

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: P581133

Luminaire Tested: **HC455D010-HM44560827-41RWWH**

Issue Date: 9/9/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P581133  
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: HC455D010-HM44560827-41RWWH  
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, HAZE TRIM  
Light Source: (1) HIGH LUMEN LED 80CRI / 2700K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

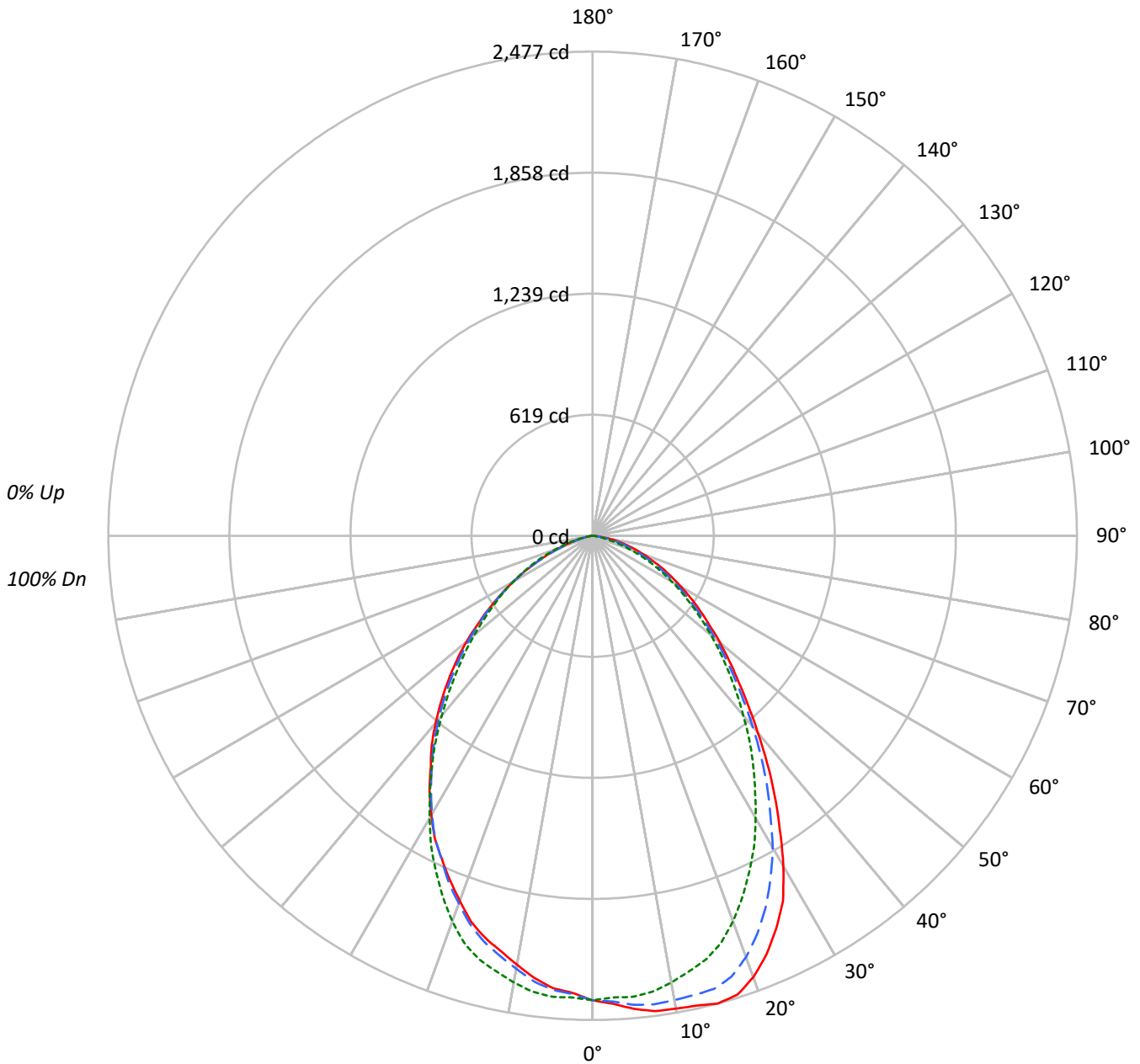
Lumens per Lamp: N/A  
Luminaire Lumens: 4529.1 lumens  
Efficiency: N/A  
Efficacy: 87.1 lumens/watt  
Spacing Criteria (0/90/45): 1.14 / 1.08 / 1.16  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 52  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage 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°	293094	293094	293094
5°	300788	293111	287639
10°	307610	290601	279129
15°	316254	286475	271777
20°	315396	275492	260764
25°	302094	257917	248281
30°	277904	237540	235005
35°	244462	215581	217358
40°	211511	192978	201045
45°	183822	171454	181763
50°	163146	151249	161439
55°	144726	132662	138382
60°	128872	115057	115057
65°	114584	95614	89601
70°	98995	72380	63869
75°	83019	47848	39412
80°	62863	23085	20954
85°	33399	8350	8350



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	225.0	5.0
10°-20°	638.0	14.1
20°-30°	899.7	19.9
30°-40°	929.5	20.5
40°-50°	787.9	17.4
50°-60°	573.3	12.7
60°-70°	335.0	7.4
70°-80°	124.5	2.7
80°-90°	16.3	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°	1762.8	38.9
0°-40°	2692.2	59.4
0°-60°	4053.4	89.5
0°-90°	4529.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4529.1	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	2376	2376	2376	2376	2376	
5°	2429	2409	2367	2332	2323	233
15°	2477	2400	2243	2149	2128	696
25°	2220	2096	1895	1827	1824	1015
35°	1624	1553	1432	1435	1444	1014
45°	1054	1024	983	1018	1042	820
55°	673	641	617	638	644	605
65°	393	360	328	307	307	390
75°	174	145	100	80	83	187
85°	24	15	6	6	6	33
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°	2376.2	2376.2	2376.2	2376.2	2376.2	2376.2	2376.2	2376.2	2376.2
2.5°	2396.9	2391.0	2385.1	2376.2	2364.4	2355.5	2346.8	2340.8	2340.8
5°	2429.3	2420.5	2408.7	2388.0	2367.3	2349.7	2332.0	2323.1	2323.1
7.5°	2453.0	2441.1	2417.5	2388.0	2352.6	2326.0	2299.5	2287.7	2281.7
10°	2456.0	2444.2	2411.7	2367.3	2320.2	2278.8	2249.3	2231.5	2228.6
12.5°	2461.8	2447.1	2405.8	2343.8	2281.7	2231.5	2199.2	2181.4	2175.5
15°	2476.6	2456.0	2399.8	2320.2	2243.4	2184.4	2149.0	2134.2	2128.3
17.5°	2461.8	2432.4	2364.4	2270.0	2184.4	2119.4	2084.1	2069.2	2069.2
20°	2402.8	2373.3	2293.5	2190.3	2098.8	2036.8	2001.4	1992.5	1986.6
22.5°	2320.2	2287.7	2202.1	2092.8	2001.4	1945.2	1921.6	1909.8	1906.9
25°	2219.7	2187.3	2095.8	1983.6	1895.1	1847.8	1827.2	1827.2	1824.3
27.5°	2107.6	2066.3	1971.8	1874.5	1788.9	1753.4	1744.5	1744.5	1747.5
30°	1951.2	1921.6	1842.0	1747.5	1667.8	1644.2	1644.2	1650.0	1650.0
32.5°	1782.9	1762.2	1691.4	1608.8	1546.8	1532.0	1537.9	1549.7	1552.7
35°	1623.5	1599.9	1552.7	1478.9	1431.7	1425.7	1434.6	1443.5	1443.5
37.5°	1467.1	1443.5	1411.0	1351.9	1316.5	1319.5	1331.3	1343.1	1351.9
40°	1313.6	1295.9	1272.3	1225.0	1198.5	1210.3	1225.0	1236.8	1248.6
42.5°	1177.8	1160.1	1142.3	1107.0	1089.2	1104.0	1121.7	1133.6	1145.4
45°	1053.8	1042.0	1024.3	994.7	982.9	997.8	1018.4	1030.2	1042.0
47.5°	947.6	941.6	918.0	891.4	885.6	900.3	918.0	932.7	941.6
50°	850.2	841.3	820.6	794.0	788.2	811.8	823.6	832.4	841.3
52.5°	755.7	746.8	723.2	699.6	699.6	717.3	726.2	729.1	738.0
55°	673.0	664.2	640.6	622.8	616.9	631.7	637.6	637.6	643.5
57.5°	596.2	587.4	563.8	543.2	540.2	549.0	549.0	549.0	552.0
60°	522.4	513.7	490.0	472.3	466.4	469.4	466.4	463.4	466.4
62.5°	454.6	445.7	422.1	401.4	395.6	395.6	386.7	383.7	386.7
65°	392.6	377.9	360.1	339.4	327.6	318.8	307.0	307.0	307.0
67.5°	330.6	318.8	298.1	277.4	262.7	248.0	230.3	236.1	239.1
70°	274.5	265.6	242.1	221.4	200.7	183.0	168.3	174.2	177.1
72.5°	224.3	212.5	191.9	168.3	150.5	126.9	118.1	124.0	124.0
75°	174.2	162.3	144.7	121.0	100.4	79.6	79.6	82.7	82.7
77.5°	129.9	118.1	100.4	79.6	62.0	47.2	50.2	50.2	50.2
80°	88.5	79.6	64.9	47.2	32.5	26.6	26.6	26.6	29.5
82.5°	50.2	44.3	35.4	23.6	14.7	14.7	14.7	14.7	14.7
85°	23.6	17.7	14.7	8.9	5.9	5.9	5.9	5.9	5.9
87.5°	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9
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)