

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: P593610

Luminaire Tested: **HC820D010-HM80520950-81NDW**

Issue Date: 10/21/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P593610  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2109-368-3)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 10/21/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO COMMERCIAL  
Catalog Number: HC820D010-HM80520950-81NDW  
Description: HALO COMMERCIAL 8" ROUND, NEW CONSTRUCTION FRAME, WITH 8" NARROW DISTRIBUTION, WHITE TRIM  
Light Source: (1) HIGH LUMEN LED 90CRI / 5000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1906.1 lumens  
Efficiency: N/A  
Efficacy: 95.3 lumens/watt  
Spacing Criteria (0/90/45): 1.06 / 1.06 / 0.92  
Luminous Opening: Circular (Dia: 0.67' x H: 0')  
CIE Type: Direct

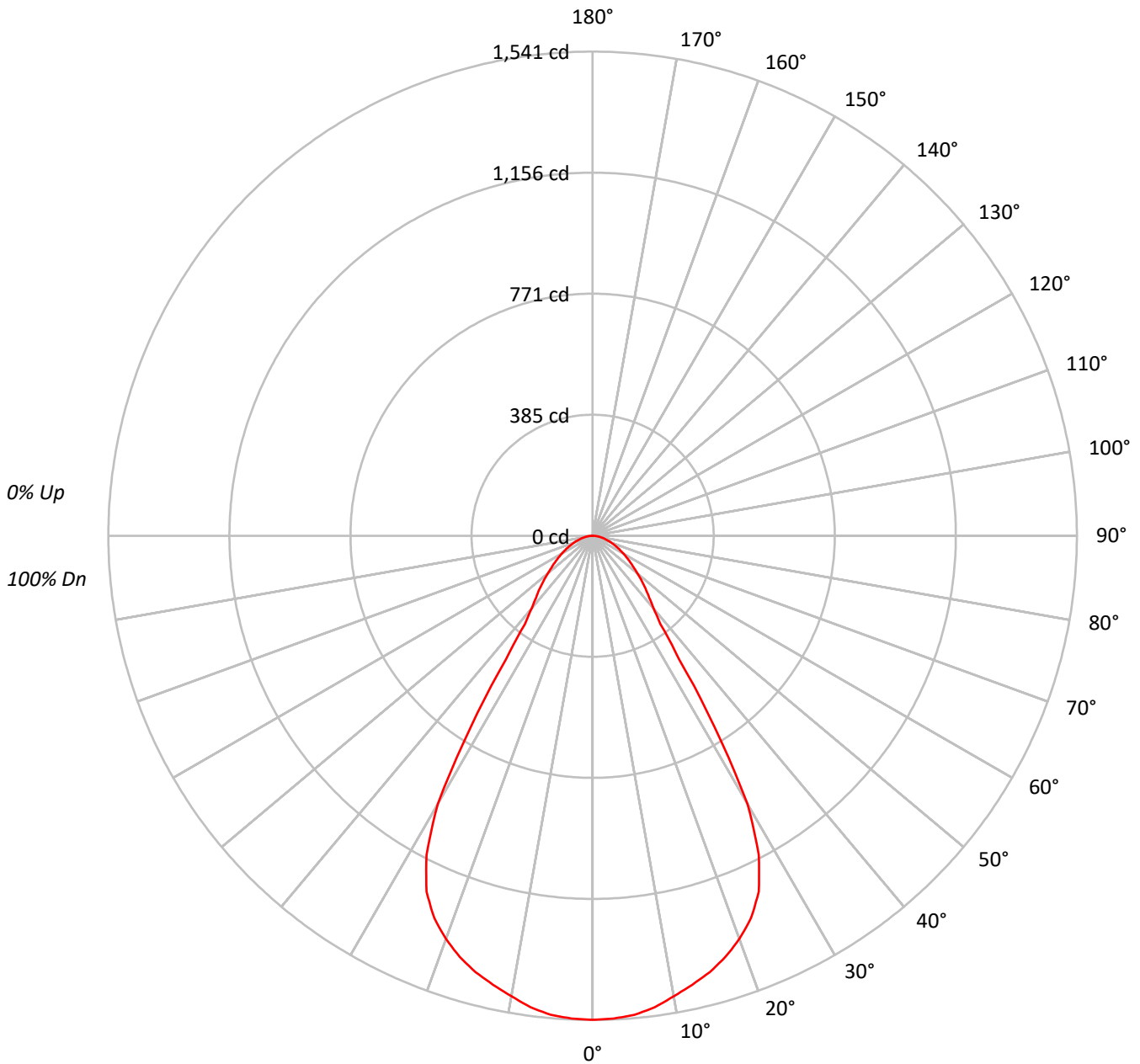
Input Watts (W): 20  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	112	108	105	102	109	106	103	101	102	100	98	98	96	95	95	93	92	90			
2	105	99	94	90	102	97	92	88	94	90	87	91	87	85	88	85	83	81			
3	98	90	84	79	96	89	83	79	86	81	77	84	80	76	81	78	75	73			
4	92	83	76	71	90	82	76	71	80	74	70	77	73	69	75	72	68	67			
5	87	77	70	65	85	76	69	64	74	68	64	72	67	63	70	66	63	61			
6	82	71	64	59	80	70	64	59	69	63	58	67	62	58	66	61	58	56			
7	77	66	59	54	76	66	59	54	64	58	54	63	58	54	62	57	53	52			
8	73	62	55	50	71	61	55	50	60	54	50	59	54	50	58	53	49	48			
9	69	58	51	47	68	57	51	47	56	51	46	55	50	46	55	50	46	45			
10	65	55	48	44	64	54	48	44	53	47	43	52	47	43	52	47	43	42			

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

	0°
0°	47506
5°	47381
10°	46592
15°	45910
20°	44813
25°	42537
30°	35083
35°	18065
40°	12096
45°	10370
50°	8947
55°	7812
60°	6938
65°	6239
70°	5644
75°	5087
80°	4546
85°	4529



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	144.7	7.6
10°-20°	404.6	21.2
20°-30°	560.6	29.4
30°-40°	336.8	17.7
40°-50°	184.4	9.7
50°-60°	130.9	6.9
60°-70°	85.0	4.5
70°-80°	45.4	2.4
80°-90°	13.6	0.7
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°	1110.0	58.2
0°-40°	1446.7	75.9
0°-60°	1762.0	92.4
0°-90°	1906.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1906.1	100.0

**CANDELA DISTRIBUTION:**

	0°	Flux
0°	1541	
5°	1531	145
15°	1438	405
25°	1250	561
35°	480	337
45°	238	184
55°	145	131
65°	86	85
75°	43	45
85°	13	14
90°	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°
0°	1540.6
2.5°	1537.8
5°	1530.7
7.5°	1513.6
10°	1488.0
12.5°	1463.8
15°	1438.1
17.5°	1405.4
20°	1365.6
22.5°	1317.1
25°	1250.2
27.5°	1144.8
30°	985.3
32.5°	722.0
35°	479.9
37.5°	354.6
40°	300.5
42.5°	266.3
45°	237.8
47.5°	210.8
50°	186.5
52.5°	163.7
55°	145.3
57.5°	128.1
60°	112.5
62.5°	98.2
65°	85.5
67.5°	72.6
70°	62.6
72.5°	51.3
75°	42.7
77.5°	34.2
80°	25.6
82.5°	18.6
85°	12.8
87.5°	5.7
90°	0.0



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— 0°-180°







(END OF REPORT)