

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: P579984

Luminaire Tested: **HC420D010-HM40525827-41WDW**

Issue Date: 9/9/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P579984  
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-HM40525827-41WDW  
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WIDE DISTRIBUTION, WHITE TRIM  
Light Source: (1) HIGH LUMEN LED 80CRI / 2700K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1802.0 lumens  
Efficiency: N/A  
Efficacy: 90.1 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

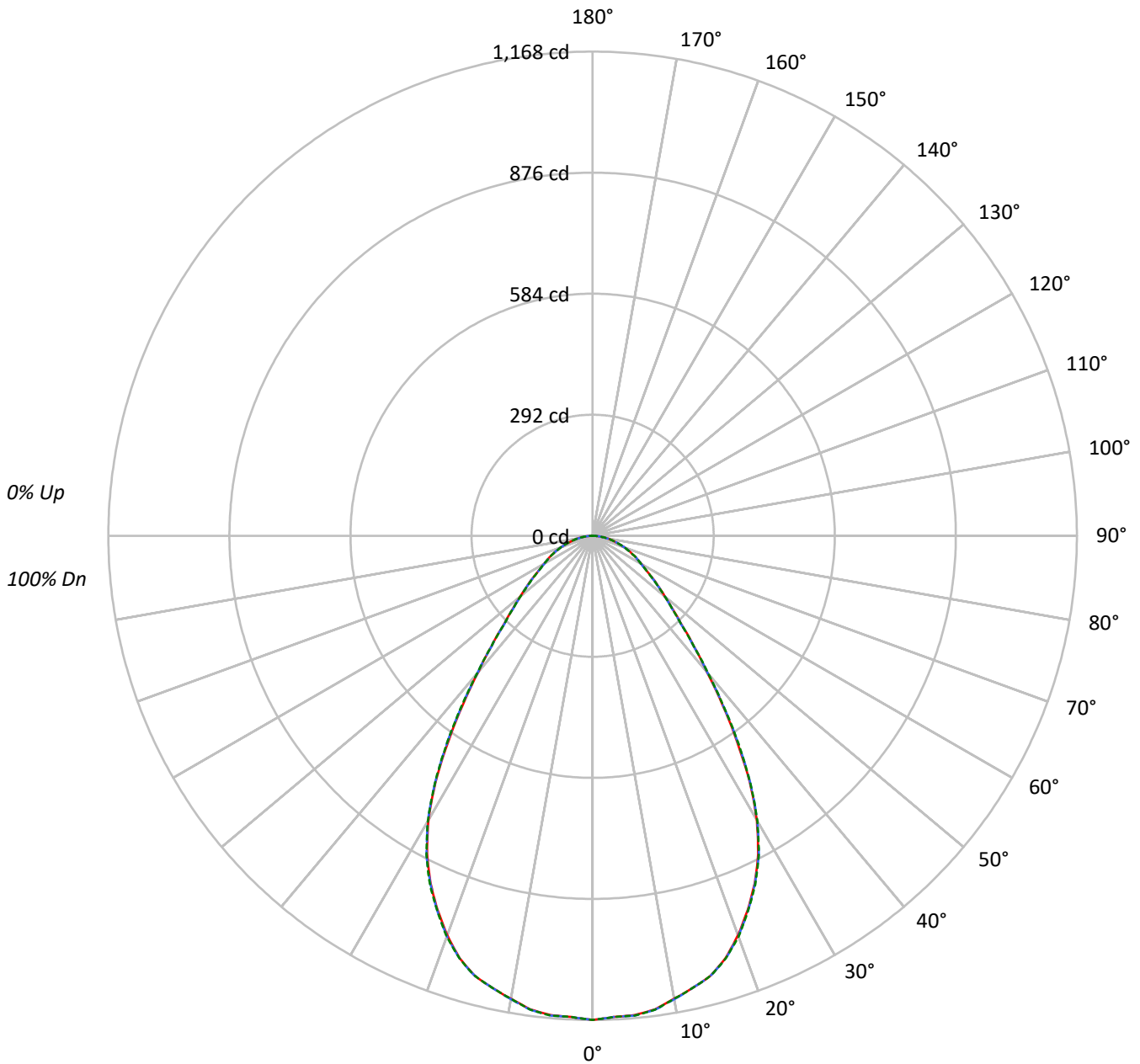
Input Watts (W): 20  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	144068	144068	144068
5°	143702	143863	143863
10°	142032	142195	142032
15°	140352	140352	140352
20°	134583	134898	135055
25°	125876	126039	126366
30°	112788	113130	113130
35°	91566	92304	92485
40°	69108	69495	69704
45°	52942	52715	52715
50°	43617	43387	43387
55°	37440	37182	37182
60°	33427	33106	33106
65°	31404	31404	31404
70°	29212	29212	29212
75°	26497	27069	26497
80°	24932	24009	24932
85°	20521	20521	20521



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	110.0	6.1
10°-20°	308.0	17.1
20°-30°	423.1	23.5
30°-40°	380.5	21.1
40°-50°	240.4	13.3
50°-60°	157.0	8.7
60°-70°	106.3	5.9
70°-80°	59.8	3.3
80°-90°	16.8	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°	841.1	46.7
0°-40°	1221.6	67.8
0°-60°	1619.0	89.8
0°-90°	1802.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1802.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1168	1168	1168	1168	1168	
5°	1161	1161	1162	1162	1162	110
15°	1099	1099	1099	1099	1099	308
25°	925	926	926	928	928	422
35°	608	610	613	615	614	379
45°	304	302	302	302	302	241
55°	174	174	173	174	173	158
65°	108	108	108	108	108	107
75°	56	57	57	57	56	60
85°	14	14	14	14	14	17
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1168.0	1168.0	1168.0	1168.0	1168.0
2.5°	1161.9	1161.9	1161.9	1161.9	1161.9
5°	1160.6	1160.6	1161.9	1161.9	1161.9
7.5°	1152.3	1153.4	1153.4	1153.4	1153.4
10°	1134.0	1134.0	1135.3	1135.3	1134.0
12.5°	1117.2	1117.2	1117.2	1118.3	1117.2
15°	1099.1	1099.1	1099.1	1099.1	1099.1
17.5°	1067.6	1068.8	1068.8	1068.8	1068.8
20°	1025.3	1027.7	1027.7	1028.9	1028.9
22.5°	976.9	978.2	979.3	980.6	979.3
25°	924.9	926.1	926.1	928.5	928.5
27.5°	864.5	865.6	868.0	868.0	868.0
30°	791.9	793.2	794.3	794.3	794.3
32.5°	706.1	706.1	708.5	709.8	708.5
35°	608.1	610.5	613.0	615.4	614.2
37.5°	515.0	517.5	518.7	518.7	519.9
40°	429.2	431.6	431.6	434.0	432.9
42.5°	361.5	360.3	360.3	362.7	361.5
45°	303.5	302.2	302.2	302.2	302.2
47.5°	261.2	259.9	259.9	259.9	259.9
50°	227.3	226.1	226.1	226.1	226.1
52.5°	199.5	198.3	198.3	198.3	197.1
55°	174.1	174.1	172.9	174.1	172.9
57.5°	151.2	151.2	151.2	151.2	151.2
60°	135.5	134.2	134.2	134.2	134.2
62.5°	120.9	120.9	120.9	120.9	120.9
65°	107.6	107.6	107.6	107.6	107.6
67.5°	94.3	93.1	94.3	94.3	93.1
70°	81.0	79.8	81.0	81.0	81.0
72.5°	67.7	67.7	67.7	68.9	67.7
75°	55.6	56.8	56.8	56.8	55.6
77.5°	44.7	46.0	44.7	44.7	44.7
80°	35.1	33.8	33.8	33.8	35.1
82.5°	24.2	24.2	24.2	24.2	24.2
85°	14.5	14.5	14.5	14.5	14.5
87.5°	6.1	6.1	6.1	6.1	6.1
90°	0.0	0.0	0.0	0.0	0.0



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







(END OF REPORT)