

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: P580879

Luminaire Tested: **HC450D010-HM44560835-41WDW**

Issue Date: 9/9/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P580879  
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: HC450D010-HM44560835-41WDW  
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WIDE DISTRIBUTION, WHITE TRIM  
Light Source: (1) HIGH LUMEN LED 80CRI / 3500K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4685.2 lumens  
Efficiency: N/A  
Efficacy: 97.6 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

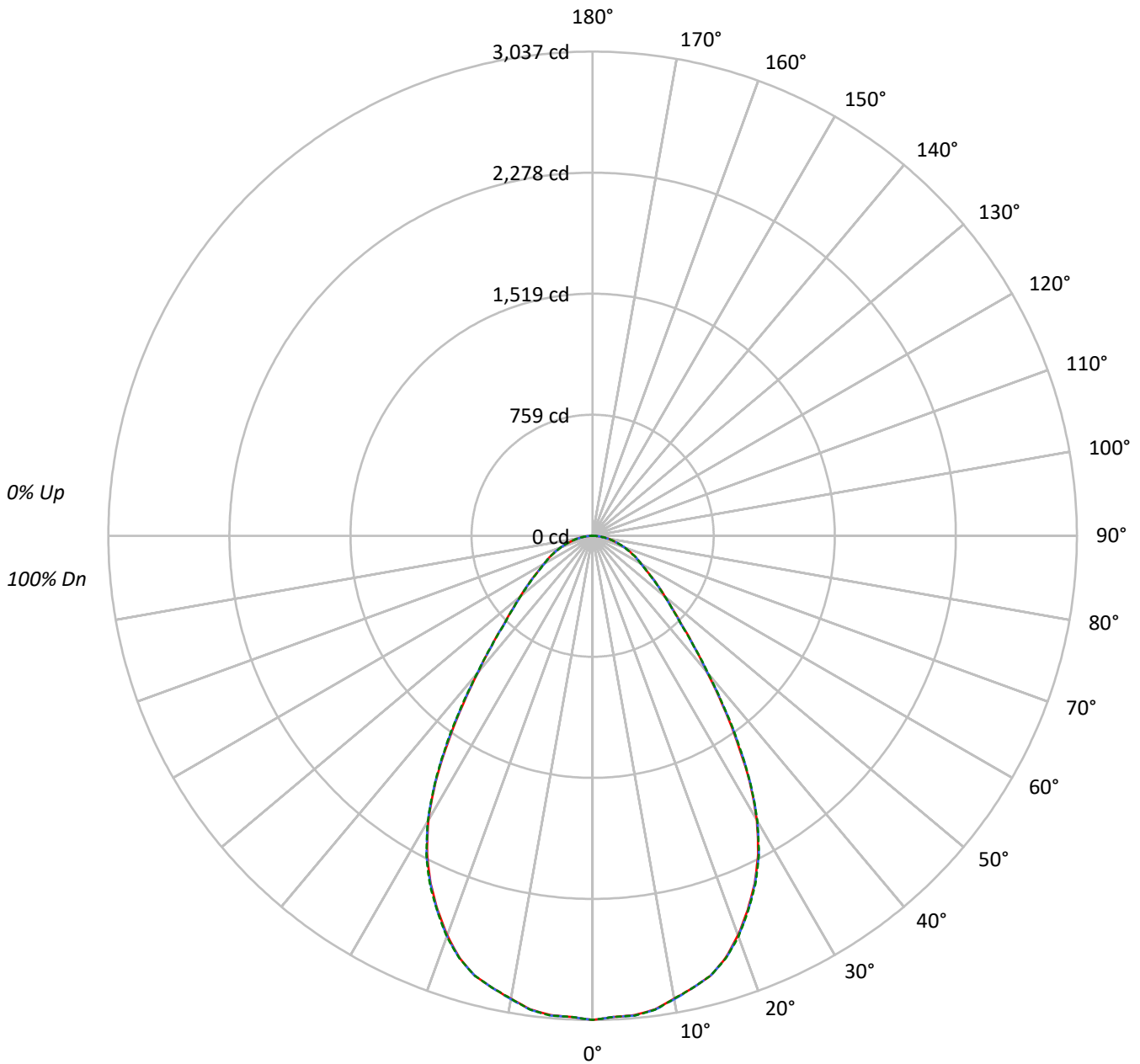
Input Watts (W): 48  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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

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

	0°	45°	90°
0°	374551	374551	374551
5°	373654	374038	374038
10°	369308	369696	369308
15°	364881	364881	364881
20°	349904	350731	351138
25°	327272	327708	328579
30°	293258	294141	294141
35°	238078	239975	240442
40°	179694	180709	181208
45°	137648	137090	137090
50°	113408	112794	112794
55°	97352	96685	96685
60°	86835	86071	86071
65°	81633	81633	81633
70°	75987	75987	75987
75°	68912	70437	68912
80°	64710	62508	64710
85°	53354	53354	53354



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	286.1	6.1
10°-20°	800.6	17.1
20°-30°	1100.2	23.5
30°-40°	989.2	21.1
40°-50°	625.1	13.3
50°-60°	408.1	8.7
60°-70°	276.5	5.9
70°-80°	155.6	3.3
80°-90°	43.7	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°	2186.9	46.7
0°-40°	3176.2	67.8
0°-60°	4209.3	89.8
0°-90°	4685.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4685.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3037	3037	3037	3037	3037	
5°	3018	3018	3021	3021	3021	286
15°	2857	2857	2857	2857	2857	800
25°	2405	2408	2408	2414	2414	1098
35°	1581	1587	1594	1600	1597	984
45°	789	786	786	786	786	626
55°	453	453	450	453	450	410
65°	280	280	280	280	280	277
75°	145	148	148	148	145	155
85°	38	38	38	38	38	44
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3036.6	3036.6	3036.6	3036.6	3036.6
2.5°	3020.9	3020.9	3020.9	3020.9	3020.9
5°	3017.8	3017.8	3020.9	3020.9	3020.9
7.5°	2995.8	2998.9	2998.9	2998.9	2998.9
10°	2948.6	2948.6	2951.7	2951.7	2948.6
12.5°	2904.5	2904.5	2904.5	2907.8	2904.5
15°	2857.4	2857.4	2857.4	2857.4	2857.4
17.5°	2775.7	2778.9	2778.9	2778.9	2778.9
20°	2665.7	2672.0	2672.0	2675.1	2675.1
22.5°	2539.9	2543.1	2546.2	2549.4	2546.2
25°	2404.7	2407.9	2407.9	2414.3	2414.3
27.5°	2247.5	2250.8	2257.1	2257.1	2257.1
30°	2059.0	2062.1	2065.2	2065.2	2065.2
32.5°	1835.8	1835.8	1842.0	1845.3	1842.0
35°	1581.1	1587.4	1593.7	1600.1	1596.8
37.5°	1339.1	1345.4	1348.5	1348.5	1351.6
40°	1116.0	1122.3	1122.3	1128.5	1125.4
42.5°	940.0	936.7	936.7	943.1	940.0
45°	789.1	785.9	785.9	785.9	785.9
47.5°	679.0	675.8	675.8	675.8	675.8
50°	591.0	587.8	587.8	587.8	587.8
52.5°	518.6	515.5	515.5	515.5	512.4
55°	452.7	452.7	449.6	452.7	449.6
57.5°	393.0	393.0	393.0	393.0	393.0
60°	352.0	348.9	348.9	348.9	348.9
62.5°	314.4	314.4	314.4	314.4	314.4
65°	279.7	279.7	279.7	279.7	279.7
67.5°	245.2	242.1	245.2	245.2	242.1
70°	210.7	207.5	210.7	210.7	210.7
72.5°	176.0	176.0	176.0	179.2	176.0
75°	144.6	147.8	147.8	147.8	144.6
77.5°	116.3	119.4	116.3	116.3	116.3
80°	91.1	88.0	88.0	88.0	91.1
82.5°	62.9	62.9	62.9	62.9	62.9
85°	37.7	37.7	37.7	37.7	37.7
87.5°	15.7	15.7	15.7	15.7	15.7
90°	0.0	0.0	0.0	0.0	0.0



Report Generated By 670245859 / DESKTOP-HRDQ47P







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







(END OF REPORT)