

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: P303263

Luminaire Tested: **HHA19089BLE40A 2700K**

Test Date: 06/14/2019

**Test Information**

Test Method: LM-41-14  
Report Number: P303263  
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 2700K  
Description: HALO A19 BLE COLOR TUNING BULB  
Light Source: 90 CRI LEDs  
Ballast/Driver: ELECTRICAL DRIVER

**Summary**

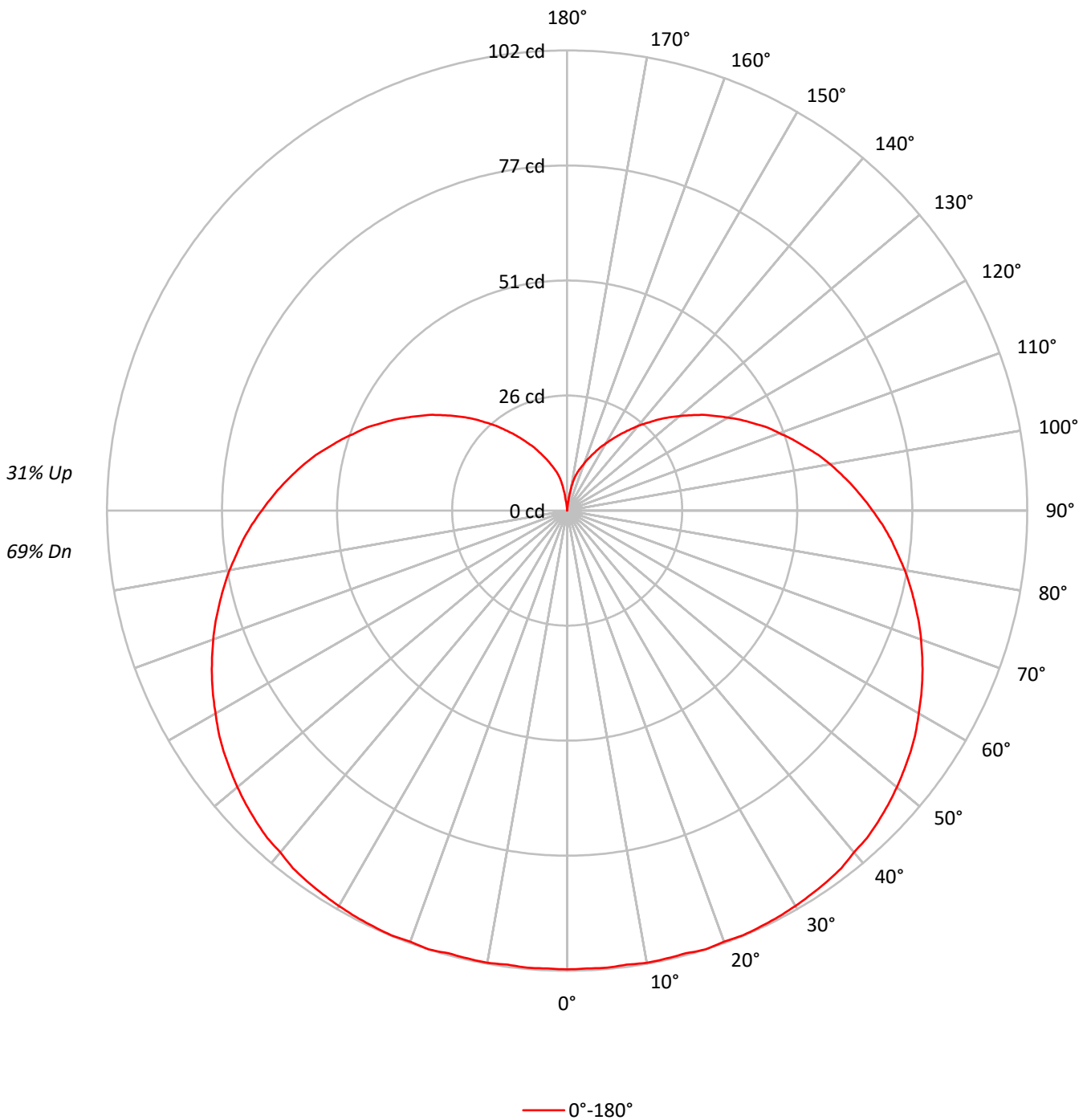
Lumens per Lamp: N/A  
Luminaire Lumens: 806.6 lumens  
Efficiency: N/A  
Efficacy: 85.8 lumens/watt  
Spacing Criteria (0/90/45): 1.51 / 1.51 / 1.68  
Luminous Opening: Vertical Cylinder (Dia: 0.19' x H: 0.15')  
CIE Type: Semi-Direct

Input Watts (W): 9.4  
Input Voltage (V): 120  
Input Current (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	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°	39646
5°	36624
10°	34307
15°	32405
20°	31012
25°	29925
30°	28983
35°	28215
40°	27488
45°	27007
50°	26538
55°	26181
60°	25843
65°	25661
70°	25578
75°	25596
80°	25788
85°	26142



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	9.7	1.2
10°-20°	28.8	3.6
20°-30°	47.0	5.8
30°-40°	63.0	7.8
40°-50°	75.4	9.3
50°-60°	83.3	10.3
60°-70°	86.2	10.7
70°-80°	84.4	10.5
80°-90°	78.5	9.7
90°-100°	69.3	8.6
100°-110°	57.9	7.2
110°-120°	45.5	5.6
120°-130°	33.2	4.1
130°-140°	22.2	2.7
140°-150°	13.1	1.6
150°-160°	6.6	0.8
160°-170°	2.5	0.3
170°-180°	0.2	0.0
0°-30°	85.6	10.6
0°-40°	148.6	18.4
0°-60°	307.2	38.1
0°-90°	556.2	69.0
90°-120°	172.6	21.4
90°-150°	241.0	29.9
90°-180°	250.0	31.0
0°-180°	806.6	100.0

**CANDELA DISTRIBUTION:**

	0°	Flux
0°	102	
5°	102	10
15°	102	29
25°	102	47
35°	100	63
45°	98	75
55°	93	83
65°	87	86
75°	80	84
85°	72	60
90°	68	37
95°	64	51
105°	55	58
115°	46	45
125°	37	33
135°	28	22
145°	21	13
155°	14	7
165°	9	3
175°	0	0
180°	0	



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**CANDELA DISTRIBUTION (FULL):**

0°	
0°	101.7
2.5°	101.6
5°	101.7
7.5°	101.5
10°	101.8
12.5°	101.7
15°	101.6
17.5°	102.0
20°	101.7
22.5°	101.9
25°	101.7
27.5°	101.5
30°	101.2
32.5°	100.8
35°	100.4
37.5°	99.9
40°	98.9
42.5°	98.4
45°	97.5
47.5°	96.5
50°	95.4
52.5°	94.2
55°	93.0
57.5°	91.6
60°	90.0
62.5°	88.5
65°	86.9
67.5°	85.2
70°	83.5
72.5°	81.7
75°	79.8
77.5°	77.9
80°	76.0
82.5°	73.9
85°	72.0
87.5°	69.9
90°	67.7
92.5°	65.6
95°	63.5
97.5°	61.3
100°	59.2
102.5°	57.0
105°	54.6
107.5°	52.4
110°	50.1



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**CANDELA DISTRIBUTION (continued):**

	0°
112.5°	48.1
115°	45.7
117.5°	43.5
120°	41.2
122.5°	39.0
125°	37.0
127.5°	34.7
130°	32.6
132.5°	30.6
135°	28.5
137.5°	26.4
140°	24.5
142.5°	22.5
145°	20.7
147.5°	18.9
150°	17.2
152.5°	15.7
155°	14.0
157.5°	12.6
160°	11.2
162.5°	9.9
165°	8.7
167.5°	7.4
170°	5.1
172.5°	2.3
175°	0.0
177.5°	0.0
180°	0.0

(END OF REPORT)