

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 COMMERCIAL

Report Number: P580681

Luminaire Tested: **HC440D010-HM43040940-41WDW**

Issue Date: 9/9/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P580681  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2106-266-9)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 9/9/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO COMMERCIAL  
Catalog Number: HC440D010-HM43040940-41WDW  
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WIDE DISTRIBUTION, WHITE TRIM  
Light Source: (1) HIGH LUMEN LED 90CRI / 4000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3618.7 lumens  
Efficiency: N/A  
Efficacy: 88.3 lumens/watt  
Spacing Criteria (0/90/45): 1.06 / 1.07 / 1.04  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

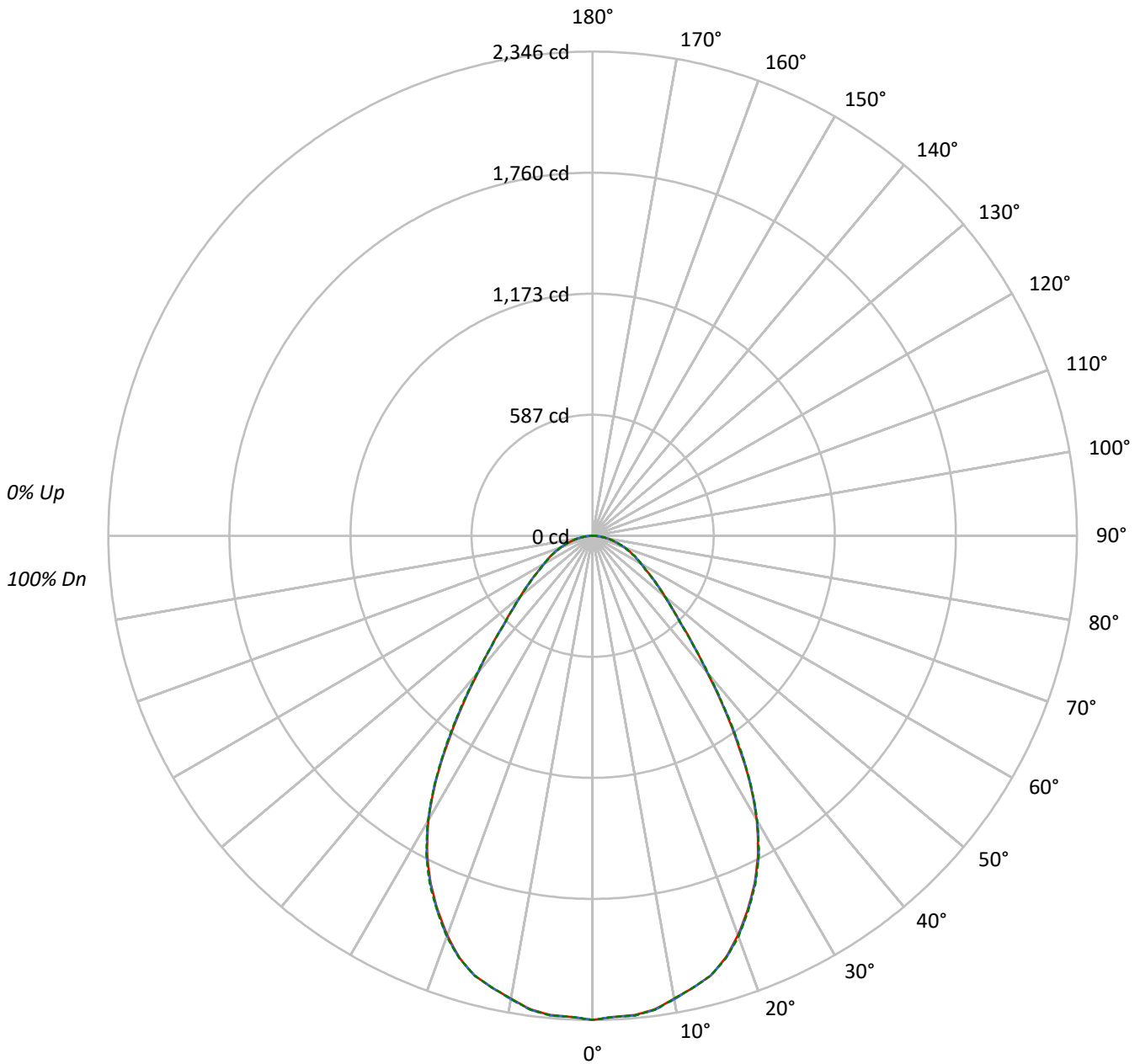
Input Watts (W): 41  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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			100
1	111	107	104	101	108	105	102	99	101	98	96	97	95	93	94	92	90	89			89
2	103	97	91	87	101	95	90	86	91	87	84	88	85	82	85	83	80	78			78
3	96	87	81	76	94	86	80	75	83	78	74	81	76	72	78	74	71	69			69
4	90	80	72	67	87	78	72	66	76	70	66	74	69	65	72	68	64	62			62
5	84	73	65	60	82	72	65	59	70	64	59	68	63	58	66	62	58	56			56
6	78	67	59	54	77	66	59	54	64	58	53	63	57	53	61	56	53	51			51
7	73	62	54	49	72	61	54	49	60	53	49	58	53	48	57	52	48	46			46
8	69	57	50	45	68	57	50	45	55	49	45	54	49	44	53	48	44	42			42
9	65	53	46	41	64	53	46	41	52	45	41	51	45	41	50	45	41	39			39
10	61	50	43	38	60	49	43	38	48	42	38	48	42	38	47	42	38	36			36

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

	0°	45°	90°
0°	289307	289307	289307
5°	288605	288889	288889
10°	285241	285554	285241
15°	281827	281827	281827
20°	270255	270898	271213
25°	252786	253127	253780
30°	226516	227200	227200
35°	183900	185361	185722
40°	138780	139569	139955
45°	106302	105883	105883
50°	87599	87119	87119
55°	75180	74664	74664
60°	67100	66483	66483
65°	63071	63071	63071
70°	58676	58676	58676
75°	53233	54377	53233
80°	50006	48231	50006
85°	41183	41183	41183



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	221.0	6.1
10°-20°	618.4	17.1
20°-30°	849.8	23.5
30°-40°	764.1	21.1
40°-50°	482.8	13.3
50°-60°	315.2	8.7
60°-70°	213.5	5.9
70°-80°	120.2	3.3
80°-90°	33.7	0.9
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°	1689.2	46.7
0°-40°	2453.2	67.8
0°-60°	3251.2	89.8
0°-90°	3618.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3618.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2346	2346	2346	2346	2346	
5°	2331	2331	2333	2333	2333	221
15°	2207	2207	2207	2207	2207	618
25°	1857	1860	1860	1865	1865	848
35°	1221	1226	1231	1236	1233	760
45°	609	607	607	607	607	483
55°	350	350	347	350	347	316
65°	216	216	216	216	216	214
75°	112	114	114	114	112	120
85°	29	29	29	29	29	34
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2345.5	2345.5	2345.5	2345.5	2345.5
2.5°	2333.2	2333.2	2333.2	2333.2	2333.2
5°	2330.9	2330.9	2333.2	2333.2	2333.2
7.5°	2313.9	2316.3	2316.3	2316.3	2316.3
10°	2277.4	2277.4	2279.9	2279.9	2277.4
12.5°	2243.5	2243.5	2243.5	2245.9	2243.5
15°	2207.0	2207.0	2207.0	2207.0	2207.0
17.5°	2143.9	2146.4	2146.4	2146.4	2146.4
20°	2058.9	2063.8	2063.8	2066.2	2066.2
22.5°	1961.9	1964.2	1966.7	1969.1	1966.7
25°	1857.4	1859.9	1859.9	1864.7	1864.7
27.5°	1736.0	1738.4	1743.3	1743.3	1743.3
30°	1590.4	1592.7	1595.2	1595.2	1595.2
32.5°	1418.0	1418.0	1422.8	1425.2	1422.8
35°	1221.3	1226.1	1231.0	1235.9	1233.4
37.5°	1034.3	1039.2	1041.6	1041.6	1044.0
40°	861.9	866.8	866.8	871.7	869.2
42.5°	726.0	723.5	723.5	728.4	726.0
45°	609.4	607.0	607.0	607.0	607.0
47.5°	524.4	522.0	522.0	522.0	522.0
50°	456.5	454.0	454.0	454.0	454.0
52.5°	400.6	398.2	398.2	398.2	395.7
55°	349.6	349.6	347.2	349.6	347.2
57.5°	303.5	303.5	303.5	303.5	303.5
60°	272.0	269.5	269.5	269.5	269.5
62.5°	242.8	242.8	242.8	242.8	242.8
65°	216.1	216.1	216.1	216.1	216.1
67.5°	189.3	187.0	189.3	189.3	187.0
70°	162.7	160.3	162.7	162.7	162.7
72.5°	136.0	136.0	136.0	138.4	136.0
75°	111.7	114.1	114.1	114.1	111.7
77.5°	89.8	92.3	89.8	89.8	89.8
80°	70.4	67.9	67.9	67.9	70.4
82.5°	48.5	48.5	48.5	48.5	48.5
85°	29.1	29.1	29.1	29.1	29.1
87.5°	12.1	12.1	12.1	12.1	12.1
90°	0.0	0.0	0.0	0.0	0.0



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— 0°-180°    - - 45°-225°    - - - - 90°-270°







(END OF REPORT)