

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: P123802

Luminaire Tested: **ELSG406927SN (35° BEAM - 0° TILT)**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P123802  
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: ELSG406927SN (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, 2700K CCT, 90CRI  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 680.0 lumens  
Efficiency: N/A  
Efficacy: 52.3 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

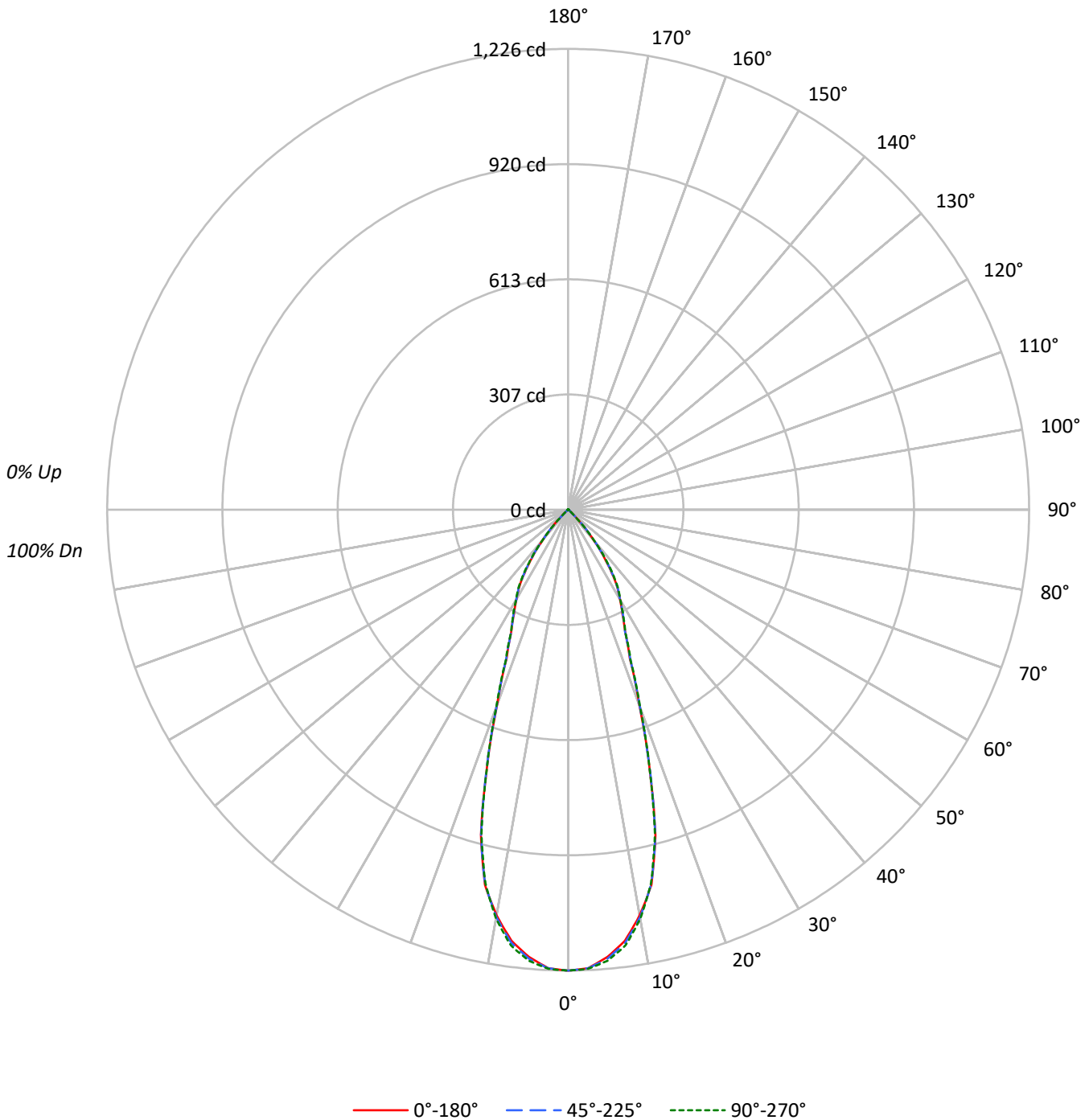
Input Watts (W): 13  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	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	84				
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°	475191	475191	475191
5°	464675	466425	468526
10°	431172	432943	434714
15°	359608	359247	357401
20°	227998	228741	230596
25°	153451	152681	153451
30°	123271	123674	124077
35°	92623	94326	96881
40°	53620	54075	54581
45°	18358	17372	16879
50°	5486	4943	4943
55°	3040	3040	2432
60°	1395	1395	1395
65°	1650	1650	1650
70°	3059	2039	2039
75°	0	0	0
80°	0	0	0
85°	4001	0	4001



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	111.5	16.4
10°-20°	237.2	34.9
20°-30°	172.2	25.3
30°-40°	121.9	17.9
40°-50°	31.7	4.7
50°-60°	3.2	0.5
60°-70°	1.4	0.2
70°-80°	0.5	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°	520.9	76.6
0°-40°	642.9	94.5
0°-60°	677.7	99.7
0°-90°	680.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	680.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1226	1226	1226	1226	1226	
5°	1195	1198	1199	1203	1204	111
15°	896	897	896	894	891	237
25°	359	356	357	358	359	172
35°	196	198	199	203	205	120
45°	34	34	32	33	31	32
55°	4	5	4	4	4	3
65°	2	1	2	1	2	1
75°	0	0	0	0	0	1
85°	1	1	0	0	1	0
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1226.3	1226.3	1226.3	1226.3	1226.3
2.5°	1220.8	1221.7	1220.8	1221.7	1222.6
5°	1194.6	1198.2	1199.1	1202.7	1204.5
7.5°	1156.5	1159.2	1161.9	1168.3	1169.2
10°	1095.8	1097.6	1100.3	1103.9	1104.8
12.5°	1022.3	1021.4	1020.5	1018.7	1017.8
15°	896.4	897.3	895.5	893.6	890.9
17.5°	717.8	720.5	719.6	722.3	718.7
20°	552.9	552.9	554.7	556.5	559.2
22.5°	428.7	430.5	431.4	432.3	434.1
25°	358.9	356.2	357.1	358.0	358.9
27.5°	312.7	312.7	314.5	315.4	317.2
30°	275.5	274.6	276.4	277.3	277.3
32.5°	242.0	242.0	242.9	245.6	246.5
35°	195.8	197.6	199.4	203.0	204.8
37.5°	151.4	152.3	154.1	157.7	156.8
40°	106.0	105.1	106.9	107.9	107.9
42.5°	68.0	67.1	67.1	67.1	67.1
45°	33.5	33.5	31.7	32.6	30.8
47.5°	12.7	11.8	11.8	11.8	13.6
50°	9.1	9.1	8.2	8.2	8.2
52.5°	4.5	3.6	3.6	4.5	4.5
55°	4.5	5.4	4.5	4.5	3.6
57.5°	0.9	1.8	0.0	0.0	0.0
60°	1.8	1.8	1.8	1.8	1.8
62.5°	1.8	1.8	1.8	1.8	1.8
65°	1.8	0.9	1.8	0.9	1.8
67.5°	0.0	0.9	0.9	0.9	0.0
70°	2.7	1.8	1.8	1.8	1.8
72.5°	0.9	0.0	0.9	0.9	0.9
75°	0.0	0.0	0.0	0.0	0.0
77.5°	0.0	0.9	0.9	0.0	0.0
80°	0.0	0.0	0.0	0.0	0.0
82.5°	0.9	0.9	0.0	0.9	0.0
85°	0.9	0.9	0.0	0.0	0.9
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)