

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: P581421

Luminaire Tested: **HC407D010-HM40525827-41RWWH**

Issue Date: 9/9/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P581421  
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: HC407D010-HM40525827-41RWWH  
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: 809.9 lumens  
Efficiency: N/A  
Efficacy: 101.2 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

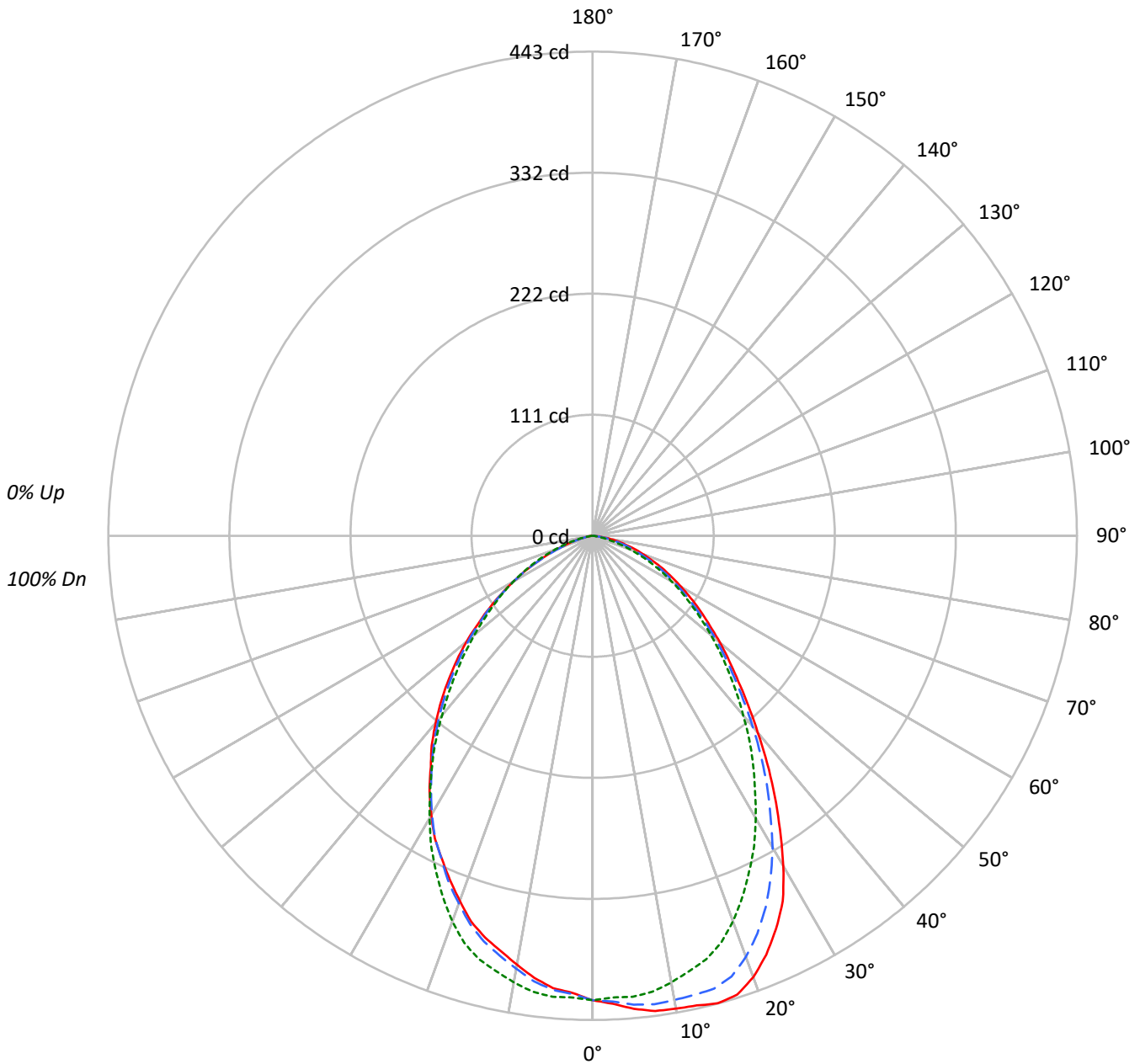
Input Watts (W): 8  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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

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

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

	0°	90°	180°
0°	52410	52410	52410
5°	53786	52412	51433
10°	55009	51966	49912
15°	56557	51219	48589
20°	56403	49263	46637
25°	54017	46123	44395
30°	49693	42486	42030
35°	43713	38548	38864
40°	37823	34506	35955
45°	32881	30666	32498
50°	29168	27038	28861
55°	25892	23720	24752
60°	23041	20574	20574
65°	20489	17103	16023
70°	17671	12911	11396
75°	14869	8578	7053
80°	11223	4120	3694
85°	5944	1415	1415



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	40.2	5.0
10°-20°	114.1	14.1
20°-30°	160.9	19.9
30°-40°	166.2	20.5
40°-50°	140.9	17.4
50°-60°	102.5	12.7
60°-70°	59.9	7.4
70°-80°	22.3	2.7
80°-90°	2.9	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°	315.2	38.9
0°-40°	481.4	59.4
0°-60°	724.8	89.5
0°-90°	809.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	809.9	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	425	425	425	425	425	
5°	434	431	423	417	415	42
15°	443	429	401	384	380	124
25°	397	375	339	327	326	182
35°	290	278	256	256	258	181
45°	188	183	176	182	186	147
55°	120	115	110	114	115	108
65°	70	64	59	55	55	70
75°	31	26	18	14	15	33
85°	4	3	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°	424.9	424.9	424.9	424.9	424.9	424.9	424.9	424.9	424.9
2.5°	428.6	427.5	426.5	424.9	422.8	421.2	419.6	418.6	418.6
5°	434.4	432.8	430.7	427.0	423.3	420.1	417.0	415.4	415.4
7.5°	438.6	436.5	432.3	427.0	420.7	415.9	411.2	409.1	408.0
10°	439.2	437.1	431.3	423.3	414.9	407.5	402.2	399.1	398.5
12.5°	440.2	437.6	430.2	419.1	408.0	399.1	393.3	390.1	389.0
15°	442.9	439.2	429.1	414.9	401.1	390.6	384.3	381.7	380.5
17.5°	440.2	434.9	422.8	405.9	390.6	379.0	372.7	370.0	370.0
20°	429.7	424.4	410.1	391.7	375.3	364.2	357.9	356.3	355.3
22.5°	414.9	409.1	393.7	374.3	357.9	347.9	343.7	341.5	340.9
25°	396.9	391.1	374.7	354.7	338.9	330.5	326.7	326.7	326.2
27.5°	376.9	369.5	352.6	335.1	319.9	313.5	311.9	311.9	312.5
30°	348.9	343.7	329.3	312.5	298.3	294.1	294.1	295.1	295.1
32.5°	318.9	315.1	302.5	287.7	276.5	273.9	275.1	277.1	277.7
35°	290.3	286.1	277.7	264.5	256.0	254.9	256.5	258.1	258.1
37.5°	262.3	258.1	252.3	241.7	235.5	235.9	238.1	240.1	241.7
40°	234.9	231.7	227.5	219.1	214.3	216.4	219.1	221.1	223.3
42.5°	210.6	207.5	204.3	197.9	194.8	197.4	200.6	202.7	204.8
45°	188.5	186.3	183.1	177.9	175.8	178.4	182.1	184.2	186.3
47.5°	169.4	168.4	164.2	159.4	158.3	161.0	164.2	166.8	168.4
50°	152.0	150.4	146.7	142.0	140.9	145.2	147.3	148.9	150.4
52.5°	135.1	133.5	129.3	125.1	125.1	128.3	129.8	130.4	132.0
55°	120.4	118.8	114.6	111.4	110.3	113.0	114.0	114.0	115.1
57.5°	106.6	105.0	100.8	97.1	96.6	98.2	98.2	98.2	98.7
60°	93.4	91.8	87.6	84.4	83.4	83.9	83.4	82.8	83.4
62.5°	81.3	79.7	75.4	71.8	70.8	70.8	69.2	68.6	69.2
65°	70.2	67.6	64.4	60.7	58.6	57.0	54.9	54.9	54.9
67.5°	59.1	57.0	53.3	49.6	47.0	44.4	41.2	42.2	42.8
70°	49.0	47.5	43.2	39.6	35.8	32.8	30.0	31.2	31.6
72.5°	40.2	38.0	34.3	30.0	27.0	22.6	21.2	22.2	22.2
75°	31.2	29.0	25.8	21.6	18.0	14.2	14.2	14.8	14.8
77.5°	23.2	21.2	18.0	14.2	11.0	8.4	9.0	9.0	9.0
80°	15.8	14.2	11.6	8.4	5.8	4.8	4.8	4.8	5.2
82.5°	9.0	8.0	6.4	4.2	2.6	2.6	2.6	2.6	2.6
85°	4.2	3.2	2.6	1.6	1.0	1.0	1.0	1.0	1.0
87.5°	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
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)