

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: P581529

Luminaire Tested: **HC407D010-HM40525935-41RWWH**

Issue Date: 9/9/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P581529  
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-HM40525935-41RWWH  
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, HAZE TRIM  
Light Source: (1) HIGH LUMEN LED 90CRI / 3500K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 812.0 lumens  
Efficiency: N/A  
Efficacy: 101.5 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

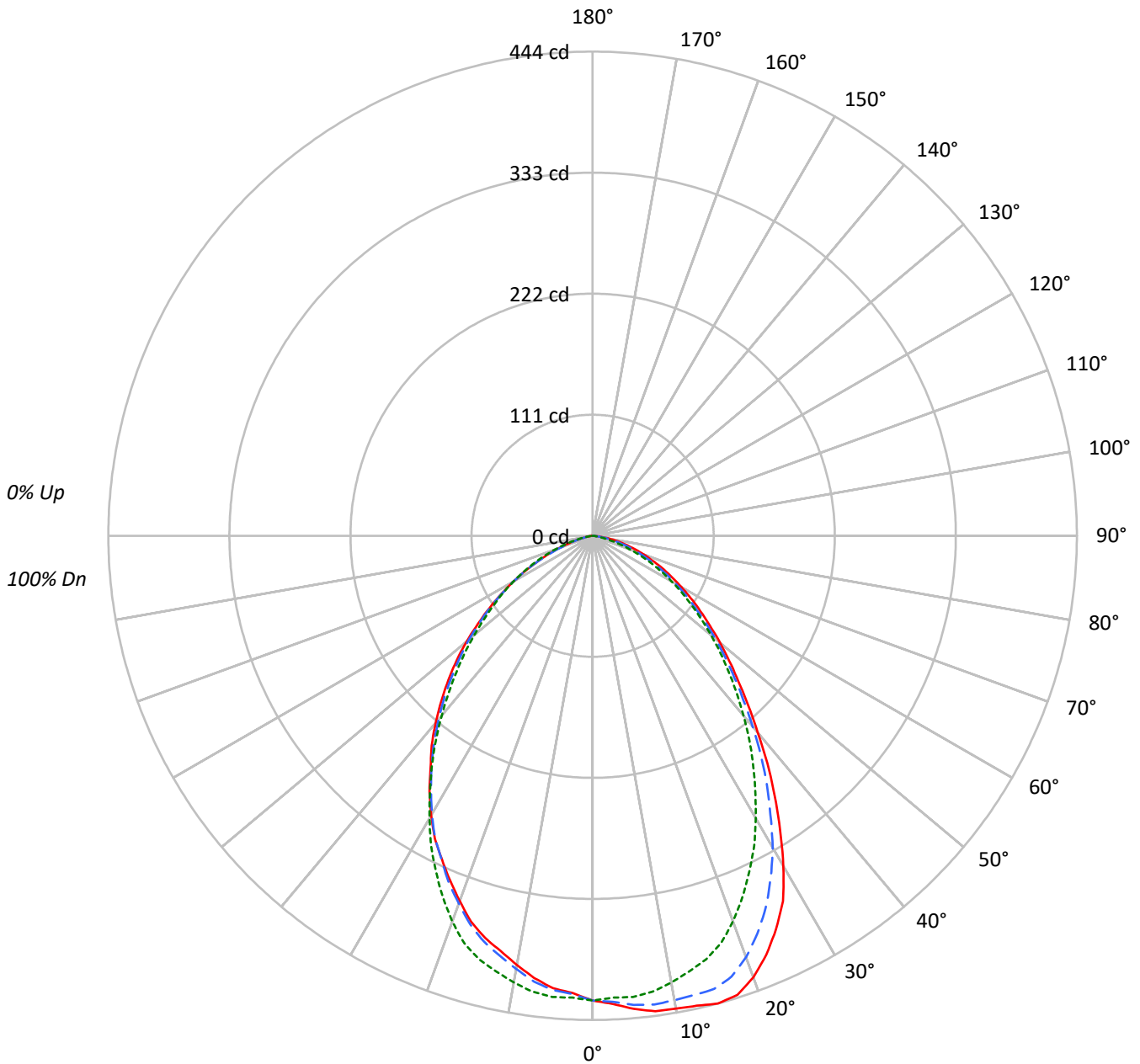
Input Watts (W): 8  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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

RF	20									20									20									20									
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°	52558	52558	52558
5°	53922	52560	51570
10°	55147	52091	50049
15°	56697	51360	48729
20°	56548	49394	46755
25°	54167	46246	44517
30°	49821	42600	42144
35°	43833	38653	38969
40°	37919	34602	36035
45°	32951	30753	32602
50°	29244	27114	28937
55°	25935	23784	24816
60°	23115	20623	20623
65°	20547	17132	16082
70°	17779	12983	11468
75°	14869	8578	7053
80°	11294	4120	3765
85°	5944	1415	1415



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	40.3	5.0
10°-20°	114.4	14.1
20°-30°	161.3	19.9
30°-40°	166.6	20.5
40°-50°	141.3	17.4
50°-60°	102.8	12.7
60°-70°	60.1	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°	316.0	38.9
0°-40°	482.7	59.4
0°-60°	726.7	89.5
0°-90°	812.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	812.0	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	426	426	426	426	426	
5°	436	432	424	418	416	42
15°	444	430	402	385	382	125
25°	398	376	340	328	327	182
35°	291	278	257	257	259	182
45°	189	184	176	182	187	147
55°	121	115	111	114	115	109
65°	70	64	59	55	55	70
75°	31	26	18	14	15	34
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°	426.1	426.1	426.1	426.1	426.1	426.1	426.1	426.1	426.1
2.5°	429.7	428.7	427.7	426.1	423.9	422.3	420.7	419.7	419.7
5°	435.5	433.9	431.9	428.1	424.5	421.3	418.1	416.5	416.5
7.5°	439.8	437.7	433.5	428.1	421.7	417.1	412.3	410.1	409.1
10°	440.3	438.2	432.4	424.5	415.9	408.5	403.3	400.1	399.6
12.5°	441.4	438.7	431.3	420.3	409.1	400.1	394.3	391.1	390.0
15°	444.0	440.3	430.3	415.9	402.2	391.6	385.3	382.6	381.6
17.5°	441.4	436.1	423.9	406.9	391.6	380.0	373.6	371.0	371.0
20°	430.8	425.5	411.2	392.7	376.3	365.2	358.8	357.2	356.2
22.5°	415.9	410.1	394.8	375.2	358.8	348.8	344.6	342.4	341.9
25°	398.0	392.2	375.8	355.6	339.8	331.3	327.6	327.6	327.1
27.5°	377.8	370.4	353.6	336.1	320.7	314.3	312.7	312.7	313.3
30°	349.8	344.6	330.2	313.3	299.1	294.7	294.7	295.9	295.9
32.5°	319.7	315.9	303.3	288.5	277.3	274.7	275.7	277.9	278.4
35°	291.1	286.9	278.4	265.2	256.7	255.6	257.2	258.8	258.8
37.5°	263.0	258.8	253.0	242.4	236.0	236.6	238.6	240.8	242.4
40°	235.5	232.4	228.1	219.6	214.9	217.0	219.6	221.8	223.8
42.5°	211.2	208.0	204.8	198.5	195.3	197.9	201.1	203.2	205.3
45°	188.9	186.9	183.7	178.3	176.3	178.9	182.5	184.7	186.9
47.5°	169.9	168.9	164.6	159.8	158.8	161.4	164.6	167.3	168.9
50°	152.4	150.8	147.1	142.4	141.3	145.6	147.7	149.2	150.8
52.5°	135.5	133.9	129.6	125.4	125.4	128.6	130.2	130.8	132.3
55°	120.6	119.0	114.8	111.6	110.6	113.2	114.4	114.4	115.4
57.5°	106.9	105.3	101.1	97.4	96.8	98.4	98.4	98.4	99.0
60°	93.7	92.1	87.9	84.7	83.6	84.1	83.6	83.1	83.6
62.5°	81.5	79.9	75.7	71.9	70.9	70.9	69.3	68.8	69.3
65°	70.4	67.7	64.5	60.9	58.7	57.1	55.1	55.1	55.1
67.5°	59.3	57.1	53.5	49.7	47.1	44.5	41.3	42.3	42.9
70°	49.3	47.7	43.4	39.7	36.0	32.8	30.2	31.2	31.8
72.5°	40.2	38.1	34.4	30.2	27.0	22.8	21.2	22.2	22.2
75°	31.2	29.1	25.9	21.7	18.0	14.3	14.3	14.8	14.8
77.5°	23.3	21.2	18.0	14.3	11.2	8.4	9.0	9.0	9.0
80°	15.9	14.3	11.6	8.4	5.8	4.8	4.8	4.8	5.3
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)