

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: P579751

Luminaire Tested: **HC410D010-HM40525840-41RWWC**

Issue Date: 9/9/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P579751  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2106-266-14)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 9/9/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO COMMERCIAL  
Catalog Number: HC410D010-HM40525840-41RWWC  
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, SPECULAR TRIM  
Light Source: (1) HIGH LUMEN LED 80CRI / 4000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1163.5 lumens  
Efficiency: N/A  
Efficacy: 117.5 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.15 / 1.21  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

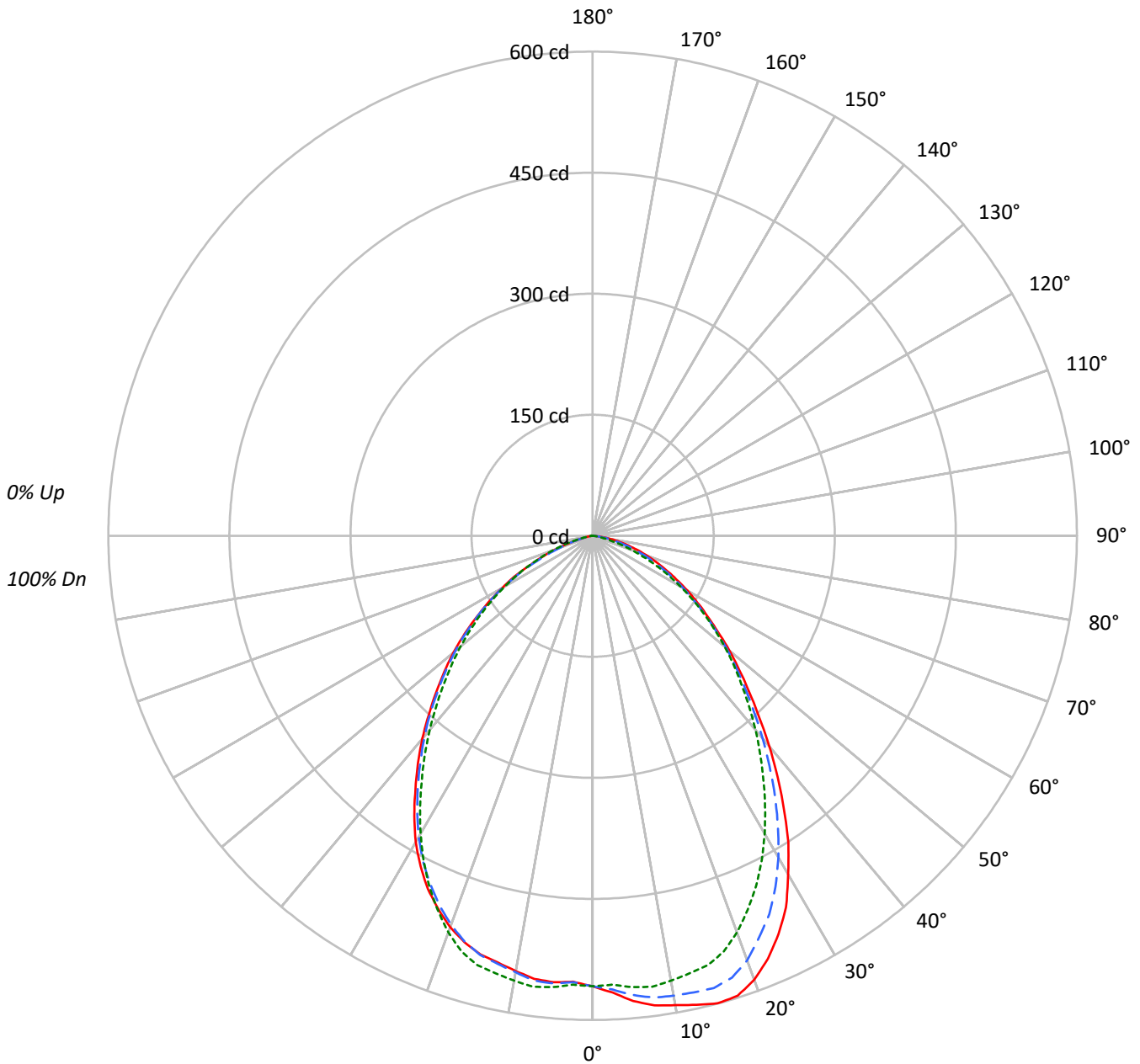
Input Watts (W): 9.9  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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

RF	20					20					20					20					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	103	100	108	105	102	99	101	98	96	97	95	93	93	92	90	88				88				
2	102	95	90	85	100	94	88	84	90	86	82	87	83	80	84	81	78	76				76				
3	95	85	78	73	92	84	77	72	81	75	71	78	74	70	76	72	69	67				67				
4	87	77	69	63	85	76	68	63	73	67	62	71	66	61	69	64	60	58				58				
5	81	70	61	56	79	68	61	55	66	60	55	65	59	54	63	58	54	52				52				
6	75	63	55	49	74	62	55	49	61	54	49	59	53	48	58	52	48	46				46				
7	70	58	50	44	69	57	49	44	56	49	44	54	48	44	53	47	43	41				41				
8	66	53	45	40	64	53	45	40	51	44	40	50	44	39	49	43	39	37				37				
9	62	49	42	36	60	49	41	36	47	41	36	46	40	36	45	40	36	34				34				
10	58	46	38	33	57	45	38	33	44	38	33	43	37	33	42	37	33	31				31				

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

	0°	90°	180°
0°	68864	68864	68864
5°	71653	69511	68755
10°	73984	70114	68599
15°	76593	70335	68599
20°	76854	68637	67744
25°	74146	65204	65721
30°	68978	60717	62440
35°	62158	55548	57596
40°	54794	50543	52846
45°	47900	45546	47778
50°	42427	40969	43156
55°	37311	36171	37633
60°	33328	30910	31823
65°	29303	25100	24691
70°	25569	18501	16878
75°	21207	11152	9007
80°	16053	4262	2699
85°	7359	1132	1132



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	53.8	4.6
10°-20°	157.1	13.5
20°-30°	227.6	19.6
30°-40°	240.1	20.6
40°-50°	207.8	17.9
50°-60°	153.9	13.2
60°-70°	88.8	7.6
70°-80°	31.0	2.7
80°-90°	3.3	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°	438.6	37.7
0°-40°	678.7	58.3
0°-60°	1040.5	89.4
0°-90°	1163.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1163.5	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	558	558	558	558	558	
5°	579	571	561	557	555	56
15°	600	580	551	538	537	169
25°	545	518	479	476	483	249
35°	413	394	369	377	382	258
45°	275	267	261	271	274	213
55°	174	170	168	174	175	157
65°	100	94	86	82	85	100
75°	44	38	23	19	19	48
85°	5	3	1	1	1	8
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°	558.3	558.3	558.3	558.3	558.3	558.3	558.3	558.3	558.3
2.5°	566.6	565.1	562.9	559.8	556.8	554.5	553.8	553.1	553.1
5°	578.7	575.7	571.2	565.1	561.4	559.1	556.8	555.3	555.3
7.5°	587.0	584.0	577.2	568.9	563.7	559.1	556.0	553.8	553.8
10°	590.7	587.0	578.7	568.1	559.8	553.8	549.3	547.7	547.7
12.5°	595.3	590.7	579.5	565.8	555.3	547.7	543.3	541.7	541.7
15°	599.8	594.5	580.2	564.3	550.8	541.7	537.9	537.2	537.2
17.5°	597.6	590.7	574.1	555.3	540.2	531.2	527.3	527.3	528.1
20°	585.5	578.7	559.8	538.7	522.9	516.1	513.0	514.6	516.1
22.5°	567.4	559.1	538.7	518.4	501.7	495.7	495.7	498.0	500.3
25°	544.8	537.2	517.6	494.9	479.1	474.5	476.1	479.9	482.9
27.5°	519.0	510.7	490.4	469.3	453.5	451.2	455.0	460.2	461.8
30°	484.3	477.6	460.2	439.8	426.3	425.5	430.8	434.6	438.4
32.5°	451.2	443.6	427.1	407.4	397.6	398.4	404.4	408.9	411.2
35°	412.8	405.9	393.9	378.0	368.9	370.4	377.2	381.8	382.5
37.5°	376.5	372.0	359.8	347.8	341.1	344.0	350.0	355.4	355.4
40°	340.3	336.5	327.4	317.6	313.9	317.6	323.6	328.2	328.2
42.5°	305.6	303.3	295.8	288.9	286.7	292.0	297.2	301.0	300.3
45°	274.6	272.3	267.1	261.9	261.1	266.3	270.8	273.1	273.9
47.5°	246.7	245.2	240.7	236.9	236.9	242.2	245.9	248.2	249.0
50°	221.1	219.5	215.8	212.8	213.5	218.8	221.8	224.1	224.9
52.5°	195.4	194.7	191.6	187.9	190.2	193.9	197.7	199.1	199.9
55°	173.5	173.5	169.8	166.7	168.2	172.1	174.3	175.0	175.0
57.5°	154.0	153.2	148.6	145.7	146.3	150.1	151.7	152.4	152.4
60°	135.1	134.3	129.7	125.3	125.3	127.5	128.3	129.0	129.0
62.5°	117.0	116.2	111.0	107.1	105.6	104.9	104.9	106.4	109.4
65°	100.4	99.6	94.3	88.3	86.0	83.8	81.5	83.0	84.6
67.5°	85.2	83.8	78.5	73.2	67.9	64.2	60.3	62.6	65.7
70°	70.9	69.4	63.4	57.4	51.3	45.3	42.2	45.3	46.8
72.5°	57.4	55.9	49.8	43.8	36.2	30.2	29.5	30.2	31.0
75°	44.5	43.8	37.7	31.0	23.4	18.9	18.9	18.9	18.9
77.5°	33.2	31.6	25.6	19.6	13.5	10.6	9.8	9.8	9.8
80°	22.6	21.2	15.8	11.3	6.0	4.6	4.6	3.8	3.8
82.5°	12.9	12.1	8.3	4.6	2.3	1.5	1.5	1.5	1.5
85°	5.2	4.6	3.1	1.5	0.8	0.8	0.8	0.8	0.8
87.5°	0.8	0.8	0.8	0.0	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



Report Generated By 670245859 / DESKTOP-HRDQ47P







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







(END OF REPORT)