

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: P581080

Luminaire Tested: **HC405D010-HM40525930-41WWBB**

Issue Date: 9/9/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P581080  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2106-266-17)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 9/9/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO COMMERCIAL  
Catalog Number: HC405D010-HM40525930-41WWBB  
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, WHITE BAFFLE TRIM  
Light Source: (1) HIGH LUMEN LED 90CRI / 3000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 461.3 lumens  
Efficiency: N/A  
Efficacy: 76.9 lumens/watt  
Spacing Criteria (0/90/45): 1.11 / 1.04 / 1.12  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

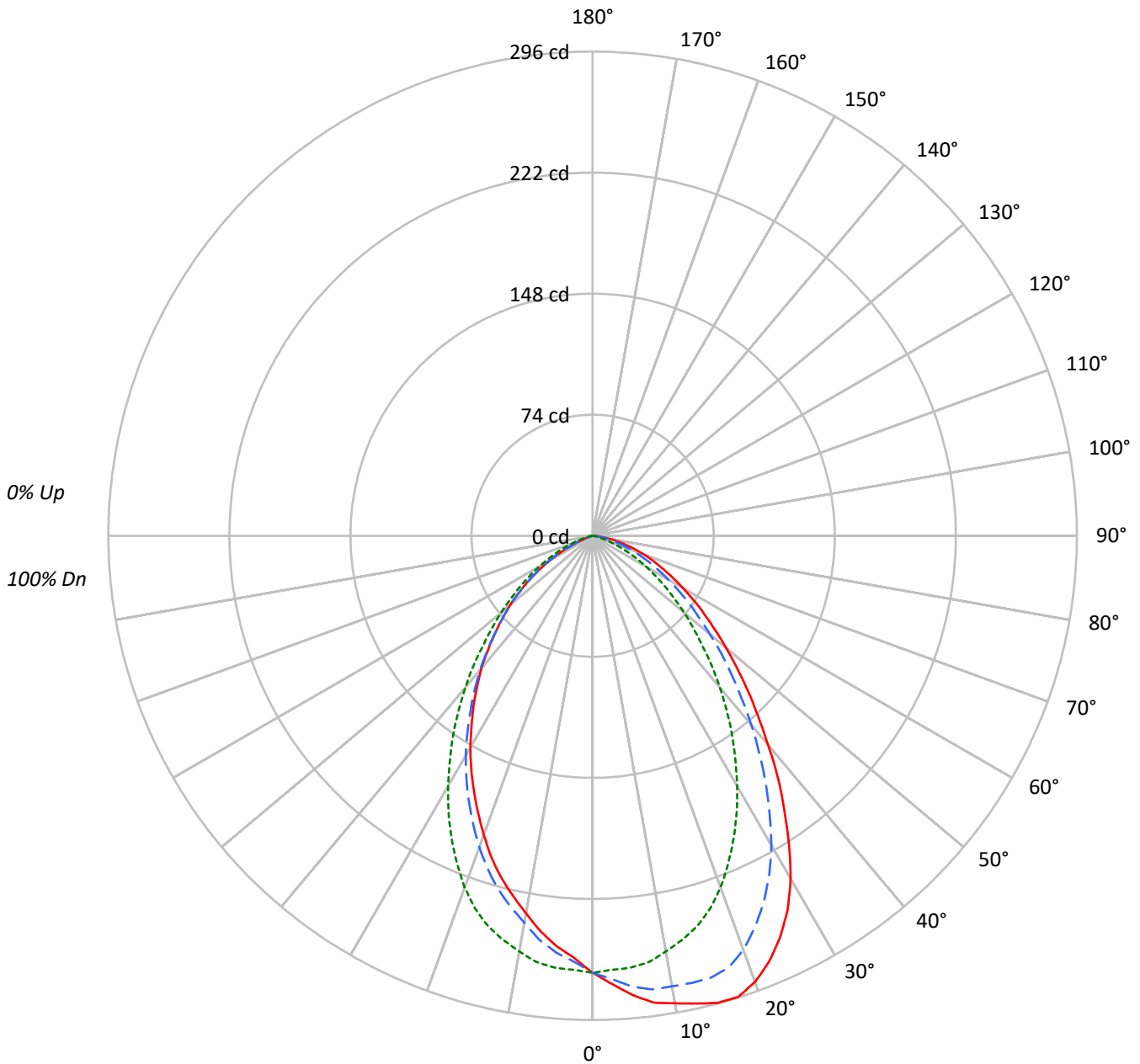
Input Watts (W): 6  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	108	104	101	109	105	102	100	101	99	97	97	95	94	94	92	91	89				89				
2	103	97	91	87	101	95	90	86	92	87	84	88	85	82	86	83	80	78				78				
3	96	87	80	75	94	86	79	74	83	78	73	80	76	72	78	74	71	69				69				
4	89	79	72	66	87	78	71	65	75	69	65	73	68	64	71	67	63	61				61				
5	83	72	64	58	81	71	64	58	69	62	58	67	61	57	65	60	56	55				55				
6	77	66	58	52	75	65	57	52	63	57	52	61	56	51	60	55	51	49				49				
7	72	60	53	47	71	60	52	47	58	51	47	57	51	46	55	50	46	44				44				
8	68	56	48	43	66	55	48	43	54	47	43	53	47	42	51	46	42	40				40				
9	64	52	44	39	62	51	44	39	50	43	39	49	43	39	48	43	39	37				37				
10	60	48	41	36	59	47	41	36	47	40	36	46	40	36	45	39	36	34				34				

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

	0°	90°	180°
0°	32946	32946	32946
5°	34904	32824	31189
10°	36347	32314	29358
15°	37747	31541	27608
20°	38092	30020	25530
25°	36869	27764	23368
30°	34467	25153	21264
35°	30718	22376	19108
40°	26841	19451	17019
45°	23409	16484	14705
50°	20398	14008	12607
55°	17892	11591	10193
60°	15640	9374	7499
65°	13659	6975	4203
70°	11901	4508	1334
75°	9770	2383	381
80°	7245	1065	213
85°	4387	425	425



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	25.2	5.5
10°-20°	70.5	15.3
20°-30°	97.5	21.1
30°-40°	98.1	21.3
40°-50°	79.1	17.2
50°-60°	53.5	11.6
60°-70°	27.2	5.9
70°-80°	8.7	1.9
80°-90°	1.3	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°	193.3	41.9
0°-40°	291.4	63.2
0°-60°	424.0	91.9
0°-90°	461.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	461.3	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	267	267	267	267	267	
5°	282	277	265	256	252	27
15°	296	280	247	223	216	83
25°	271	247	204	179	172	124
35°	204	184	149	130	127	127
45°	134	120	94	84	84	104
55°	83	72	54	47	47	75
65°	47	38	24	16	14	47
75°	20	14	5	1	1	22
85°	3	2	0	0	0	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°	267.1	267.1	267.1	267.1	267.1	267.1	267.1	267.1	267.1
2.5°	274.3	272.7	271.3	268.5	265.6	262.5	260.6	259.1	258.3
5°	281.9	280.0	276.6	270.9	265.1	259.8	255.7	253.0	251.9
7.5°	287.9	285.3	279.7	271.6	262.9	254.6	249.2	245.4	243.9
10°	290.2	287.2	279.7	269.0	258.0	247.7	240.1	236.3	234.4
12.5°	292.9	289.5	280.0	266.7	253.0	240.8	232.1	227.2	225.3
15°	295.6	291.0	279.7	263.3	247.0	232.9	223.4	218.5	216.2
17.5°	295.6	290.2	276.6	257.5	238.9	224.2	213.5	207.8	205.9
20°	290.2	284.2	269.3	248.5	228.7	212.7	202.5	196.8	194.5
22.5°	281.9	275.0	259.1	237.4	216.6	201.0	190.7	185.3	183.1
25°	270.9	264.0	247.3	225.0	204.0	188.4	179.0	174.0	171.7
27.5°	258.0	250.4	233.7	211.2	190.7	175.9	167.2	162.6	160.7
30°	242.0	234.8	218.5	196.4	176.6	163.0	155.0	150.8	149.3
32.5°	223.4	217.4	201.3	180.8	162.2	149.7	142.4	139.0	137.6
35°	204.0	198.3	184.2	165.3	148.6	136.8	130.0	127.7	126.9
37.5°	185.8	180.8	167.2	149.7	134.5	124.3	118.2	116.7	115.9
40°	166.7	163.3	150.8	134.8	120.8	111.7	106.8	105.7	105.7
42.5°	149.7	145.8	134.8	120.4	107.9	98.7	95.3	94.2	94.5
45°	134.2	130.3	120.1	106.8	94.5	87.1	84.3	84.3	84.3
47.5°	119.6	116.2	106.8	93.1	83.2	77.1	74.5	74.5	74.8
50°	106.3	104.1	93.4	81.7	73.0	67.2	65.4	64.9	65.7
52.5°	93.9	91.1	81.7	71.1	62.7	58.1	56.2	55.8	56.2
55°	83.2	80.1	71.8	61.5	53.9	49.4	47.1	46.8	47.4
57.5°	73.0	70.7	62.0	52.8	45.6	41.0	39.2	38.4	38.7
60°	63.4	61.2	53.2	44.5	38.0	33.5	30.8	30.0	30.4
62.5°	54.7	52.8	45.2	36.9	30.4	26.2	23.6	21.7	22.4
65°	46.8	44.8	38.0	29.6	23.9	19.4	15.5	14.1	14.4
67.5°	39.8	37.6	31.1	23.6	17.8	12.9	8.7	7.9	7.9
70°	33.0	30.8	25.1	18.3	12.5	6.8	3.7	3.7	3.7
72.5°	26.6	24.7	19.4	13.6	7.9	3.1	1.5	1.5	1.5
75°	20.5	19.0	14.4	9.5	5.0	1.5	1.1	0.8	0.8
77.5°	15.2	13.6	10.2	6.5	3.1	0.8	0.8	0.8	0.8
80°	10.2	9.1	6.8	3.7	1.5	0.3	0.3	0.3	0.3
82.5°	6.1	5.3	3.7	1.9	0.8	0.3	0.3	0.3	0.3
85°	3.1	2.3	1.5	0.8	0.3	0.3	0.3	0.3	0.3
87.5°	0.8	0.3	0.3	0.3	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



Report Generated By 670245859 / DESKTOP-HRDQ47P







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







(END OF REPORT)