

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: P580105

Luminaire Tested: **HC420D010-HM40525940-41WDW**

Issue Date: 9/9/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P580105  
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-HM40525940-41WDW  
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WIDE DISTRIBUTION, WHITE TRIM  
Light Source: (1) HIGH LUMEN LED 90CRI / 4000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1872.2 lumens  
Efficiency: N/A  
Efficacy: 93.6 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

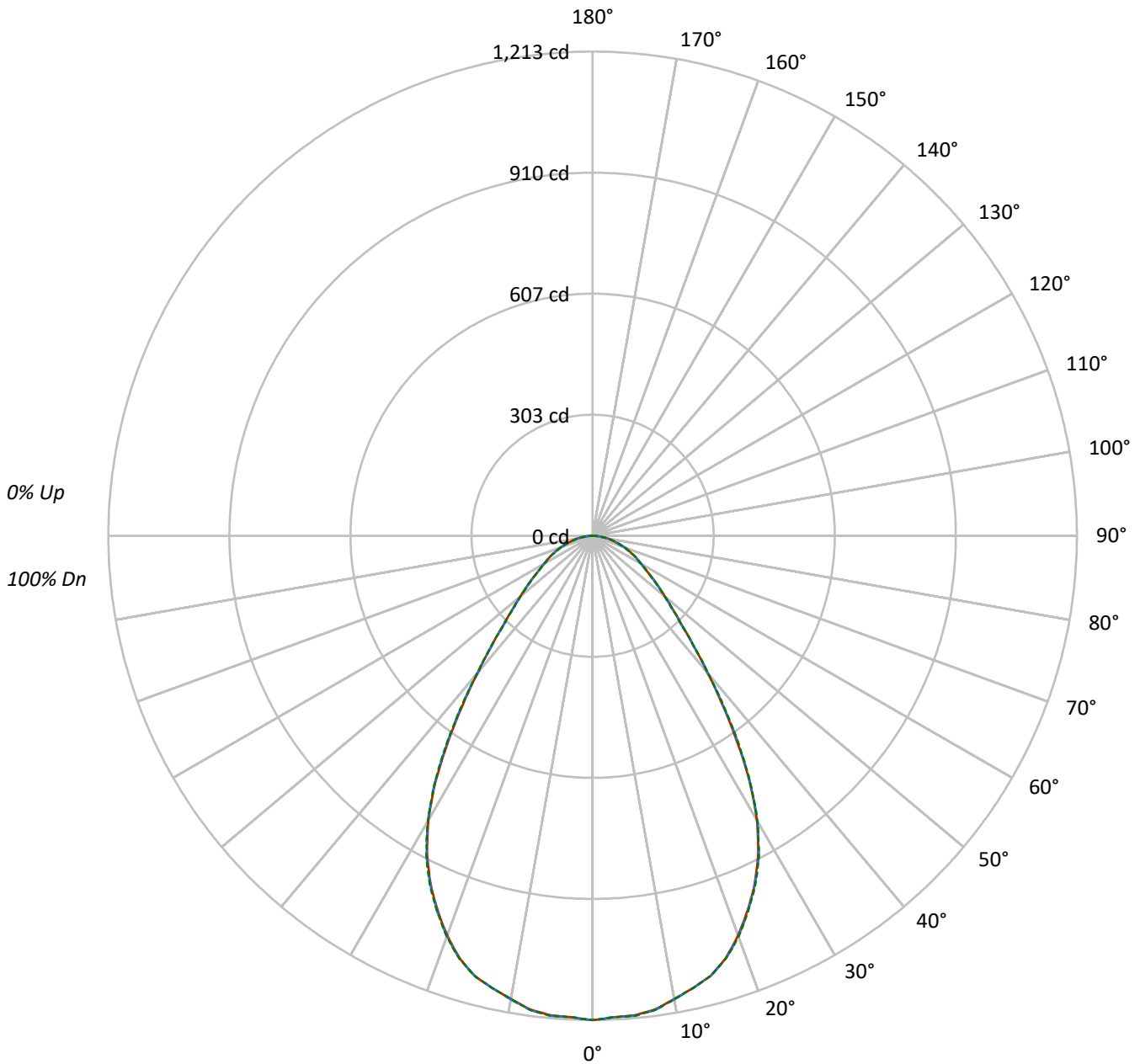
Input Watts (W): 20  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20									20									20									20									
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																			
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°	149668	149668	149668
5°	149298	149459	149459
10°	147568	147731	147568
15°	145804	145804	145804
20°	139820	140148	140306
25°	130789	130952	131293
30°	117175	117545	117545
35°	95135	95888	96083
40°	71813	72216	72409
45°	55000	54773	54773
50°	45325	45075	45075
55°	38902	38622	38622
60°	34709	34413	34413
65°	32630	32630	32630
70°	30366	30366	30366
75°	27546	28165	27546
80°	25927	25003	25927
85°	21228	21228	21228



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	114.3	6.1
10°-20°	319.9	17.1
20°-30°	439.6	23.5
30°-40°	395.3	21.1
40°-50°	249.8	13.3
50°-60°	163.1	8.7
60°-70°	110.5	5.9
70°-80°	62.2	3.3
80°-90°	17.5	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°	873.9	46.7
0°-40°	1269.2	67.8
0°-60°	1682.0	89.8
0°-90°	1872.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1872.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1213	1213	1213	1213	1213	
5°	1206	1206	1207	1207	1207	114
15°	1142	1142	1142	1142	1142	320
25°	961	962	962	965	965	439
35°	632	634	637	639	638	393
45°	315	314	314	314	314	250
55°	181	181	180	181	180	164
65°	112	112	112	112	112	111
75°	58	59	59	59	58	62
85°	15	15	15	15	15	18
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1213.4	1213.4	1213.4	1213.4	1213.4
2.5°	1207.1	1207.1	1207.1	1207.1	1207.1
5°	1205.8	1205.8	1207.1	1207.1	1207.1
7.5°	1197.0	1198.3	1198.3	1198.3	1198.3
10°	1178.2	1178.2	1179.5	1179.5	1178.2
12.5°	1160.6	1160.6	1160.6	1161.9	1160.6
15°	1141.8	1141.8	1141.8	1141.8	1141.8
17.5°	1109.1	1110.4	1110.4	1110.4	1110.4
20°	1065.2	1067.7	1067.7	1068.9	1068.9
22.5°	1015.0	1016.2	1017.4	1018.7	1017.4
25°	961.0	962.2	962.2	964.7	964.7
27.5°	898.1	899.4	901.9	901.9	901.9
30°	822.7	824.0	825.3	825.3	825.3
32.5°	733.6	733.6	736.0	737.3	736.0
35°	631.8	634.3	636.8	639.3	638.1
37.5°	535.1	537.6	538.9	538.9	540.1
40°	446.0	448.5	448.5	450.9	449.7
42.5°	375.5	374.3	374.3	376.8	375.5
45°	315.3	314.0	314.0	314.0	314.0
47.5°	271.3	270.1	270.1	270.1	270.1
50°	236.2	234.9	234.9	234.9	234.9
52.5°	207.3	206.0	206.0	206.0	204.7
55°	180.9	180.9	179.6	180.9	179.6
57.5°	157.0	157.0	157.0	157.0	157.0
60°	140.7	139.5	139.5	139.5	139.5
62.5°	125.6	125.6	125.6	125.6	125.6
65°	111.8	111.8	111.8	111.8	111.8
67.5°	98.0	96.7	98.0	98.0	96.7
70°	84.2	82.9	84.2	84.2	84.2
72.5°	70.3	70.3	70.3	71.6	70.3
75°	57.8	59.1	59.1	59.1	57.8
77.5°	46.5	47.7	46.5	46.5	46.5
80°	36.5	35.2	35.2	35.2	36.5
82.5°	25.1	25.1	25.1	25.1	25.1
85°	15.0	15.0	15.0	15.0	15.0
87.5°	6.3	6.3	6.3	6.3	6.3
90°	0.0	0.0	0.0	0.0	0.0



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







(END OF REPORT)