

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: P579809

Luminaire Tested: **HC410D010-HM40525935-41WWWB**

Issue Date: 9/9/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P579809  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2106-266-18)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 9/9/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO COMMERCIAL  
Catalog Number: HC410D010-HM40525935-41WWWB  
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, BLACK BAFFLE TRIM  
Light Source: (1) HIGH LUMEN LED 90CRI / 3500K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

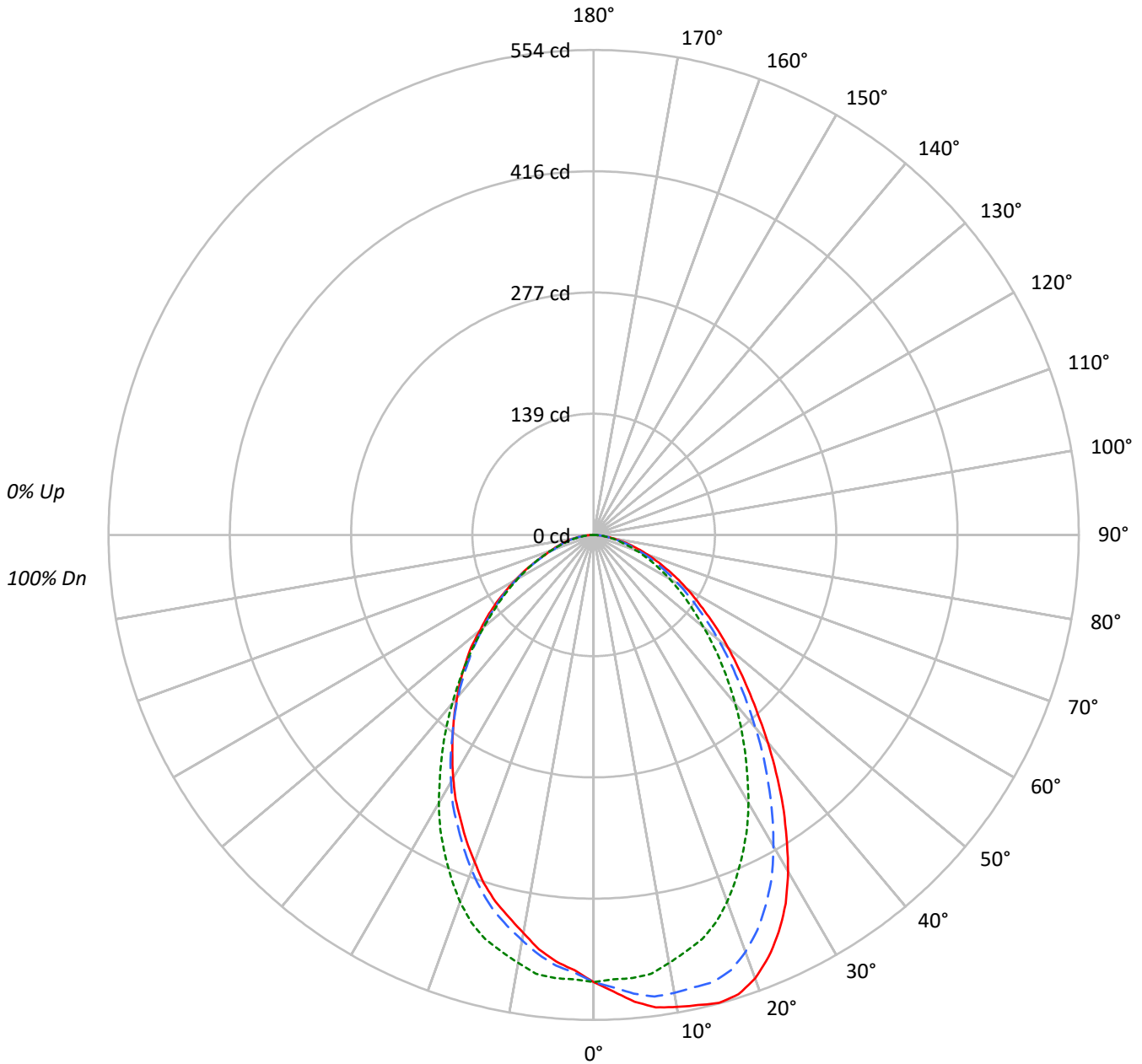
Lumens per Lamp: N/A  
Luminaire Lumens: 990.8 lumens  
Efficiency: N/A  
Efficacy: 100.1 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.07 / 1.15  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 9.9  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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								
1	110	106	103	99	108	104	101	98	100	97	95	96	94	92	92	91	89	87								
2	102	95	89	84	99	93	87	83	89	85	81	86	82	79	83	80	77	75								
3	94	85	77	72	92	83	76	71	80	75	70	78	73	69	75	71	68	66								
4	87	76	68	62	85	75	68	62	72	66	61	70	65	60	68	63	60	58								
5	81	69	61	55	79	68	60	55	66	59	54	64	58	53	62	57	53	51								
6	75	63	55	49	73	62	54	49	60	53	48	59	53	48	57	52	47	46								
7	70	58	50	44	68	57	49	44	55	48	43	54	48	43	53	47	43	41								
8	65	53	45	40	64	52	45	40	51	44	39	50	44	39	49	43	39	37								
9	61	49	41	36	60	48	41	36	47	41	36	46	40	36	45	40	36	34								
10	58	45	38	33	57	45	38	33	44	38	33	43	37	33	42	37	33	31								

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

	0°	90°	180°
0°	63005	63005	63005
5°	66267	62924	60571
10°	68586	62186	57827
15°	70680	61052	55357
20°	70763	58543	52163
25°	68103	54725	48913
30°	63238	50348	45676
35°	56692	45324	42267
40°	49738	40447	39063
45°	43470	35812	36021
50°	38398	31336	32468
55°	33848	27784	29203
60°	30269	24595	25582
65°	26793	21627	21627
70°	23442	18465	18465
75°	20016	15632	17538
80°	15840	13993	15840
85°	10190	12029	14860



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	48.4	4.9
10°-20°	136.3	13.8
20°-30°	191.0	19.3
30°-40°	196.7	19.9
40°-50°	167.5	16.9
50°-60°	124.1	12.5
60°-70°	77.9	7.9
70°-80°	38.7	3.9
80°-90°	10.2	1.0
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°	375.7	37.9
0°-40°	572.4	57.8
0°-60°	864.1	87.2
0°-90°	990.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	990.8	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	511	511	511	511	511	
5°	535	526	508	494	489	51
15°	554	529	478	443	434	156
25°	500	466	402	367	359	229
35°	376	348	301	281	281	235
45°	249	232	205	201	206	193
55°	157	145	129	132	136	142
65°	92	83	74	73	74	92
75°	42	37	33	35	37	45
85°	7	7	8	10	10	9
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°	510.8	510.8	510.8	510.8	510.8	510.8	510.8	510.8	510.8
2.5°	522.0	520.1	517.4	512.9	508.2	504.4	500.4	498.4	497.8
5°	535.2	531.2	526.0	517.4	508.2	500.4	493.9	490.6	489.2
7.5°	544.3	540.4	531.9	518.8	505.6	493.9	483.3	478.8	477.5
10°	547.6	543.1	531.2	513.5	496.5	482.1	470.2	464.3	461.7
12.5°	550.2	544.3	529.3	508.2	487.3	469.5	457.1	449.3	447.2
15°	553.5	546.9	528.6	503.0	478.1	457.1	443.4	436.1	433.5
17.5°	550.2	543.1	521.4	492.5	464.3	441.4	426.3	419.7	417.1
20°	539.1	531.2	507.0	476.1	446.0	422.3	407.3	400.7	397.4
22.5°	522.0	513.5	488.5	455.8	424.9	402.1	387.6	381.0	379.1
25°	500.4	491.8	465.7	432.2	402.1	379.8	367.2	361.3	359.4
27.5°	474.8	466.4	440.7	408.0	379.1	358.1	348.2	342.3	341.1
30°	444.0	435.5	410.6	380.4	353.5	333.8	325.9	321.4	320.7
32.5°	409.9	402.7	379.8	352.2	326.6	310.2	304.3	301.0	300.3
35°	376.5	368.6	348.2	323.3	301.0	286.5	281.3	280.7	280.7
37.5°	342.3	334.5	318.1	295.1	276.1	263.0	261.1	261.6	261.6
40°	308.9	301.7	287.2	268.2	251.2	241.4	240.7	242.1	242.6
42.5°	277.4	271.5	258.4	242.1	227.6	219.7	220.3	222.9	225.0
45°	249.2	244.0	232.2	217.7	205.3	199.4	201.3	204.6	206.5
47.5°	223.6	219.1	207.9	194.8	184.2	180.4	183.0	186.9	189.6
50°	200.1	196.1	185.6	171.8	163.3	160.7	164.0	167.9	169.2
52.5°	179.0	175.1	164.0	152.2	145.6	144.3	147.6	150.9	152.8
55°	157.4	154.1	145.0	134.4	129.2	128.6	131.8	134.4	135.8
57.5°	139.7	136.4	127.9	118.7	114.1	113.5	116.8	118.7	119.4
60°	122.7	119.4	111.5	103.0	99.7	99.7	101.6	103.0	103.7
62.5°	106.9	103.7	96.4	89.2	86.6	86.6	86.6	87.2	89.2
65°	91.8	89.2	82.6	76.1	74.1	72.8	72.8	72.8	74.1
67.5°	78.1	75.4	70.2	64.3	62.2	60.3	59.6	61.0	61.0
70°	65.0	62.9	57.7	53.1	51.2	49.2	48.5	51.2	51.2
72.5°	53.1	51.2	47.9	43.2	41.3	40.6	42.0	43.2	43.9
75°	42.0	40.1	37.3	34.7	32.8	33.5	35.4	36.1	36.8
77.5°	31.5	30.8	28.2	26.3	26.3	26.9	28.2	29.5	30.2
80°	22.3	21.6	20.4	19.0	19.7	20.9	21.6	23.0	22.3
82.5°	13.8	13.8	13.1	13.1	13.8	15.1	15.7	16.4	17.1
85°	7.2	7.2	7.2	7.9	8.5	9.2	9.8	10.5	10.5
87.5°	1.9	2.6	2.6	3.3	4.0	4.0	4.6	4.6	4.6
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)