

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: P580071

Luminaire Tested: **HC420D010-HM40525930-41WDW**

Issue Date: 9/9/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P580071  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2106-266-9)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 9/9/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO COMMERCIAL  
Catalog Number: HC420D010-HM40525930-41WDW  
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WIDE DISTRIBUTION, WHITE TRIM  
Light Source: (1) HIGH LUMEN LED 90CRI / 3000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1715.2 lumens  
Efficiency: N/A  
Efficacy: 85.8 lumens/watt  
Spacing Criteria (0/90/45): 1.06 / 1.07 / 1.04  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

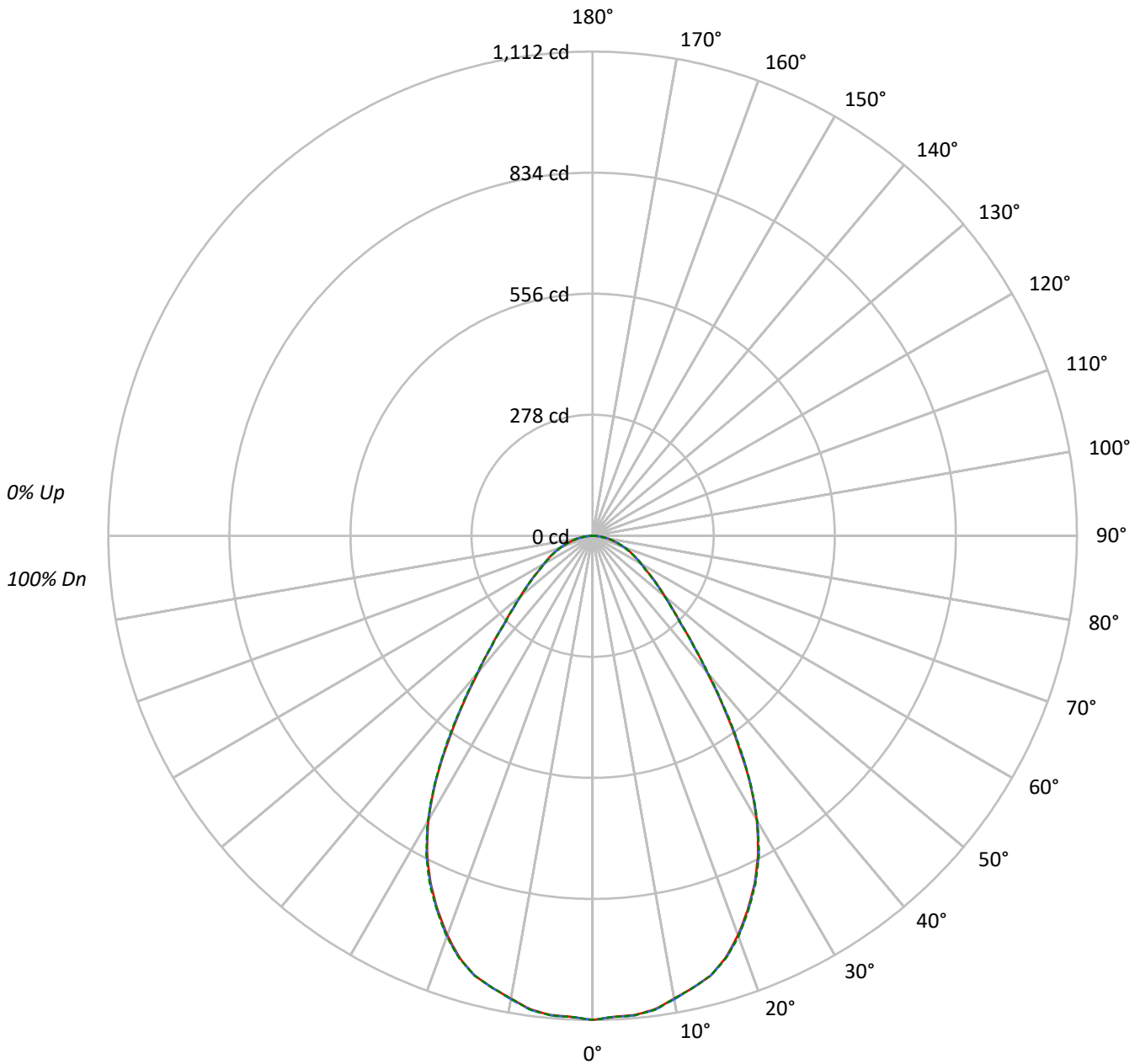
Input Watts (W): 20  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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								
1	111	107	104	101	108	105	102	99	101	98	96	97	95	93	94	92	90	89								
2	103	97	91	87	101	95	90	86	91	87	84	88	85	82	85	83	80	78								
3	96	87	81	76	94	86	80	75	83	78	74	81	76	72	78	74	71	69								
4	90	80	72	67	87	78	72	66	76	70	66	74	69	65	72	68	64	62								
5	84	73	65	60	82	72	65	59	70	64	59	68	63	58	66	62	58	56								
6	78	67	59	54	77	66	59	54	64	58	53	63	57	53	61	56	53	51								
7	73	62	54	49	72	61	54	49	60	53	49	58	53	48	57	52	48	46								
8	69	57	50	45	68	57	50	45	55	49	45	54	49	44	53	48	44	42								
9	65	53	46	41	64	53	46	41	52	45	41	51	45	41	50	45	41	39								
10	61	50	43	38	60	49	43	38	48	42	38	48	42	38	47	42	38	36								

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

	0°	45°	90°
0°	137123	137123	137123
5°	136793	136929	136929
10°	135193	135343	135193
15°	133584	133584	133584
20°	128098	128400	128545
25°	119820	119983	120296
30°	107362	107689	107689
35°	87169	87862	88027
40°	65791	66162	66339
45°	50377	50186	50186
50°	41506	41295	41295
55°	35633	35397	35397
60°	31799	31527	31527
65°	29887	29887	29887
70°	27805	27805	27805
75°	25258	25782	25258
80°	23725	22872	23725
85°	19530	19530	19530



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	104.7	6.1
10°-20°	293.1	17.1
20°-30°	402.8	23.5
30°-40°	362.2	21.1
40°-50°	228.8	13.3
50°-60°	149.4	8.7
60°-70°	101.2	5.9
70°-80°	57.0	3.3
80°-90°	16.0	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°	800.6	46.7
0°-40°	1162.8	67.8
0°-60°	1541.0	89.8
0°-90°	1715.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1715.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1112	1112	1112	1112	1112	
5°	1105	1105	1106	1106	1106	105
15°	1046	1046	1046	1046	1046	293
25°	880	882	882	884	884	402
35°	579	581	584	586	585	360
45°	289	288	288	288	288	229
55°	166	166	165	166	165	150
65°	102	102	102	102	102	101
75°	53	54	54	54	53	57
85°	14	14	14	14	14	16
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1111.7	1111.7	1111.7	1111.7	1111.7
2.5°	1105.9	1105.9	1105.9	1105.9	1105.9
5°	1104.8	1104.8	1105.9	1105.9	1105.9
7.5°	1096.8	1097.9	1097.9	1097.9	1097.9
10°	1079.4	1079.4	1080.6	1080.6	1079.4
12.5°	1063.4	1063.4	1063.4	1064.5	1063.4
15°	1046.1	1046.1	1046.1	1046.1	1046.1
17.5°	1016.1	1017.4	1017.4	1017.4	1017.4
20°	975.9	978.2	978.2	979.3	979.3
22.5°	929.9	931.0	932.2	933.3	932.2
25°	880.4	881.6	881.6	883.9	883.9
27.5°	822.9	824.0	826.3	826.3	826.3
30°	753.8	755.0	756.1	756.1	756.1
32.5°	672.0	672.0	674.4	675.6	674.4
35°	578.9	581.2	583.5	585.8	584.6
37.5°	490.2	492.5	493.7	493.7	494.8
40°	408.6	410.9	410.9	413.1	412.0
42.5°	344.1	343.0	343.0	345.2	344.1
45°	288.8	287.7	287.7	287.7	287.7
47.5°	248.6	247.4	247.4	247.4	247.4
50°	216.3	215.2	215.2	215.2	215.2
52.5°	189.9	188.7	188.7	188.7	187.5
55°	165.7	165.7	164.6	165.7	164.6
57.5°	143.8	143.8	143.8	143.8	143.8
60°	128.9	127.8	127.8	127.8	127.8
62.5°	115.0	115.0	115.0	115.0	115.0
65°	102.4	102.4	102.4	102.4	102.4
67.5°	89.8	88.7	89.8	89.8	88.7
70°	77.1	75.9	77.1	77.1	77.1
72.5°	64.5	64.5	64.5	65.6	64.5
75°	53.0	54.1	54.1	54.1	53.0
77.5°	42.6	43.7	42.6	42.6	42.6
80°	33.4	32.2	32.2	32.2	33.4
82.5°	23.1	23.1	23.1	23.1	23.1
85°	13.8	13.8	13.8	13.8	13.8
87.5°	5.7	5.7	5.7	5.7	5.7
90°	0.0	0.0	0.0	0.0	0.0



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







(END OF REPORT)