

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: P581548

Luminaire Tested: **HC407D010-HM40525950-41WWBB**

Issue Date: 9/9/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P581548  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2106-266-17)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 9/9/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO COMMERCIAL  
Catalog Number: HC407D010-HM40525950-41WWBB  
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, WHITE BAFFLE TRIM  
Light Source: (1) HIGH LUMEN LED 90CRI / 5000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 665.9 lumens  
Efficiency: N/A  
Efficacy: 83.2 lumens/watt  
Spacing Criteria (0/90/45): 1.11 / 1.04 / 1.12  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

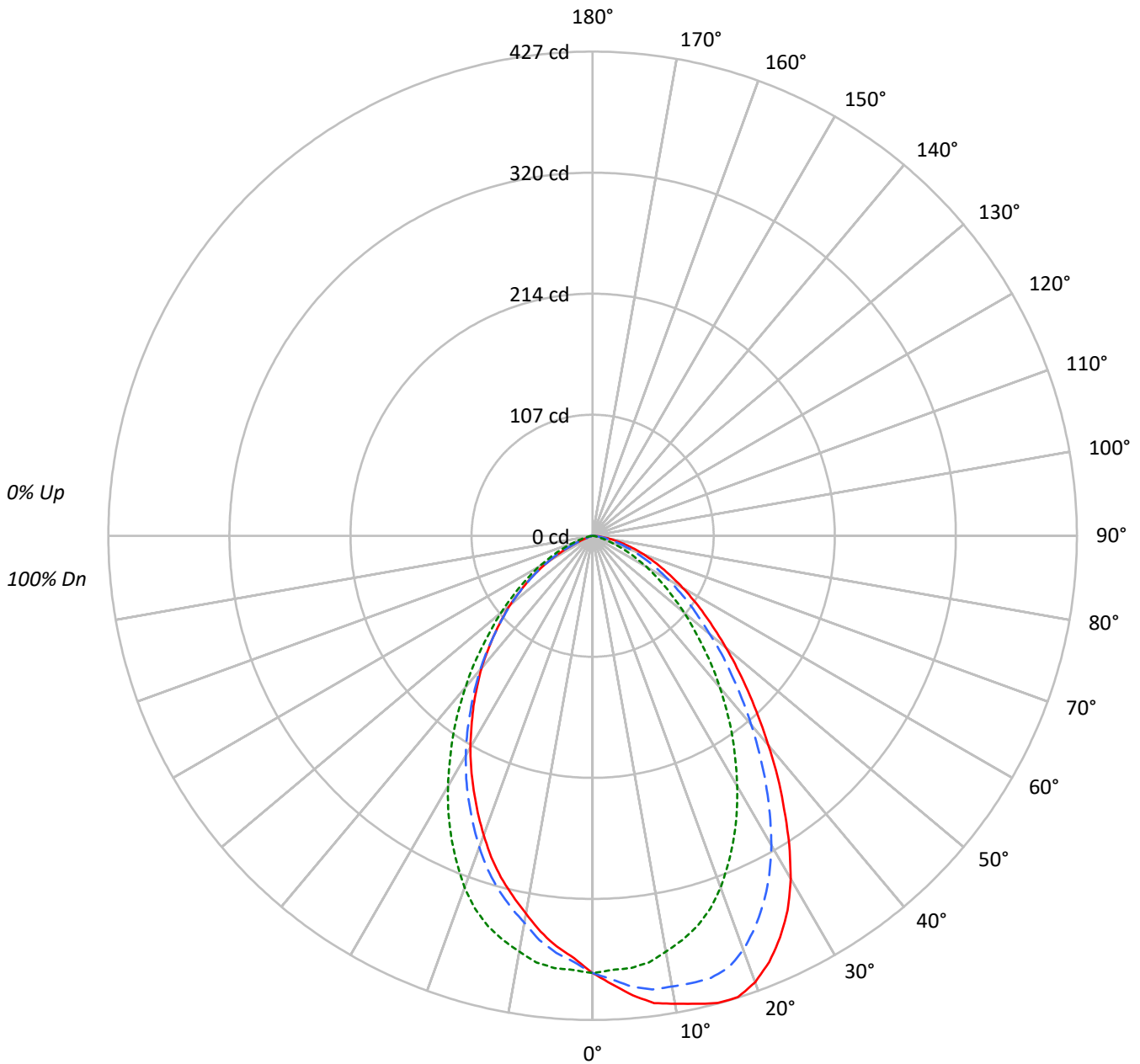
Input Watts (W): 8  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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

RF	20									20									20									20									
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	108	104	101	109	105	102	100	101	99	97	97	95	94	94	92	91	89																			
2	103	97	91	87	101	95	90	86	92	87	84	88	85	82	85	83	80	78																			
3	96	87	80	75	94	86	79	74	83	78	73	80	76	72	78	74	71	69																			
4	89	79	72	66	87	78	71	65	75	69	65	73	68	64	71	67	63	61																			
5	83	72	64	58	81	71	64	58	69	62	58	67	61	57	65	60	56	55																			
6	77	66	58	52	75	65	57	52	63	57	52	61	56	51	60	55	51	49																			
7	72	60	53	47	71	59	52	47	58	51	47	57	51	46	55	50	46	44																			
8	68	56	48	43	66	55	48	43	54	47	42	53	47	42	51	46	42	40																			
9	64	52	44	39	62	51	44	39	50	43	39	49	43	39	48	43	39	37																			
10	60	48	41	36	59	47	41	36	46	40	36	46	40	36	45	39	36	34																			

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

	0°	90°	180°
0°	47562	47562	47562
5°	50369	47385	45020
10°	52479	46643	42372
15°	54475	45511	39841
20°	54999	43329	36845
25°	53214	40081	33738
30°	49764	36319	30693
35°	44345	32284	27571
40°	38757	28065	24555
45°	33771	23828	21246
50°	29455	20206	18211
55°	25827	16731	14731
60°	22597	13543	10805
65°	19701	10098	6071
70°	17202	6528	1984
75°	14106	3431	524
80°	10513	1563	426
85°	6227	849	849



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	36.4	5.5
10°-20°	101.8	15.3
20°-30°	140.8	21.1
30°-40°	141.6	21.3
40°-50°	114.2	17.2
50°-60°	77.2	11.6
60°-70°	39.3	5.9
70°-80°	12.6	1.9
80°-90°	2.0	0.3
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°	279.0	41.9
0°-40°	420.6	63.2
0°-60°	612.1	91.9
0°-90°	665.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	665.9	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	386	386	386	386	386	
5°	407	399	383	369	364	39
15°	427	404	356	322	312	120
25°	391	357	294	258	248	179
35°	294	266	214	188	183	184
45°	194	173	137	122	122	150
55°	120	104	78	68	68	108
65°	68	55	35	22	21	68
75°	30	21	7	2	1	32
85°	4	2	1	1	1	6
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°	385.6	385.6	385.6	385.6	385.6	385.6	385.6	385.6	385.6
2.5°	395.9	393.7	391.6	387.7	383.3	379.0	376.2	373.9	372.9
5°	406.8	404.1	399.2	391.0	382.7	375.1	369.1	365.2	363.6
7.5°	415.7	411.8	403.6	392.0	379.5	367.5	359.7	354.3	352.1
10°	419.0	414.6	403.6	388.3	372.4	357.6	346.5	341.1	338.3
12.5°	422.8	417.9	404.1	385.0	365.2	347.7	335.0	328.0	325.2
15°	426.6	420.0	403.6	380.0	356.4	336.2	322.4	315.3	312.0
17.5°	426.6	419.0	399.2	371.8	344.9	323.5	308.2	300.0	297.2
20°	419.0	410.1	388.7	358.6	330.1	307.0	292.2	284.0	280.7
22.5°	406.8	397.0	373.9	342.8	312.6	290.1	275.3	267.7	264.4
25°	391.0	381.1	357.0	324.7	294.5	272.0	258.3	251.2	247.9
27.5°	372.4	361.4	337.3	304.9	275.3	253.9	241.3	234.7	231.9
30°	349.4	338.9	315.3	283.5	255.0	235.2	223.7	217.7	215.5
32.5°	322.4	313.6	290.6	261.1	234.2	216.1	205.6	200.7	198.5
35°	294.5	286.2	266.0	238.5	214.4	197.4	187.5	184.2	183.1
37.5°	268.1	261.1	241.3	216.1	194.1	179.3	170.6	168.3	167.3
40°	240.7	235.8	217.7	194.7	174.3	161.3	154.1	152.5	152.5
42.5°	216.1	210.5	194.7	173.9	155.8	142.6	137.7	136.0	136.6
45°	193.6	188.1	173.3	154.1	136.6	125.5	121.8	121.8	121.8
47.5°	172.7	167.9	154.1	134.4	120.1	111.3	107.4	107.4	108.0
50°	153.5	150.2	134.9	117.9	105.3	97.1	94.3	93.8	94.9
52.5°	135.4	131.6	117.9	102.5	90.5	83.9	81.1	80.6	81.1
55°	120.1	115.7	103.7	88.9	77.8	71.2	68.1	67.5	68.5
57.5°	105.3	102.0	89.3	76.2	65.8	59.2	56.4	55.4	56.0
60°	91.6	88.3	76.8	64.2	54.9	48.3	44.4	43.4	43.8
62.5°	79.0	76.2	65.2	53.1	43.8	37.8	34.0	31.3	32.3
65°	67.5	64.8	54.9	42.8	34.6	28.0	22.5	20.3	20.8
67.5°	57.6	54.3	45.0	34.0	25.7	18.7	12.6	11.5	11.5
70°	47.7	44.4	36.2	26.3	18.1	9.9	5.5	5.5	5.5
72.5°	38.4	35.6	28.0	19.7	11.5	4.4	2.2	2.2	2.2
75°	29.6	27.4	20.8	13.7	7.2	2.2	1.6	1.1	1.1
77.5°	22.0	19.7	14.8	9.3	4.4	1.1	1.1	1.1	1.1
80°	14.8	13.2	9.9	5.5	2.2	0.6	0.6	0.6	0.6
82.5°	8.8	7.6	5.5	2.7	1.1	0.6	0.6	0.6	0.6
85°	4.4	3.3	2.2	1.1	0.6	0.6	0.6	0.6	0.6
87.5°	1.1	0.6	0.6	0.6	0.0	0.0	0.0	0.0	0.0
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)