

Scaled data based on original data using  
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-  
State Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

Brand: HALO

Report Number: P677516

Luminaire Tested: ML406FL9FS1E-TL40R2GMW-3500K

Issue Date: 4/25/2023

**Test Information**

Test Method: LM-79-2019  
Report Number: P677516  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2304-979-1)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 4/25/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: HALO  
Catalog Number: ML406FL9FS1E-TL40R2GMW-3500K  
Description: RETROFIT, CONICAL LENS TRIM  
Light Source: (1) SELECTABLE LUMEN LED 90CRI / 3500K CCT  
Ballast/Driver: -

**Summary**

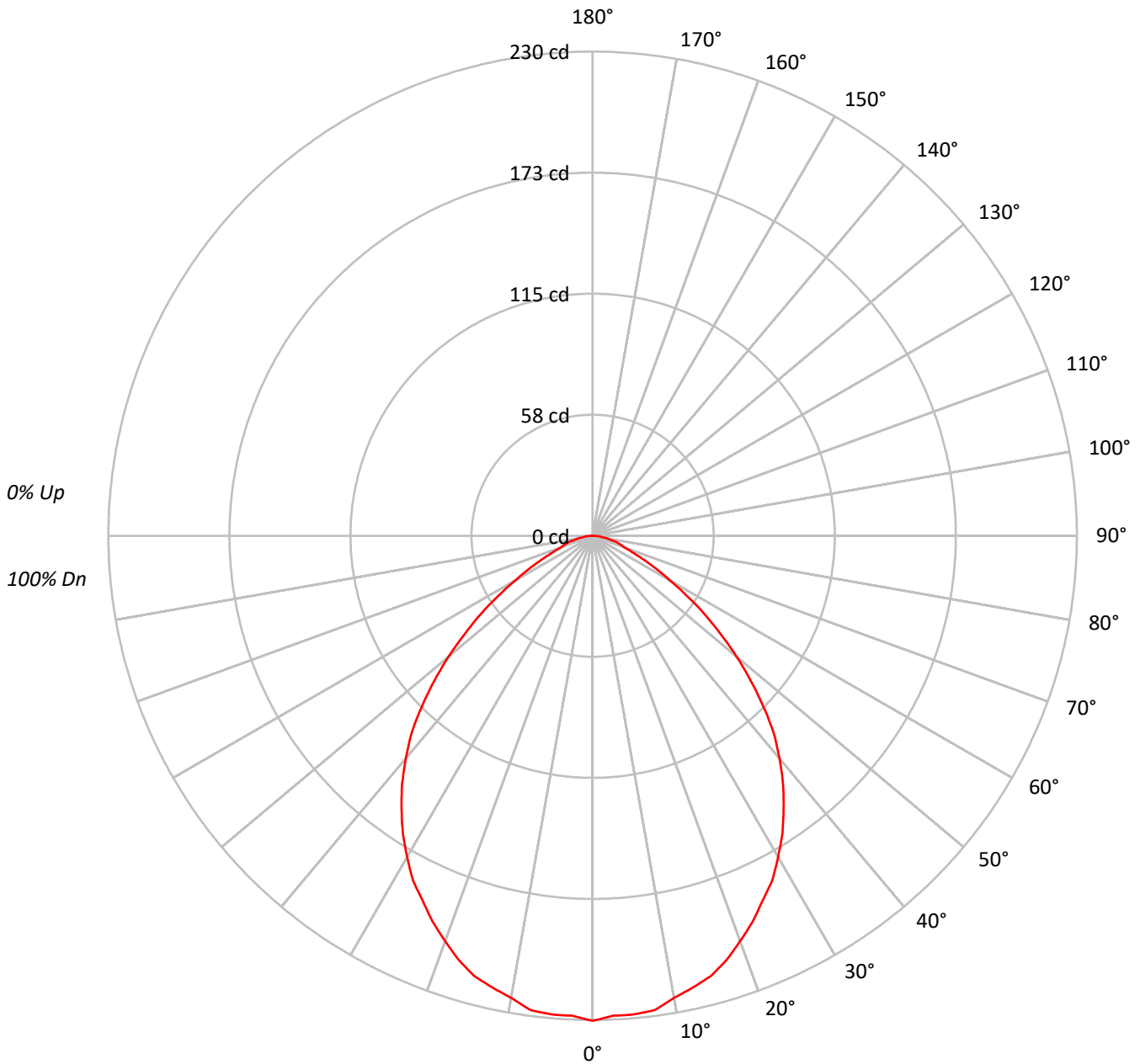
Lumens per Lamp: N/A  
Luminaire Lumens: 457.5 lumens  
Efficiency: N/A  
Efficacy: 55.1 lumens/watt  
Spacing Criteria (0/90/45): 1.15 / 1.15 / 1.23  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

Input Watts (W): 8.3  
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: 24 FT



TEST NUMBER: P677516  
CATALOG NUMBER: ML406FL9FS1E-TL40R2GMW-3500K

### Luminous Intensity Polar Plot





TEST NUMBER: P677516

CATALOG NUMBER: ML406FL9FS1E-TL40R2GMW-3500K

**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20									20									20									20									
RC	80									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																			
1	111	107	103	100	108	105	102	99	101	98	96	97	95	93	93	92	90	88																			
2	103	96	90	85	100	94	89	84	90	86	82	87	84	80	84	81	79	77																			
3	95	86	79	73	92	84	78	73	81	76	71	79	74	70	76	72	69	67																			
4	88	77	70	64	86	76	69	63	74	67	62	71	66	62	69	65	61	59																			
5	81	70	62	56	79	69	61	56	67	60	55	65	59	55	63	58	54	52																			
6	76	64	56	50	74	63	55	50	61	54	49	59	53	49	58	53	48	47																			
7	70	58	50	45	69	57	50	45	56	49	44	55	48	44	53	48	44	42																			
8	66	53	46	40	64	53	45	40	52	45	40	50	44	40	49	44	40	38																			
9	62	49	42	37	60	49	42	37	48	41	36	47	41	36	46	40	36	34																			
10	58	46	38	34	57	45	38	33	44	38	33	43	37	33	43	37	33	31																			

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

	0°
0°	28419
5°	28255
10°	27918
15°	27659
20°	26896
25°	26008
30°	25096
35°	23821
40°	22220
45°	20008
50°	17117
55°	13935
60°	10484
65°	7734
70°	5734
75°	5576
80°	4546
85°	4529

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 20008 cd/sqm



TEST NUMBER: P677516  
 CATALOG NUMBER: ML406FL9FS1E-TL40R2GMW-3500K

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	21.6	4.7
10°-20°	60.8	13.3
20°-30°	88.1	19.3
30°-40°	98.7	21.6
40°-50°	88.1	19.3
50°-60°	57.9	12.7
60°-70°	27.1	5.9
70°-80°	11.9	2.6
80°-90°	3.2	0.7
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°	170.6	37.3
0°-40°	269.3	58.9
0°-60°	415.3	90.8
0°-90°	457.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	457.5	100.0

**CANDELA DISTRIBUTION:**

	0°	Flux
0°	230	
5°	228	22
15°	217	61
25°	191	88
35°	158	99
45°	115	88
55°	65	58
65°	26	27
75°	12	12
85°	3	3
90°	0	



TEST NUMBER: P677516

CATALOG NUMBER: ML406FL9FS1E-TL40R2GMW-3500K

**CANDELA DISTRIBUTION (FULL):**

	0°
0°	230.4
2.5°	228.2
5°	228.2
7.5°	227.2
10°	222.9
12.5°	219.8
15°	216.6
17.5°	211.3
20°	204.9
22.5°	198.5
25°	191.1
27.5°	184.7
30°	176.2
32.5°	167.7
35°	158.2
37.5°	148.6
40°	138.0
42.5°	127.4
45°	114.7
47.5°	101.9
50°	89.2
52.5°	76.4
55°	64.8
57.5°	53.1
60°	42.5
62.5°	34.0
65°	26.5
67.5°	20.2
70°	15.9
72.5°	13.8
75°	11.7
77.5°	8.5
80°	6.4
82.5°	4.2
85°	3.2
87.5°	1.1
90°	0.0

Signify Classified - Internal  
Cooper Lighting Solutions Photometric Lab  
1121 Highway 74 South  
Peachtree City, GA 30269

Scaled Data Report



Report Generated By 670245859 / DESKTOP-T8S5UU9

Signify Classified - Internal  
Cooper Lighting Solutions Photometric Lab  
1121 Highway 74 South  
Peachtree City, GA 30269

Scaled Data Report





Signify Classified - Internal  
Cooper Lighting Solutions Photometric Lab  
1121 Highway 74 South  
Peachtree City, GA 30269

Scaled Data Report



— 0°-180°

Signify Classified - Internal  
Cooper Lighting Solutions Photometric Lab  
1121 Highway 74 South  
Peachtree City, GA 30269

Scaled Data Report



Signify Classified - Internal  
Cooper Lighting Solutions Photometric Lab  
1121 Highway 74 South  
Peachtree City, GA 30269

Scaled Data Report



Signify Classified - Internal  
Cooper Lighting Solutions Photometric Lab  
1121 Highway 74 South  
Peachtree City, GA 30269

Scaled Data Report



(END OF REPORT)