1516	1521	1523	140
15°	1134	1135	1132	1130	1127	300
25°	454	450	452	453	454	217
35°	248	250	252	257	259	152
45°	42	42	40	41	39	41
55°	6	7	6	6	5	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°	1550.9	1550.9	1550.9	1550.9	1550.9
2.5°	1544.0	1545.1	1544.0	1545.1	1546.3
5°	1510.8	1515.3	1516.5	1521.1	1523.4
7.5°	1462.6	1466.1	1469.5	1477.5	1478.7
10°	1385.8	1388.1	1391.5	1396.1	1397.3
12.5°	1293.0	1291.8	1290.7	1288.4	1287.2
15°	1133.6	1134.8	1132.5	1130.2	1126.8
17.5°	907.8	911.3	910.1	913.6	909.0
20°	699.2	699.2	701.5	703.8	707.2
22.5°	542.2	544.5	545.6	546.8	549.1
25°	453.9	450.5	451.6	452.8	453.9
27.5°	395.5	395.5	397.7	398.9	401.2
30°	348.5	347.3	349.6	350.8	350.8
32.5°	306.0	306.0	307.2	310.6	311.8
35°	247.6	249.9	252.2	256.8	259.1
37.5°	191.4	192.6	194.9	199.4	198.3
40°	134.1	133.0	135.3	136.4	136.4
42.5°	86.0	84.8	84.8	84.8	84.8
45°	42.4	42.4	40.1	41.3	39.0
47.5°	16.0	14.9	14.9	14.9	17.2
50°	11.5	11.5	10.3	10.3	10.3
52.5°	5.7	4.6	4.6	5.7	5.7
55°	5.7	6.9	5.7	5.7	4.6
57.5°	1.1	2.3	0.0	0.0	0.0
60°	2.3	2.3	2.3	2.3	2.3
62.5°	2.3	2.3	2.3	2.3	2.3
65°	2.3	1.1	2.3	1.1	2.3
67.5°	0.0	1.1	1.1	1.1	0.0
70°	3.4	2.3	2.3	2.3	2.3
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)