

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: P581027

Luminaire Tested: **HC405D010-HM40525835-41WWW**

Issue Date: 9/9/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P581027  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2106-266-16)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 9/9/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO COMMERCIAL  
Catalog Number: HC405D010-HM40525835-41WWW  
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, WHITE TRIM  
Light Source: (1) HIGH LUMEN LED 80CRI / 3500K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 680.3 lumens  
Efficiency: N/A  
Efficacy: 113.4 lumens/watt  
Spacing Criteria (0/90/45): 1.06 / 1.03 / 1.1  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

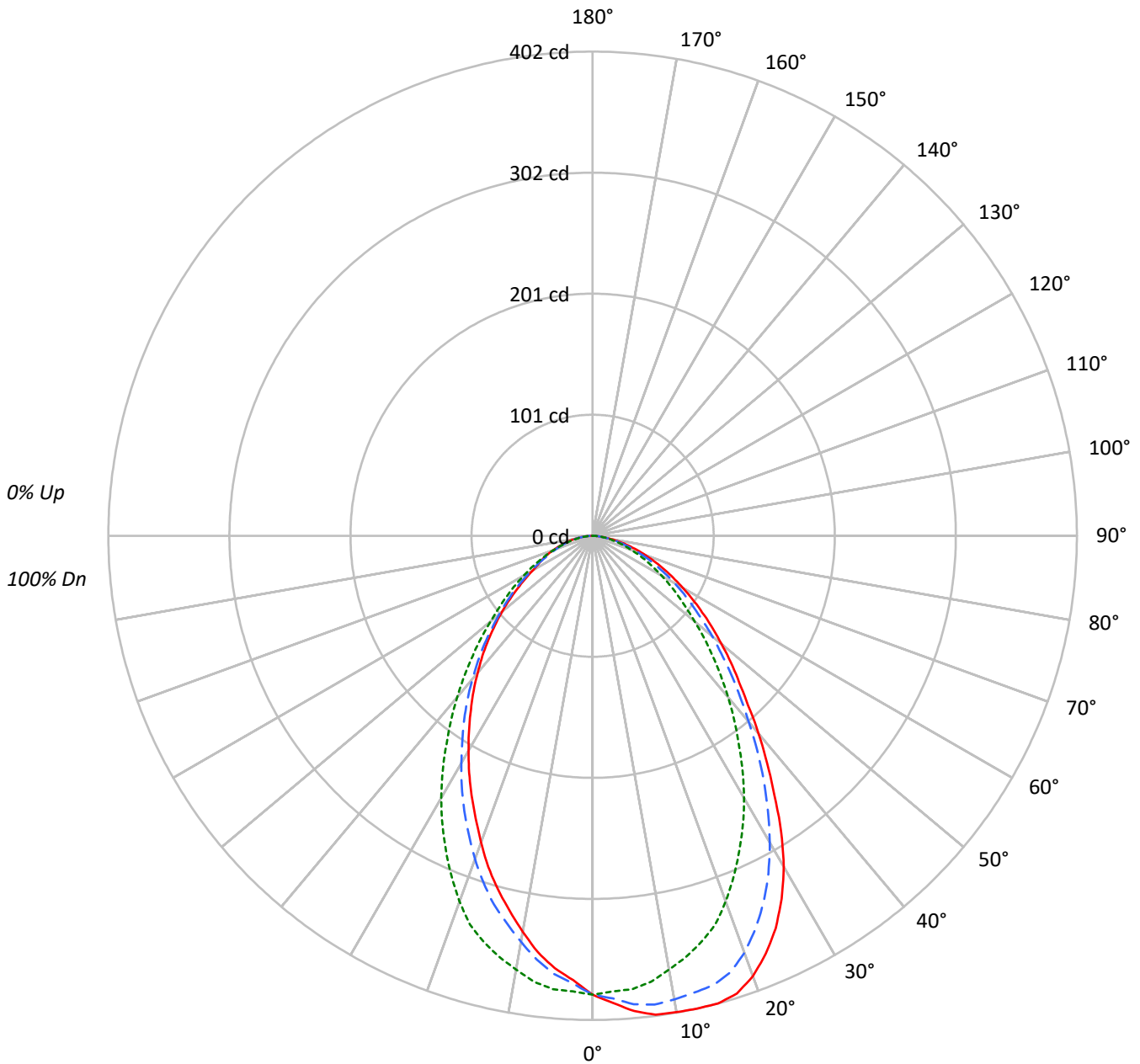
Input Watts (W): 6  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P581027

CATALOG NUMBER: HC405D010-HM40525835-41WWW

### Luminous Intensity Polar Plot





TEST NUMBER: P581027

CATALOG NUMBER: HC405D010-HM40525835-41WWW

**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			100																
1	111	106	103	100	108	104	101	98	100	97	95	96	94	92	93	91	89	87			87																
2	102	95	89	84	100	93	88	83	90	85	81	87	83	80	84	81	78	76			76																
3	94	85	78	72	92	84	77	72	81	75	71	78	73	69	76	72	68	66			66																
4	87	77	69	63	85	76	68	63	73	67	62	71	66	61	69	64	60	58			58																
5	81	70	62	56	79	69	61	56	67	60	55	65	59	54	63	58	54	52			52																
6	76	64	56	50	74	63	55	50	61	54	49	59	53	49	58	53	48	47			47																
7	71	58	50	45	69	58	50	45	56	49	44	55	49	44	53	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	42	37	47	41	37	46	41	37	35			35																
10	59	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°	46995	46995	46995
5°	49056	46778	44624
10°	50300	45803	41820
15°	51334	44579	38794
20°	51074	42411	35533
25°	48927	39223	32337
30°	45192	35806	29312
35°	39617	31862	26532
40°	34506	28146	23879
45°	30021	24543	21351
50°	26750	21146	18844
55°	23892	18602	16279
60°	21339	16257	14061
65°	18971	14243	13338
70°	16661	12262	12442
75°	14106	10485	11533
80°	10797	8950	10513
85°	6227	6935	8774



TEST NUMBER: P581027

CATALOG NUMBER: HC405D010-HM40525835-41WWW

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	35.7	5.2
10°-20°	98.5	14.5
20°-30°	134.6	19.8
30°-40°	135.1	19.9
40°-50°	111.8	16.4
50°-60°	81.0	11.9
60°-70°	51.3	7.5
70°-80°	25.9	3.8
80°-90°	6.3	0.9
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°	268.8	39.5
0°-40°	404.0	59.4
0°-60°	596.8	87.7
0°-90°	680.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	680.3	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	381	381	381	381	381	
5°	396	390	378	365	360	38
15°	402	386	349	317	304	113
25°	360	336	288	252	238	164
35°	263	247	212	186	176	165
45°	172	162	141	127	122	134
55°	111	101	86	79	76	100
65°	65	58	49	44	46	65
75°	30	26	22	23	24	32
85°	4	4	5	6	6	6
90°	0	0	0	0	0	



TEST NUMBER: P581027

CATALOG NUMBER: HC405D010-HM40525835-41WWW

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	381.0	381.0	381.0	381.0	381.0	381.0	381.0	381.0	381.0
2.5°	388.2	386.8	384.5	381.9	378.7	375.1	372.1	370.2	369.3
5°	396.2	394.4	390.4	384.5	377.8	371.1	365.4	361.7	360.4
7.5°	401.1	398.5	392.6	383.6	373.4	363.5	355.0	350.0	348.7
10°	401.6	398.5	390.9	378.7	365.7	352.8	342.4	335.3	333.9
12.5°	402.0	398.0	388.6	374.3	358.1	342.0	329.5	321.0	318.7
15°	402.0	398.0	386.4	369.3	349.1	330.7	316.9	307.0	303.8
17.5°	398.5	394.0	380.1	360.4	338.5	317.8	301.7	291.4	288.2
20°	389.1	384.1	368.4	347.0	323.1	301.7	285.6	274.8	270.7
22.5°	375.6	369.8	353.2	329.9	306.1	284.2	268.5	257.3	253.7
25°	359.5	353.7	335.7	312.8	288.2	267.6	251.9	241.6	237.6
27.5°	339.7	333.5	316.0	293.2	270.2	249.7	235.3	225.9	221.9
30°	317.3	310.6	294.1	272.1	251.4	231.8	217.8	210.2	205.8
32.5°	291.4	285.6	270.7	251.1	231.8	212.9	201.2	194.5	190.9
35°	263.1	259.9	247.4	230.4	211.6	195.9	185.6	179.3	176.2
37.5°	238.0	234.8	224.2	209.7	193.2	178.9	170.4	164.9	162.3
40°	214.3	211.6	201.2	189.2	174.8	162.3	155.0	151.1	148.3
42.5°	190.9	189.5	181.0	169.9	157.3	146.5	140.7	137.6	135.4
45°	172.1	170.4	162.3	151.5	140.7	131.8	126.9	124.6	122.4
47.5°	155.5	153.3	144.8	135.4	125.5	117.5	112.9	110.7	109.9
50°	139.4	137.1	129.5	120.1	110.2	104.4	100.9	98.6	98.2
52.5°	125.1	122.8	114.3	105.3	97.7	92.7	89.7	87.4	86.5
55°	111.1	108.5	101.2	92.7	86.5	82.1	78.9	76.6	75.7
57.5°	98.6	95.9	89.7	81.6	75.7	71.7	69.0	66.7	65.9
60°	86.5	84.2	78.4	70.8	65.9	62.3	59.6	57.8	57.0
62.5°	75.3	73.5	67.6	60.9	57.0	53.8	51.5	49.7	50.6
65°	65.0	63.2	57.8	52.0	48.8	45.7	43.9	43.9	45.7
67.5°	55.2	53.3	48.8	43.9	41.2	39.0	37.7	39.0	40.3
70°	46.2	44.4	40.3	36.3	34.0	32.2	32.2	33.6	34.5
72.5°	37.7	35.9	32.7	29.6	27.8	26.4	27.8	28.7	29.6
75°	29.6	28.3	25.5	23.3	22.0	21.6	22.8	23.7	24.2
77.5°	22.0	21.1	19.3	17.5	16.6	17.0	18.4	18.8	19.3
80°	15.2	14.8	13.4	12.6	12.6	13.1	13.8	14.3	14.8
82.5°	9.4	9.4	8.5	8.1	8.5	9.4	9.9	10.3	10.3
85°	4.4	4.9	4.4	4.4	4.9	5.8	5.8	6.2	6.2
87.5°	1.4	1.4	1.8	1.8	2.3	2.3	2.3	2.3	2.7
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)