

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: P581097

Luminaire Tested: **HC405D010-HM40525935-41RWWH**

Issue Date: 9/9/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P581097  
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: HC405D010-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: 614.1 lumens  
Efficiency: N/A  
Efficacy: 102.3 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

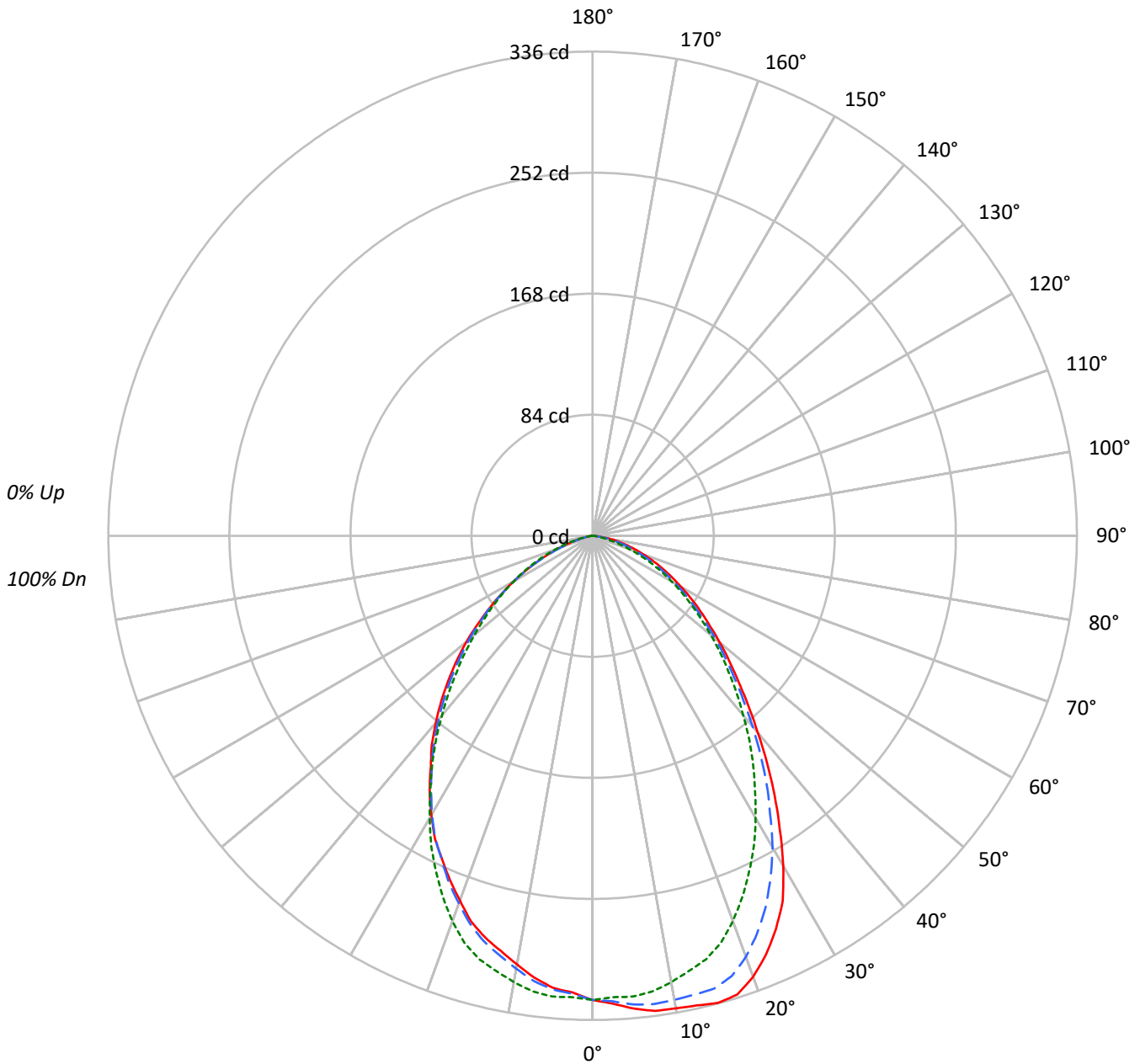
Input Watts (W): 6  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	39730	39730	39730
5°	40785	39745	39002
10°	41708	39391	37838
15°	42868	38845	36841
20°	42752	37344	35349
25°	40952	34977	33657
30°	37686	32203	31861
35°	33142	29227	29468
40°	28677	26149	27244
45°	24927	23235	24648
50°	22106	20494	21895
55°	19634	17978	18774
60°	17466	15591	15591
65°	15527	12959	12171
70°	13416	9809	8691
75°	11247	6481	5338
80°	8524	3125	2841
85°	4529	1132	1132



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	30.5	5.0
10°-20°	86.5	14.1
20°-30°	122.0	19.9
30°-40°	126.0	20.5
40°-50°	106.8	17.4
50°-60°	77.7	12.7
60°-70°	45.4	7.4
70°-80°	16.9	2.7
80°-90°	2.2	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°	239.0	38.9
0°-40°	365.0	59.4
0°-60°	549.5	89.5
0°-90°	614.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	614.1	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	322	322	322	322	322	
5°	329	326	321	316	315	32
15°	336	325	304	291	288	94
25°	301	284	257	248	247	138
35°	220	210	194	194	196	137
45°	143	139	133	138	141	111
55°	91	87	84	86	87	82
65°	53	49	44	42	42	53
75°	24	20	14	11	11	25
85°	3	2	1	1	1	4
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°	322.1	322.1	322.1	322.1	322.1	322.1	322.1	322.1	322.1
2.5°	325.0	324.2	323.4	322.1	320.5	319.4	318.1	317.3	317.3
5°	329.4	328.1	326.5	323.7	321.0	318.6	316.1	315.0	315.0
7.5°	332.6	331.0	327.8	323.7	318.9	315.3	311.8	310.2	309.3
10°	333.0	331.3	327.0	321.0	314.5	308.9	305.0	302.6	302.1
12.5°	333.8	331.8	326.2	317.8	309.3	302.6	298.2	295.8	295.0
15°	335.7	333.0	325.4	314.5	304.2	296.1	291.4	289.3	288.5
17.5°	333.8	329.7	320.5	307.7	296.1	287.4	282.5	280.6	280.6
20°	325.7	321.8	311.0	296.9	284.5	276.1	271.4	270.1	269.3
22.5°	314.5	310.2	298.5	283.8	271.4	263.8	260.5	258.9	258.6
25°	300.9	296.6	284.1	268.9	257.0	250.5	247.8	247.8	247.3
27.5°	285.7	280.1	267.3	254.1	242.5	237.7	236.5	236.5	236.9
30°	264.6	260.5	249.7	236.9	226.1	222.9	222.9	223.7	223.7
32.5°	241.8	238.9	229.3	218.1	209.7	207.7	208.5	210.1	210.5
35°	220.1	216.9	210.5	200.4	194.1	193.3	194.5	195.7	195.7
37.5°	198.9	195.7	191.2	183.3	178.5	178.9	180.5	182.1	183.3
40°	178.1	175.7	172.5	166.1	162.4	164.1	166.1	167.6	169.2
42.5°	159.7	157.3	154.9	150.0	147.7	149.7	152.1	153.7	155.3
45°	142.9	141.3	138.8	134.8	133.2	135.3	138.0	139.7	141.3
47.5°	128.5	127.7	124.5	120.9	120.1	122.0	124.5	126.4	127.7
50°	115.2	114.1	111.2	107.6	106.8	110.1	111.7	112.8	114.1
52.5°	102.5	101.2	98.1	94.9	94.9	97.3	98.4	98.9	100.0
55°	91.3	90.0	86.8	84.4	83.6	85.7	86.5	86.5	87.3
57.5°	80.8	79.7	76.4	73.7	73.2	74.5	74.5	74.5	74.8
60°	70.8	69.6	66.4	64.0	63.2	63.7	63.2	62.9	63.2
62.5°	61.6	60.4	57.2	54.5	53.6	53.6	52.4	52.0	52.4
65°	53.2	51.2	48.8	46.0	44.4	43.2	41.7	41.7	41.7
67.5°	44.8	43.2	40.4	37.6	35.6	33.6	31.2	32.0	32.5
70°	37.2	36.0	32.8	30.0	27.2	24.9	22.8	23.6	24.1
72.5°	30.4	28.8	26.0	22.8	20.4	17.3	16.0	16.8	16.8
75°	23.6	22.0	19.6	16.5	13.6	10.8	10.8	11.2	11.2
77.5°	17.6	16.0	13.6	10.8	8.4	6.4	6.8	6.8	6.8
80°	12.0	10.8	8.9	6.4	4.4	3.6	3.6	3.6	4.0
82.5°	6.8	6.0	4.8	3.2	2.0	2.0	2.0	2.0	2.0
85°	3.2	2.4	2.0	1.2	0.8	0.8	0.8	0.8	0.8
87.5°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
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)