

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: P592543

Luminaire Tested: **HC405D010-HM40525850-41RWWC**

Issue Date: 9/9/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P592543  
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: HC405D010-HM40525850-41RWWC  
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, SPECULAR TRIM  
Light Source: (1) HIGH LUMEN LED 80CRI / 5000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 710.2 lumens  
Efficiency: N/A  
Efficacy: 118.4 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

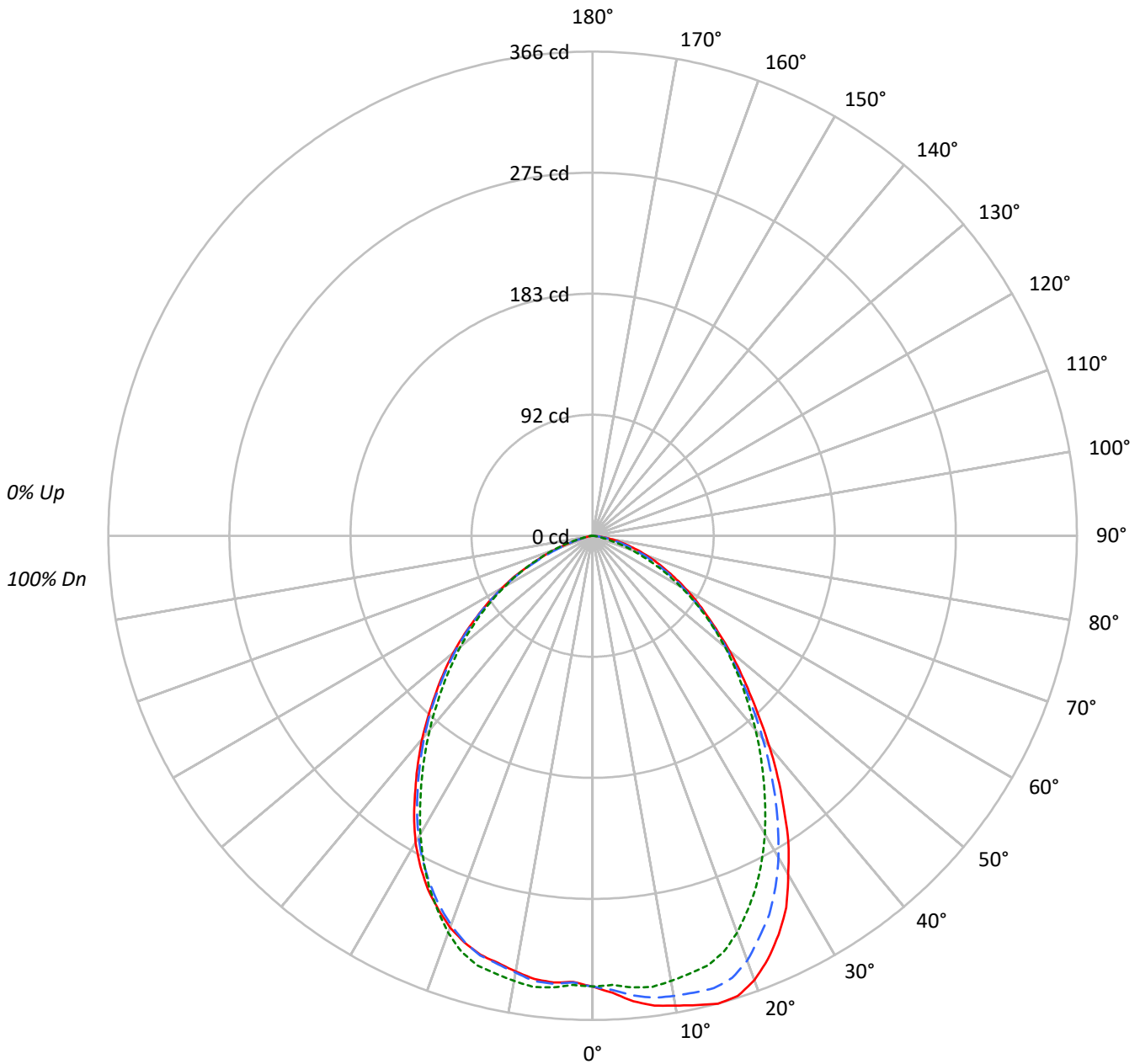
Input Watts (W): 6  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	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	62	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°	42036	42036	42036
5°	43732	42432	41974
10°	45165	42797	41883
15°	46763	42932	41872
20°	46913	41899	41361
25°	45266	39808	40121
30°	42116	37074	38114
35°	37945	33910	35160
40°	33443	30851	32252
45°	29236	27805	29166
50°	25905	25003	26328
55°	22773	22085	22967
60°	20327	18872	19439
65°	17891	15352	15031
70°	15580	11288	10314
75°	12915	6815	5481
80°	9802	2557	1634
85°	4529	708	708



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	32.9	4.6
10°-20°	95.9	13.5
20°-30°	138.9	19.6
30°-40°	146.6	20.6
40°-50°	126.9	17.9
50°-60°	94.0	13.2
60°-70°	54.2	7.6
70°-80°	18.9	2.7
80°-90°	2.0	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°	267.7	37.7
0°-40°	414.3	58.3
0°-60°	635.1	89.4
0°-90°	710.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	710.2	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	341	341	341	341	341	
5°	353	349	343	340	339	34
15°	366	354	336	328	328	103
25°	333	316	292	291	295	152
35°	252	240	225	230	234	157
45°	168	163	159	165	167	130
55°	106	104	103	106	107	96
65°	61	58	53	50	52	61
75°	27	23	14	12	12	29
85°	3	2	0	0	0	5
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°	340.8	340.8	340.8	340.8	340.8	340.8	340.8	340.8	340.8
2.5°	345.8	344.9	343.6	341.7	339.9	338.6	338.0	337.5	337.5
5°	353.2	351.4	348.7	344.9	342.7	341.3	339.9	339.0	339.0
7.5°	358.3	356.5	352.3	347.3	344.0	341.3	339.5	338.0	338.0
10°	360.6	358.3	353.2	346.9	341.7	338.0	335.3	334.4	334.4
12.5°	363.4	360.6	353.7	345.4	339.0	334.4	331.6	330.7	330.7
15°	366.2	363.0	354.1	344.5	336.2	330.7	328.4	327.9	327.9
17.5°	364.8	360.6	350.5	339.0	329.7	324.3	321.9	321.9	322.3
20°	357.4	353.2	341.7	328.8	319.2	315.1	313.1	314.1	315.1
22.5°	346.3	341.3	328.8	316.4	306.2	302.6	302.6	304.0	305.3
25°	332.6	327.9	316.0	302.1	292.5	289.7	290.6	292.9	294.8
27.5°	316.9	311.8	299.4	286.5	276.8	275.5	277.7	280.9	281.8
30°	295.7	291.6	280.9	268.5	260.3	259.8	263.0	265.2	267.6
32.5°	275.5	270.8	260.7	248.7	242.7	243.2	246.9	249.6	251.1
35°	252.0	247.8	240.4	230.7	225.2	226.1	230.3	233.0	233.5
37.5°	229.8	227.1	219.7	212.4	208.2	210.0	213.7	216.9	216.9
40°	207.7	205.4	199.9	193.9	191.6	193.9	197.6	200.3	200.3
42.5°	186.5	185.1	180.6	176.4	175.0	178.2	181.5	183.8	183.3
45°	167.6	166.3	163.0	159.8	159.4	162.5	165.4	166.7	167.2
47.5°	150.6	149.7	146.9	144.6	144.6	147.9	150.2	151.5	152.0
50°	135.0	134.0	131.8	129.8	130.3	133.6	135.4	136.8	137.2
52.5°	119.3	118.8	117.0	114.6	116.1	118.4	120.7	121.6	122.0
55°	105.9	105.9	103.6	101.8	102.7	105.0	106.3	106.8	106.8
57.5°	94.0	93.5	90.7	88.9	89.3	91.7	92.6	93.1	93.1
60°	82.4	81.9	79.2	76.5	76.5	77.9	78.3	78.8	78.8
62.5°	71.4	70.9	67.8	65.4	64.5	64.0	64.0	64.9	66.7
65°	61.3	60.8	57.5	53.9	52.6	51.1	49.7	50.6	51.5
67.5°	52.1	51.1	47.9	44.7	41.4	39.2	36.9	38.2	40.1
70°	43.2	42.3	38.7	35.0	31.3	27.6	25.8	27.6	28.6
72.5°	35.0	34.0	30.4	26.7	22.1	18.4	17.9	18.4	18.8
75°	27.1	26.7	23.0	18.8	14.3	11.5	11.5	11.5	11.5
77.5°	20.3	19.3	15.7	12.0	8.3	6.5	6.0	6.0	6.0
80°	13.8	12.9	9.6	6.9	3.6	2.7	2.7	2.3	2.3
82.5°	7.8	7.4	5.1	2.7	1.4	0.9	0.9	0.9	0.9
85°	3.2	2.7	1.8	0.9	0.5	0.5	0.5	0.5	0.5
87.5°	0.5	0.5	0.5	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



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







(END OF REPORT)