

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

Report Number: P303264

Luminaire Tested: **HHA19089BLE40A 3500K**

Test Date: 06/14/2019



**Test Information**

Test Method: LM-41-14  
Report Number: P303264  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-1906-359-1)  
Test Lab: INNOVATION CENTER(G1)  
Test Date: 06/14/2019  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO  
Catalog Number: HHA19089BLE40A 3500K  
Description: HALO A19 BLE COLOR TUNING BULB  
Light Source: 90 CRI LEDs  
Ballast/Driver: ELECTRICAL DRIVER

**Summary**

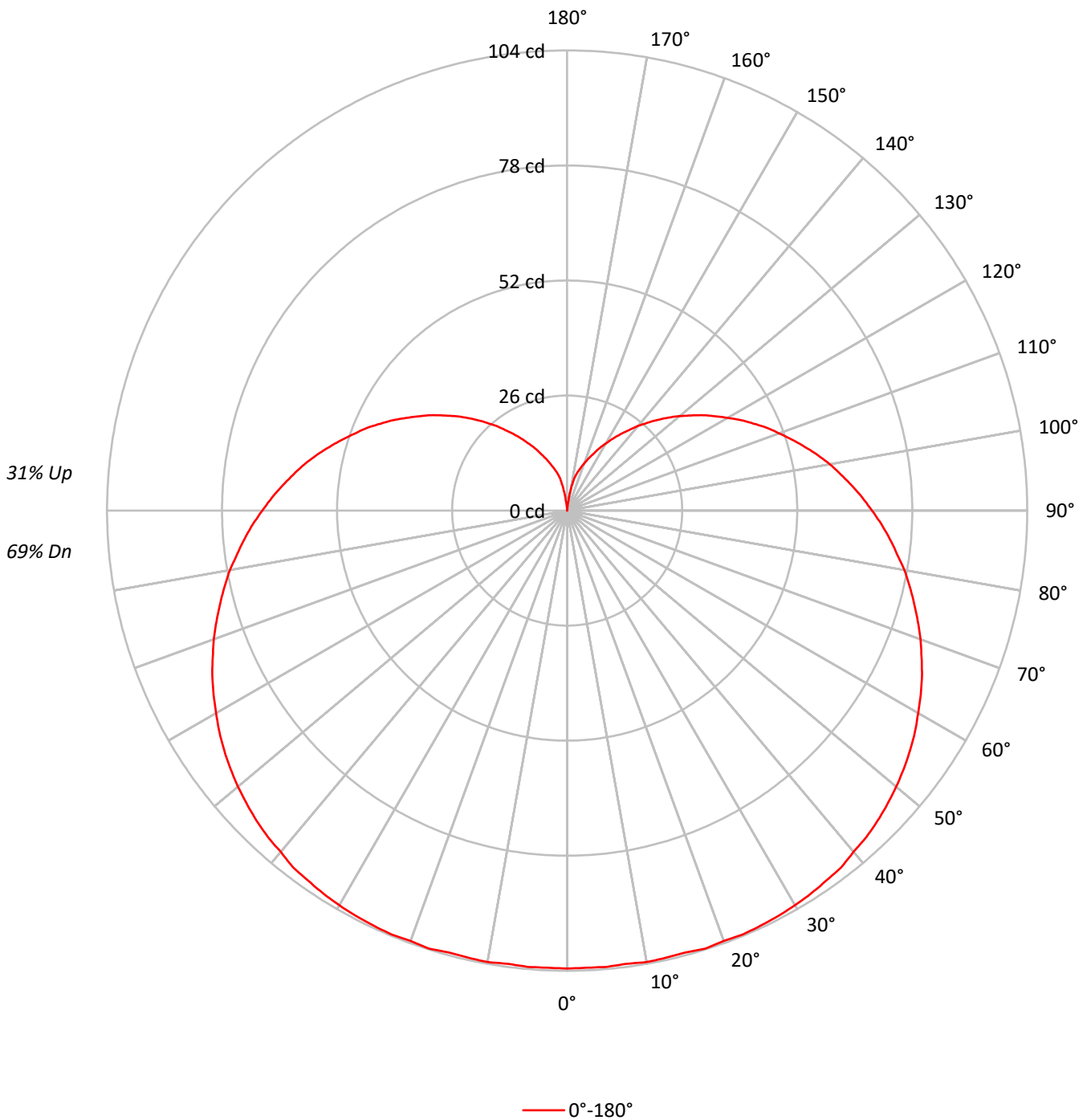
Lumens per Lamp: N/A  
Luminaire Lumens: 820.8 lumens  
Efficiency: N/A  
Efficacy: 87.3 lumens/watt  
Spacing Criteria (0/90/45): 1.51 / 1.51 / 1.68  
Luminous Opening: Vertical Cylinder (Dia: 0.19' x H: 0.15')  
CIE Type: Semi-Direct

Input Watts (W): 9.4  
Input Voltage (V): 120  
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	0
RCR																				
0	112	112	112	112	105	105	105	105	94	94	94		83	83	83		74	74	74	69
1	97	91	85	80	91	85	80	76	75	71	67		66	63	60		58	55	53	48
2	87	77	68	62	81	72	65	58	63	57	52		55	51	46		48	44	41	37
3	78	66	57	49	73	62	54	47	55	48	42		48	42	37		41	37	33	29
4	71	58	48	40	66	54	45	38	48	40	35		42	36	31		36	31	27	24
5	65	51	41	34	60	48	39	32	42	35	29		37	31	26		32	27	23	20
6	59	45	36	29	55	43	34	28	38	30	25		33	27	22		29	24	20	17
7	55	41	31	25	51	38	30	24	34	27	22		30	24	19		26	21	17	15
8	51	37	28	22	47	35	27	21	31	24	19		27	21	17		24	19	15	13
9	47	33	25	19	44	32	24	19	28	21	17		25	19	15		22	17	13	11
10	44	31	23	17	41	29	22	16	26	19	15		23	17	14		20	15	12	10

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

	0°
0°	40348
5°	37272
10°	34913
15°	32980
20°	31561
25°	30455
30°	29499
35°	28693
40°	27988
45°	27478
50°	27011
55°	26631
60°	26302
65°	26134
70°	26038
75°	26045
80°	26263
85°	26577



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	9.9	1.2
10°-20°	29.4	3.6
20°-30°	47.9	5.8
30°-40°	64.1	7.8
40°-50°	76.7	9.3
50°-60°	84.7	10.3
60°-70°	87.7	10.7
70°-80°	85.9	10.5
80°-90°	79.8	9.7
90°-100°	70.5	8.6
100°-110°	58.9	7.2
110°-120°	46.3	5.6
120°-130°	33.8	4.1
130°-140°	22.6	2.7
140°-150°	13.4	1.6
150°-160°	6.7	0.8
160°-170°	2.5	0.3
170°-180°	0.2	0.0
0°-30°	87.1	10.6
0°-40°	151.2	18.4
0°-60°	312.6	38.1
0°-90°	566.0	69.0
90°-120°	175.6	21.4
90°-150°	245.3	29.9
90°-180°	255.0	31.1
0°-180°	820.8	100.0

**CANDELA DISTRIBUTION:**

	0°	Flux
0°	104	
5°	104	10
15°	103	29
25°	104	48
35°	102	64
45°	99	77
55°	95	85
65°	88	88
75°	81	86
85°	73	61
90°	69	38
95°	65	52
105°	56	59
115°	46	46
125°	38	34
135°	29	23
145°	21	13
155°	14	7
165°	9	3
175°	0	0
180°	0	



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**CANDELA DISTRIBUTION (FULL):**

0°	
0°	103.5
2.5°	103.4
5°	103.5
7.5°	103.3
10°	103.6
12.5°	103.5
15°	103.4
17.5°	103.8
20°	103.5
22.5°	103.7
25°	103.5
27.5°	103.3
30°	103.0
32.5°	102.6
35°	102.1
37.5°	101.7
40°	100.7
42.5°	100.1
45°	99.2
47.5°	98.2
50°	97.1
52.5°	95.9
55°	94.6
57.5°	93.2
60°	91.6
62.5°	90.1
65°	88.5
67.5°	86.7
70°	85.0
72.5°	83.1
75°	81.2
77.5°	79.3
80°	77.4
82.5°	75.2
85°	73.2
87.5°	71.1
90°	68.9
92.5°	66.8
95°	64.6
97.5°	62.4
100°	60.3
102.5°	58.0
105°	55.6
107.5°	53.3
110°	51.0



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**CANDELA DISTRIBUTION (continued):**

	0°
112.5°	48.9
115°	46.5
117.5°	44.3
120°	41.9
122.5°	39.7
125°	37.6
127.5°	35.3
130°	33.2
132.5°	31.1
135°	29.0
137.5°	26.9
140°	25.0
142.5°	22.9
145°	21.1
147.5°	19.3
150°	17.5
152.5°	16.0
155°	14.2
157.5°	12.8
160°	11.4
162.5°	10.1
165°	8.9
167.5°	7.5
170°	5.2
172.5°	2.3
175°	0.0
177.5°	0.0
180°	0.0

(END OF REPORT)