

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: P579917

Luminaire Tested: **HC415D010-HM40525927-41WWWB**

Issue Date: 9/9/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P579917  
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: HC415D010-HM40525927-41WWWB  
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, BLACK BAFFLE TRIM  
Light Source: (1) HIGH LUMEN LED 90CRI / 2700K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1149.5 lumens  
Efficiency: N/A  
Efficacy: 82.1 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

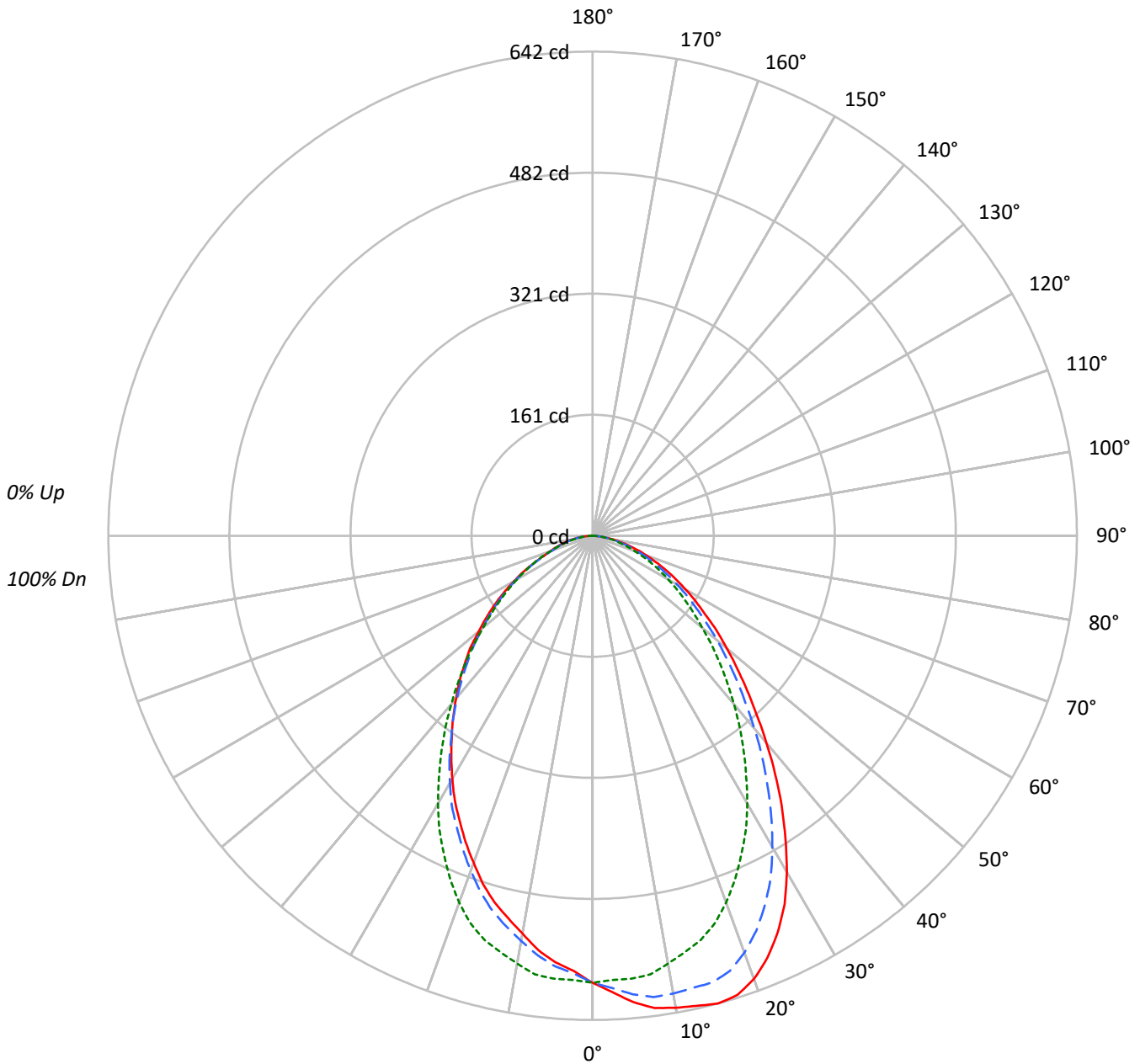
Input Watts (W): 14  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	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°	73107	73107	73107
5°	76878	73002	70278
10°	79583	72143	67083
15°	82007	70821	64219
20°	82104	67915	60525
25°	79018	63476	56739
30°	73364	58409	52983
35°	65757	52597	49028
40°	57708	46920	45326
45°	50430	41551	41813
50°	44538	36344	37688
55°	39267	32235	33870
60°	35079	28518	29652
65°	31083	25100	25100
70°	27192	21422	21422
75°	23209	18157	20302
80°	18397	16266	18397
85°	11888	14011	17266



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	56.2	4.9
10°-20°	158.1	13.8
20°-30°	221.6	19.3
30°-40°	228.3	19.9
40°-50°	194.3	16.9
50°-60°	144.0	12.5
60°-70°	90.4	7.9
70°-80°	44.9	3.9
80°-90°	11.8	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°	435.9	37.9
0°-40°	664.1	57.8
0°-60°	1002.4	87.2
0°-90°	1149.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1149.5	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	593	593	593	593	593	
5°	621	610	590	573	568	60
15°	642	613	555	514	503	181
25°	581	540	466	426	417	266
35°	437	404	349	326	326	272
45°	289	269	238	234	240	224
55°	183	168	150	153	158	165
65°	106	96	86	84	86	106
75°	49	43	38	41	43	52
85°	8	8	10	11	12	11
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°	592.7	592.7	592.7	592.7	592.7	592.7	592.7	592.7	592.7
2.5°	605.7	603.4	600.3	595.0	589.6	585.1	580.6	578.3	577.5
5°	620.9	616.3	610.2	600.3	589.6	580.6	572.9	569.2	567.6
7.5°	631.5	626.9	617.0	601.8	586.6	572.9	560.8	555.4	553.9
10°	635.4	630.0	616.3	595.8	576.0	559.3	545.5	538.7	535.6
12.5°	638.4	631.5	614.0	589.6	565.3	544.7	530.3	521.2	518.9
15°	642.2	634.6	613.3	583.6	554.6	530.3	514.4	506.0	502.9
17.5°	638.4	630.0	604.9	571.5	538.7	512.1	494.6	487.0	483.9
20°	625.5	616.3	588.2	552.4	517.4	490.0	472.5	464.9	461.1
22.5°	605.7	595.8	566.8	528.8	493.0	466.4	449.7	442.1	439.8
25°	580.6	570.7	540.2	501.4	466.4	440.6	426.0	419.2	416.9
27.5°	550.9	541.0	511.3	473.2	439.8	415.5	404.0	397.2	395.7
30°	515.1	505.2	476.3	441.3	410.1	387.3	378.2	372.8	372.0
32.5°	475.5	467.2	440.6	408.6	379.0	359.9	353.0	349.3	348.5
35°	436.7	427.6	404.0	375.1	349.3	332.5	326.4	325.6	325.6
37.5°	397.2	388.1	369.1	342.4	320.3	305.1	302.8	303.6	303.6
40°	358.4	350.0	333.3	311.2	291.4	280.0	279.2	280.7	281.5
42.5°	321.9	314.9	299.8	280.7	264.0	254.9	255.6	258.7	260.9
45°	289.1	283.0	269.4	252.6	238.2	231.3	233.5	237.4	239.7
47.5°	259.5	254.1	241.2	226.0	213.8	209.2	212.3	216.8	219.9
50°	232.1	227.5	215.3	199.3	189.4	186.5	190.2	194.8	196.4
52.5°	207.7	203.2	190.2	176.6	169.0	167.4	171.2	175.0	177.3
55°	182.6	178.9	168.2	156.0	149.9	149.2	152.9	156.0	157.5
57.5°	162.0	158.3	148.4	137.7	132.3	131.7	135.4	137.7	138.5
60°	142.2	138.5	129.4	119.5	115.6	115.6	117.9	119.5	120.2
62.5°	124.0	120.2	111.9	103.5	100.4	100.4	100.4	101.2	103.5
65°	106.5	103.5	95.8	88.2	86.0	84.5	84.5	84.5	86.0
67.5°	90.5	87.5	81.4	74.6	72.3	70.0	69.2	70.7	70.7
70°	75.4	73.0	67.0	61.6	59.4	57.1	56.3	59.4	59.4
72.5°	61.6	59.4	55.6	50.3	48.0	47.2	48.7	50.3	50.9
75°	48.7	46.4	43.3	40.4	38.1	38.8	41.0	41.8	42.6
77.5°	36.5	35.8	32.7	30.5	30.5	31.2	32.7	34.2	35.0
80°	25.9	25.1	23.5	22.1	22.9	24.3	25.1	26.6	25.9
82.5°	16.0	16.0	15.2	15.2	16.0	17.5	18.3	19.0	19.8
85°	8.4	8.4	8.4	9.1	9.9	10.7	11.4	12.2	12.2
87.5°	2.3	3.1	3.1	3.8	4.5	4.5	5.3	5.3	5.3
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)