

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: P593604

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

Issue Date: 10/21/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P593604  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2109-368-2)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 10/21/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO COMMERCIAL  
Catalog Number: HC820D010-HM80520950-81NDH  
Description: HALO COMMERCIAL 8" ROUND, NEW CONSTRUCTION FRAME, WITH 8" NARROW DISTRIBUTION, HAZE TRIM  
Light Source: (1) HIGH LUMEN LED 90CRI / 5000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1927.2 lumens  
Efficiency: N/A  
Efficacy: 96.4 lumens/watt  
Spacing Criteria (0/90/45): 0.42 / 0.42 / 0.57  
Luminous Opening: Circular (Dia: 0.67' x H: 0')  
CIE Type: Direct

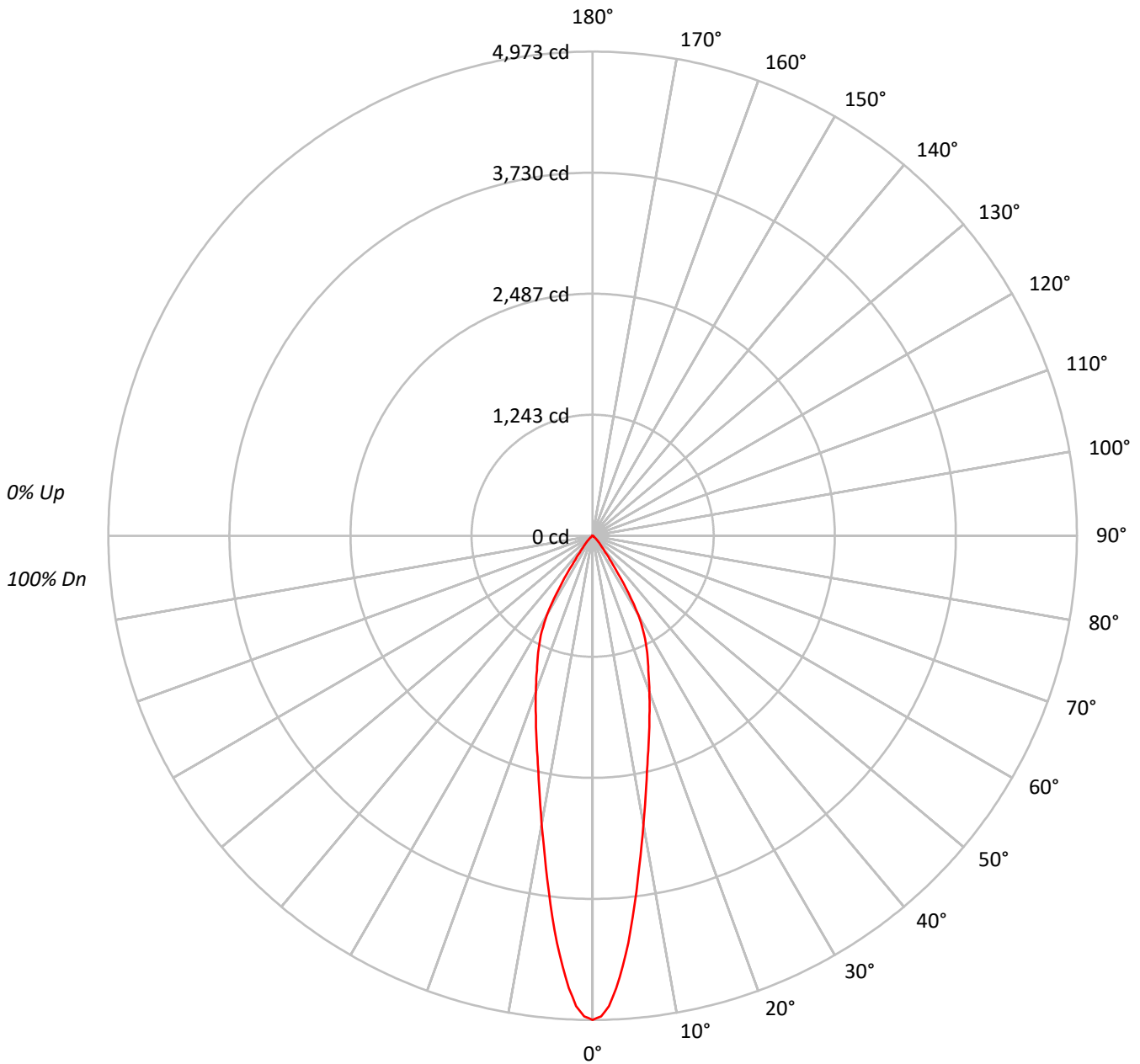
Input Watts (W): 20  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	114	112	109	107	112	109	107	106	105	104	102	102	100	99	98	97	96	95			95
2	109	105	101	98	107	103	100	97	100	97	95	97	95	93	94	92	91	89			89
3	104	99	94	91	102	97	93	90	95	91	88	92	90	87	90	88	86	84			84
4	100	93	88	84	98	92	87	84	90	86	83	88	85	82	86	83	81	80			80
5	96	88	83	79	94	87	82	79	86	81	78	84	80	77	82	79	77	75			75
6	92	84	78	75	90	83	78	74	82	77	74	80	76	73	79	76	73	72			72
7	88	80	74	71	87	79	74	70	78	73	70	77	73	70	76	72	69	68			68
8	84	76	71	67	83	75	70	67	74	70	66	73	69	66	72	69	66	65			65
9	81	72	67	64	80	72	67	63	71	66	63	70	66	63	69	66	63	62			62
10	78	69	64	61	77	69	64	61	68	63	60	67	63	60	67	63	60	59			59

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

	0°
0°	153361
5°	129927
10°	94271
15°	70795
20°	55858
25°	45055
30°	33388
35°	13526
40°	5704
45°	3057
50°	1372
55°	694
60°	444
65°	314
70°	252
75°	167
80°	249
85°	495



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	360.4	18.7
10°-20°	622.8	32.3
20°-30°	602.2	31.2
30°-40°	264.5	13.7
40°-50°	57.2	3.0
50°-60°	12.8	0.7
60°-70°	4.4	0.2
70°-80°	1.7	0.1
80°-90°	1.3	0.1
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°	1585.4	82.3
0°-40°	1849.9	96.0
0°-60°	1919.9	99.6
0°-90°	1927.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1927.2	100.0

**CANDELA DISTRIBUTION:**

	0°	Flux
0°	4973	
5°	4197	360
15°	2218	623
25°	1324	602
35°	359	264
45°	70	57
55°	13	13
65°	4	4
75°	1	2
85°	1	1
90°	0	



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**CANDELA DISTRIBUTION (FULL):**

0°	
0°	4973.4
1°	4936.2
2°	4834.5
3°	4651.2
4°	4432.1
5°	4197.4
6°	3941.1
7°	3683.5
8°	3441.5
9°	3216.8
10°	3010.7
11°	2815.9
12°	2641.3
13°	2482.3
14°	2342.1
15°	2217.6
17.5°	1938.4
20°	1702.2
22.5°	1494.5
25°	1324.2
27.5°	1151.0
30°	937.7
32.5°	637.1
35°	359.3
37.5°	211.9
40°	141.7
42.5°	100.2
45°	70.1
47.5°	45.9
50°	28.6
52.5°	17.1
55°	12.9
57.5°	10.0
60°	7.2
62.5°	5.7
65°	4.3
67.5°	2.8
70°	2.8
72.5°	1.4
75°	1.4
77.5°	1.4
80°	1.4
82.5°	1.4



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**CANDELA DISTRIBUTION (continued):**

0°  
90° | 0.0



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— 0°-180°







85°		1.4
87.5°		1.4



(END OF REPORT)