

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: P583988

Luminaire Tested: **HC820D010-HM80520830-81NDH**

Issue Date: 10/21/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P583988  
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-HM80520830-81NDH  
Description: HALO COMMERCIAL 8" ROUND, NEW CONSTRUCTION FRAME, WITH 8" NARROW DISTRIBUTION, HAZE TRIM  
Light Source: (1) HIGH LUMEN LED 80CRI / 3000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1960.4 lumens  
Efficiency: N/A  
Efficacy: 98.0 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

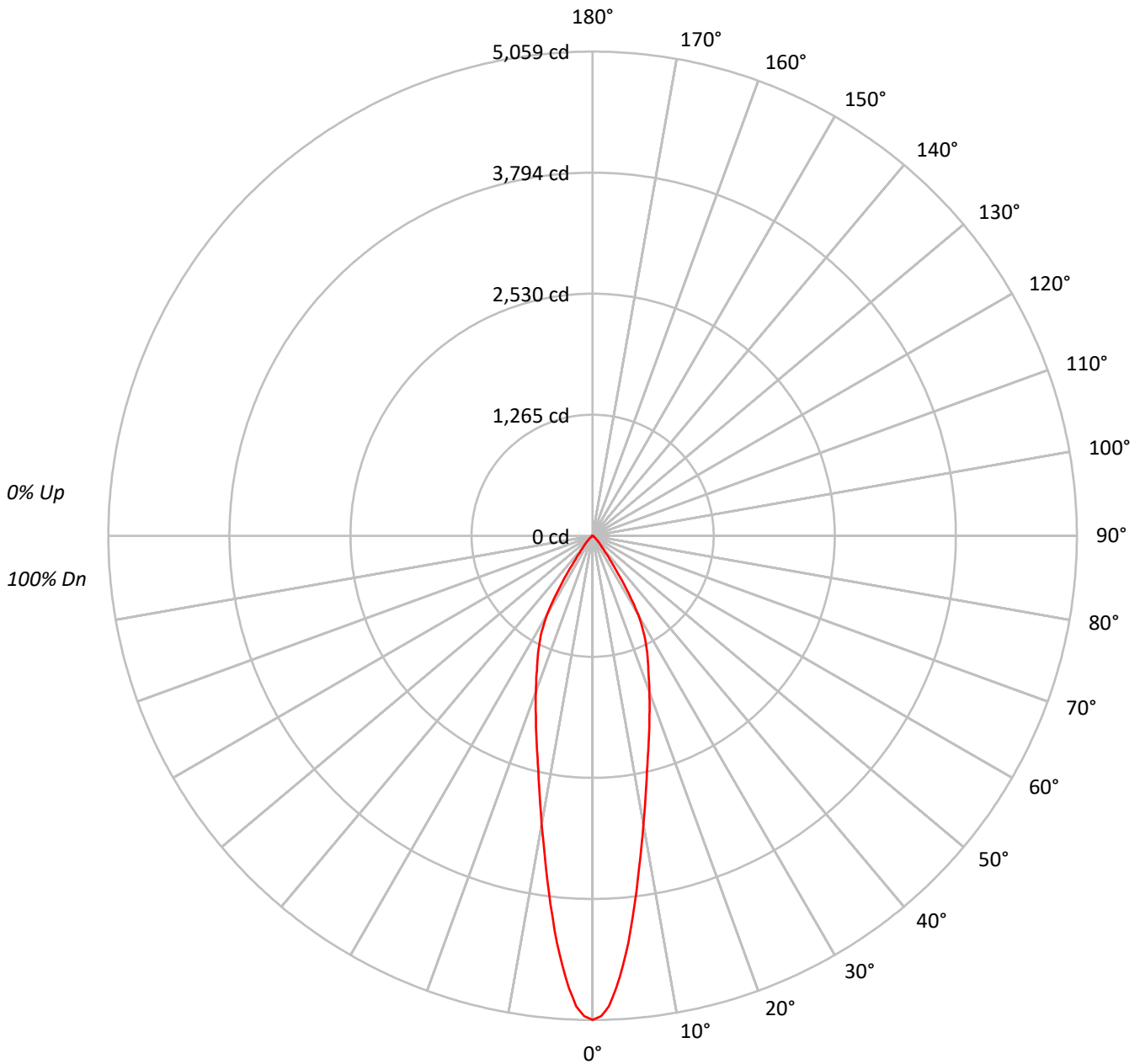
Input Watts (W): 20  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	81	77	74	80	76	73	79	76	73	72			72
7	88	80	74	70	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°	155995
5°	132159
10°	95887
15°	72008
20°	56816
25°	45830
30°	33962
35°	13759
40°	5805
45°	3114
50°	1396
55°	704
60°	450
65°	321
70°	270
75°	167
80°	249
85°	495



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	366.6	18.7
10°-20°	633.5	32.3
20°-30°	612.5	31.2
30°-40°	269.0	13.7
40°-50°	58.2	3.0
50°-60°	13.1	0.7
60°-70°	4.5	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°	1612.6	82.3
0°-40°	1881.7	96.0
0°-60°	1952.9	99.6
0°-90°	1960.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1960.4	100.0

**CANDELA DISTRIBUTION:**

	0°	Flux
0°	5059	
5°	4270	367
15°	2256	634
25°	1347	613
35°	366	269
45°	71	58
55°	13	13
65°	4	5
75°	1	2
85°	1	1
90°	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°
0°	5058.8
1°	5020.9
2°	4917.6
3°	4731.2
4°	4508.4
5°	4269.5
6°	4008.9
7°	3746.8
8°	3500.7
9°	3272.0
10°	3062.3
11°	2864.3
12°	2686.7
13°	2525.0
14°	2382.3
15°	2255.6
17.5°	1971.7
20°	1731.4
22.5°	1520.3
25°	1347.0
27.5°	1170.8
30°	953.8
32.5°	648.0
35°	365.5
37.5°	215.5
40°	144.2
42.5°	101.9
45°	71.4
47.5°	46.6
50°	29.1
52.5°	17.5
55°	13.1
57.5°	10.2
60°	7.3
62.5°	5.8
65°	4.4
67.5°	3.0
70°	3.0
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)