

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: P303588

Luminaire Tested: **HLA406FL9FS1EMWR-4000K**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P303588  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA ( A1906595A001)  
Test Lab:  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO  
Catalog Number: HLA406FL9FS1EMWR-4000K  
Description: 4IN HLA LED DOWNLIGHT WITH 40 DEGREE OPTIC AND 4000K LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

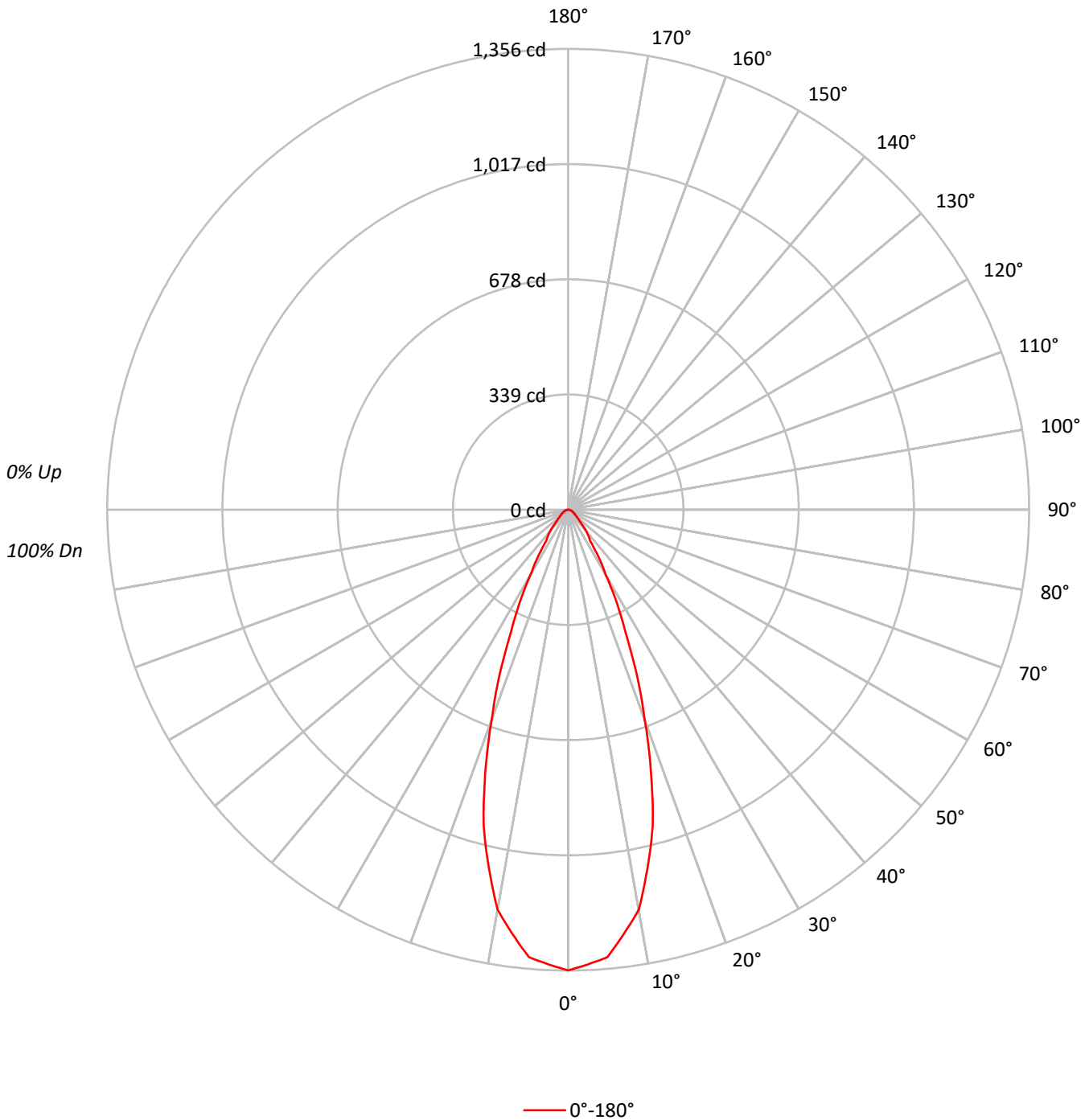
Lumens per Lamp: N/A  
Luminaire Lumens: 745.0 lumens  
Efficiency: N/A  
Efficacy: 73.0 lumens/watt  
Spacing Criteria (0/90/45): 0.65 / 0.65 / 0.63  
Luminous Opening: Circular (Dia: 0.25' x H: 0')  
CIE Type: Direct

Input Watts (W): 10.2  
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	0
RCR																				
0	119	119	119	119	116	116	116	116	111	111	111		106	106	106		102	102	102	100
1	113	110	108	106	111	108	106	104	104	102	101		101	99	98		97	96	95	93
2	108	103	99	95	106	101	97	94	98	95	92		95	92	90		92	90	88	87
3	103	96	91	87	101	95	90	87	92	88	85		90	87	84		88	85	83	81
4	98	90	85	81	96	89	84	80	87	83	80		85	82	79		83	80	78	76
5	93	85	80	76	92	84	79	75	83	78	75		81	77	74		79	76	73	72
6	89	81	75	71	88	80	75	71	78	74	70		77	73	70		76	72	69	68
7	85	77	71	67	84	76	71	67	75	70	66		73	69	66		72	69	66	64
8	82	73	67	63	81	72	67	63	71	66	63		70	66	63		69	65	62	61
9	78	69	64	60	77	69	64	60	68	63	60		67	63	60		66	62	59	58
10	75	66	61	57	74	66	61	57	65	60	57		64	60	57		64	60	57	56

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

	0°
0°	297279
5°	290974
10°	266105
15°	218367
20°	153897
25°	96272
30°	56363
35°	30410
40°	23873
45°	14699
50°	11292
55°	9328
60°	8201
65°	7575
70°	7181
75°	7032
80°	7198
85°	7296



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	122.1	16.4
10°-20°	261.6	35.1
20°-30°	189.4	25.4
30°-40°	82.4	11.1
40°-50°	40.5	5.4
50°-60°	22.5	3.0
60°-70°	14.6	2.0
70°-80°	8.8	1.2
80°-90°	3.1	0.4
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°	573.1	76.9
0°-40°	655.4	88.0
0°-60°	718.4	96.4
0°-90°	745.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	745.0	100.0

**CANDELA DISTRIBUTION:**

	0°	Flux
0°	1356	
5°	1322	122
15°	962	262
25°	398	189
35°	114	82
45°	47	40
55°	24	22
65°	15	15
75°	8	9
85°	3	3
90°	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°
0°	1355.7
5°	1321.9
10°	1195.1
15°	961.9
20°	659.5
25°	397.9
30°	222.6
35°	113.6
40°	83.4
45°	47.4
50°	33.1
55°	24.4
60°	18.7
65°	14.6
70°	11.2
75°	8.3
80°	5.7
85°	2.9
90°	0.0

(END OF REPORT)