

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: P580611

Luminaire Tested: **HC440D010-HM43040840-41RWWH**

Issue Date: 9/9/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P580611  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2106-266-15)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 9/9/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO COMMERCIAL  
Catalog Number: HC440D010-HM43040840-41RWWH  
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, HAZE TRIM  
Light Source: (1) HIGH LUMEN LED 80CRI / 4000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4375.2 lumens  
Efficiency: N/A  
Efficacy: 106.7 lumens/watt  
Spacing Criteria (0/90/45): 1.14 / 1.08 / 1.16  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

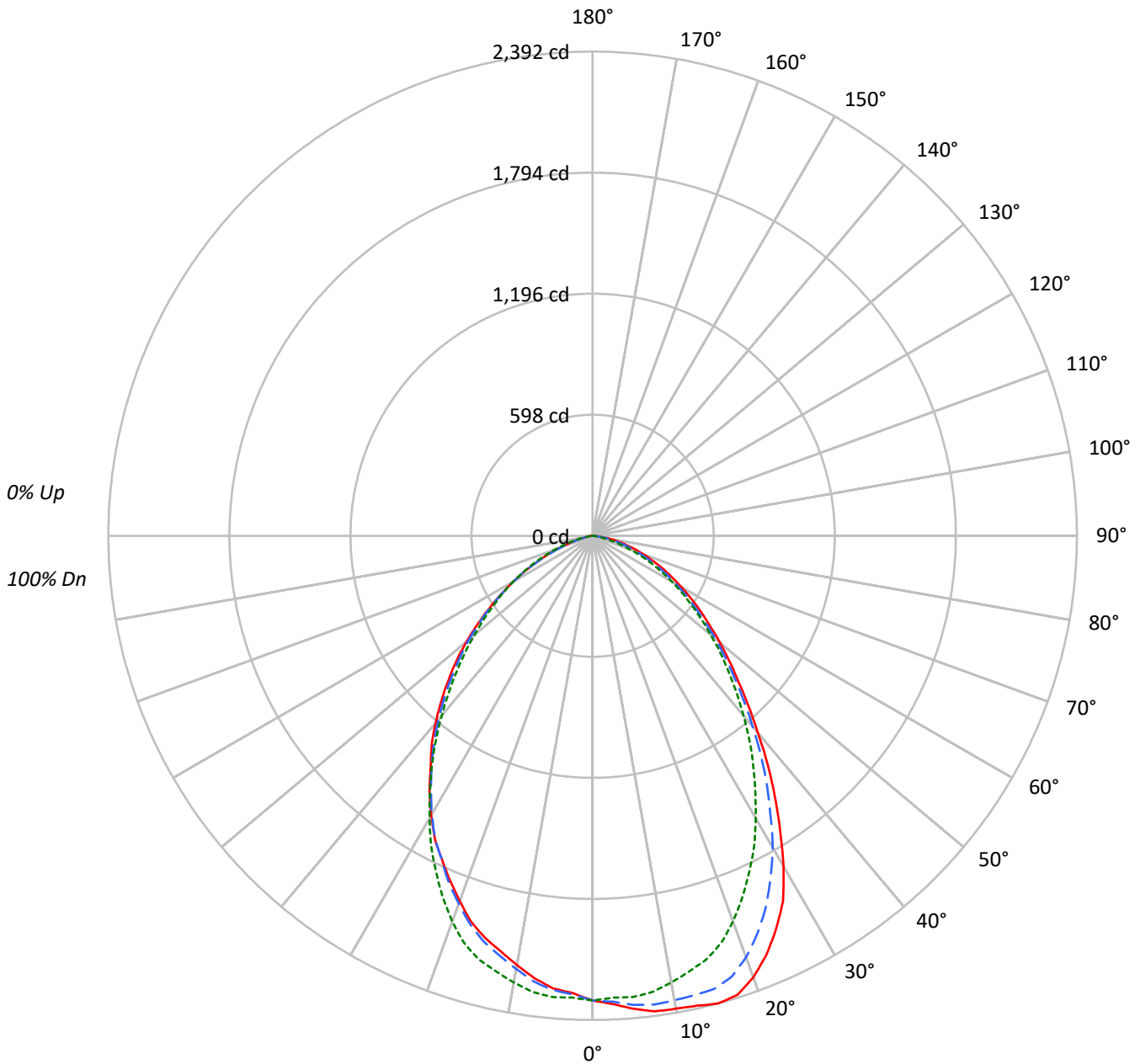
Input Watts (W): 41  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20									20									20									20									
RC	80									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	111	107	104	100	108	105	102	99	101	98	96	97	95	93	93	92	90	88																			
2	103	96	90	85	100	94	89	84	90	86	82	87	84	80	84	81	79	77																			
3	95	86	79	73	92	84	78	73	81	76	71	79	74	70	76	72	69	67																			
4	88	77	70	64	86	76	69	63	74	67	62	71	66	62	69	65	61	59																			
5	81	70	62	56	79	69	61	56	67	60	55	65	59	55	63	58	54	52																			
6	76	64	56	50	74	63	55	50	61	54	49	60	54	49	58	53	49	47																			
7	71	58	51	45	69	58	50	45	56	49	45	55	49	44	54	48	44	42																			
8	66	54	46	41	65	53	46	41	52	45	40	51	45	40	50	44	40	38																			
9	62	50	42	37	61	49	42	37	48	41	37	47	41	37	46	41	37	35																			
10	58	46	39	34	57	46	39	34	45	38	34	44	38	34	43	38	34	32																			

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

	0°	90°	180°
0°	283140	283140	283140
5°	290573	283169	277857
10°	297152	280719	269647
15°	305502	276744	262545
20°	304671	266120	251917
25°	291846	249152	239830
30°	268447	229465	227043
35°	236165	208248	209965
40°	204330	186425	194218
45°	177577	165645	175571
50°	157581	146106	155950
55°	139823	128146	133673
60°	124505	111134	111134
65°	110674	92403	86566
70°	95641	69928	61705
75°	80207	46227	38030
80°	60732	22304	20244
85°	32409	8067	8067



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	217.4	5.0
10°-20°	616.3	14.1
20°-30°	869.2	19.9
30°-40°	897.9	20.5
40°-50°	761.1	17.4
50°-60°	553.8	12.7
60°-70°	323.6	7.4
70°-80°	120.2	2.7
80°-90°	15.7	0.4
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°	1702.9	38.9
0°-40°	2600.7	59.4
0°-60°	3915.7	89.5
0°-90°	4375.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4375.2	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	2296	2296	2296	2296	2296	
5°	2347	2327	2287	2253	2244	225
15°	2392	2318	2167	2076	2056	672
25°	2144	2025	1831	1765	1762	981
35°	1568	1500	1383	1386	1394	980
45°	1018	990	950	984	1006	792
55°	650	619	596	616	622	585
65°	379	348	317	297	297	376
75°	168	140	97	77	80	181
85°	23	14	6	6	6	32
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	2295.5	2295.5	2295.5	2295.5	2295.5	2295.5	2295.5	2295.5	2295.5
2.5°	2315.4	2309.7	2304.1	2295.5	2284.1	2275.5	2267.0	2261.3	2261.3
5°	2346.8	2338.3	2326.9	2306.9	2287.0	2269.8	2252.8	2244.1	2244.1
7.5°	2369.7	2358.2	2335.4	2306.9	2272.7	2247.0	2221.4	2209.9	2204.2
10°	2372.5	2361.1	2329.8	2287.0	2241.3	2201.4	2172.8	2155.8	2152.9
12.5°	2378.2	2364.0	2324.1	2264.1	2204.2	2155.8	2124.4	2107.3	2101.7
15°	2392.4	2372.5	2318.3	2241.3	2167.2	2110.2	2076.0	2061.6	2056.0
17.5°	2378.2	2349.7	2284.1	2192.9	2110.2	2047.4	2013.2	1999.0	1999.0
20°	2321.1	2292.7	2215.7	2115.9	2027.4	1967.6	1933.4	1924.8	1919.2
22.5°	2241.3	2209.9	2127.2	2021.7	1933.4	1879.1	1856.4	1844.9	1842.1
25°	2144.4	2113.0	2024.6	1916.2	1830.7	1785.1	1765.1	1765.1	1762.2
27.5°	2036.0	1996.1	1904.8	1810.8	1728.0	1693.8	1685.3	1685.3	1688.1
30°	1884.8	1856.4	1779.4	1688.1	1611.1	1588.3	1588.3	1594.1	1594.1
32.5°	1722.3	1702.4	1634.0	1554.2	1494.2	1479.9	1485.7	1497.1	1499.9
35°	1568.4	1545.5	1499.9	1428.6	1383.0	1377.3	1385.9	1394.4	1394.4
37.5°	1417.2	1394.4	1363.0	1306.0	1271.8	1274.7	1286.0	1297.4	1306.0
40°	1269.0	1251.8	1229.1	1183.4	1157.8	1169.1	1183.4	1194.8	1206.2
42.5°	1137.8	1120.7	1103.5	1069.3	1052.2	1066.5	1083.6	1095.0	1106.4
45°	1018.0	1006.5	989.5	960.9	949.6	963.8	983.8	995.2	1006.5
47.5°	915.3	909.7	886.8	861.2	855.4	869.7	886.8	901.1	909.7
50°	821.2	812.7	792.8	767.1	761.4	784.1	795.6	804.1	812.7
52.5°	730.0	721.5	698.6	675.9	675.9	692.9	701.5	704.3	712.8
55°	650.2	641.5	618.8	601.6	595.9	610.3	616.0	616.0	621.6
57.5°	576.0	567.5	544.7	524.7	521.8	530.3	530.3	530.3	533.3
60°	504.7	496.2	473.4	456.2	450.5	453.4	450.5	447.7	450.5
62.5°	439.1	430.6	407.8	387.9	382.1	382.1	373.5	370.7	373.5
65°	379.2	365.0	347.8	327.9	316.6	307.9	296.6	296.6	296.6
67.5°	319.4	307.9	288.0	268.0	253.8	239.6	222.4	228.1	230.9
70°	265.2	256.6	233.8	213.9	193.9	176.8	162.5	168.3	171.1
72.5°	216.7	205.4	185.3	162.5	145.4	122.6	114.1	119.7	119.7
75°	168.3	156.8	139.7	116.9	97.0	77.0	77.0	79.8	79.8
77.5°	125.4	114.1	97.0	77.0	59.9	45.6	48.4	48.4	48.4
80°	85.5	77.0	62.8	45.6	31.4	25.7	25.7	25.7	28.5
82.5°	48.4	42.8	34.2	22.9	14.2	14.2	14.2	14.2	14.2
85°	22.9	17.2	14.2	8.5	5.7	5.7	5.7	5.7	5.7
87.5°	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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







(END OF REPORT)