

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: P640344

Luminaire Tested: ML5609LSFL40D2W1E - 696WB - 900LM - 3000K

Issue Date: 2/17/2023

**Test Information**

Test Method: LM-79-2019  
Report Number: P640344  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2212-866-46)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 2/17/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: HALO  
Catalog Number: ML5609LSFL40D2W1E - 696WB - 900LM - 3000K  
Description: ML56 RR, 40D TIR OPTIC, 6" SHALLOW WHITE BAFFLE TRIM  
Light Source: (1) D2W SELECTABLE LUMEN LED 90CRI / 3000K CCT  
Ballast/Driver: -

**Summary**

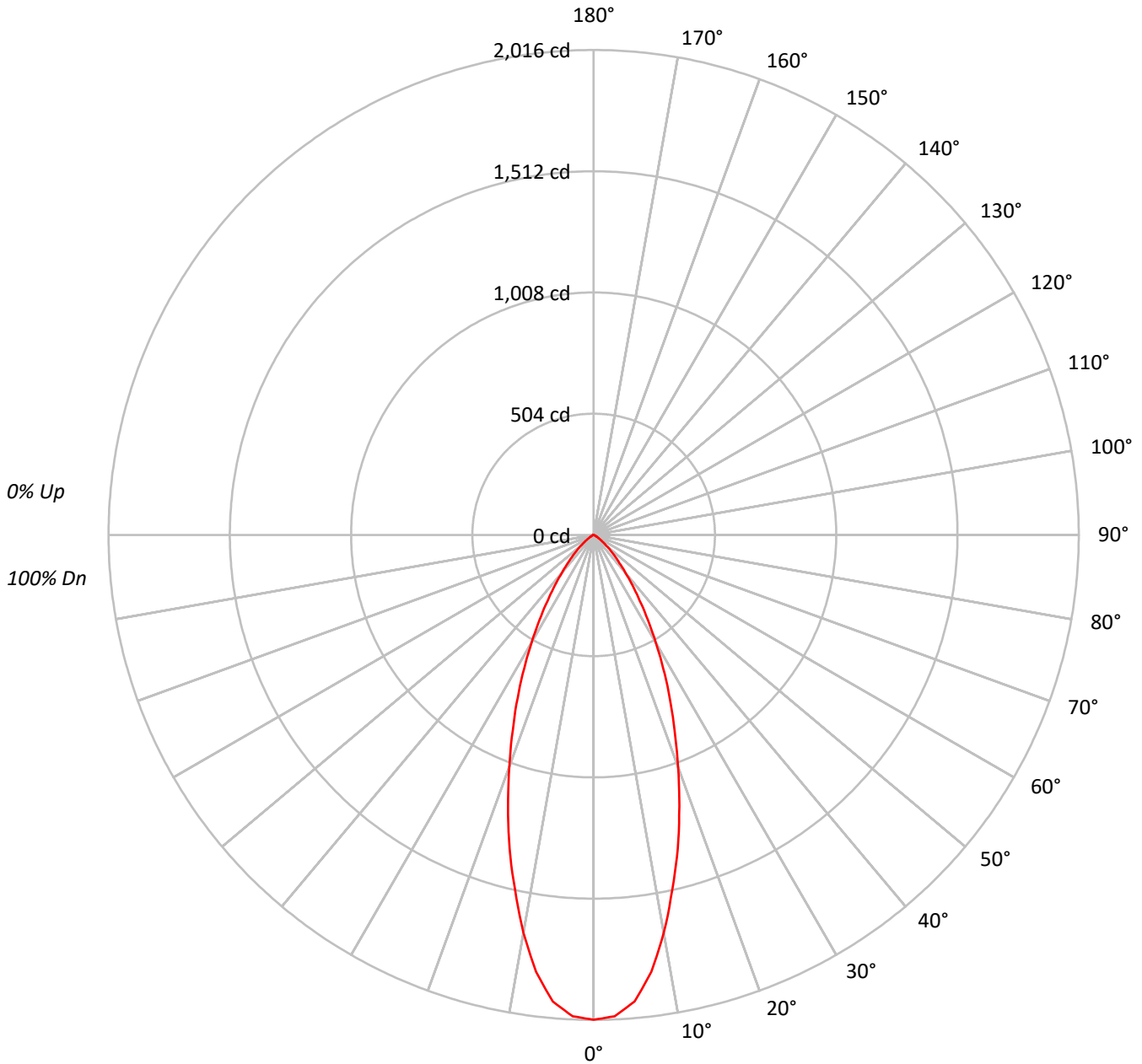
Lumens per Lamp: N/A  
Luminaire Lumens: 1243.8 lumens  
Efficiency: N/A  
Efficacy: 105.4 lumens/watt  
Spacing Criteria (0/90/45): 0.64 / 0.64 / 0.69  
Luminous Opening: Circular (Dia: 0.5' x H: 0')  
CIE Type: Direct

Input Watts (W): 11.8  
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: 24 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	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	111	108	106	111	109	106	104	105	103	101	101	100	98	97	96	95	94					94			
2	108	103	99	96	106	101	98	95	98	95	93	95	93	91	93	91	89	87					87			
3	103	96	91	87	101	95	90	87	92	89	85	90	87	84	88	85	83	81					81			
4	98	90	85	81	96	89	84	80	87	83	79	85	81	78	83	80	77	76					76			
5	93	85	79	75	91	84	78	74	82	77	74	80	76	73	79	75	72	71					71			
6	88	80	74	70	87	79	73	69	77	72	69	76	72	68	75	71	68	66					66			
7	84	75	69	65	83	74	69	65	73	68	65	72	68	64	71	67	64	63					63			
8	80	71	65	61	79	70	65	61	69	64	61	68	64	61	67	63	60	59					59			
9	77	67	62	58	76	67	61	58	66	61	57	65	60	57	64	60	57	56					56			
10	73	64	58	55	72	64	58	55	63	58	54	62	57	54	61	57	54	53					53			

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

	0°
0°	110496
5°	107126
10°	93491
15°	76669
20°	59768
25°	45220
30°	32594
35°	22352
40°	14649
45°	9520
50°	5603
55°	3087
60°	1776
65°	973
70°	513
75°	233
80°	347
85°	0

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 9520 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	177.0	14.2
10°-20°	372.9	30.0
20°-30°	342.7	27.6
30°-40°	212.3	17.1
40°-50°	97.1	7.8
50°-60°	31.5	2.5
60°-70°	8.2	0.7
70°-80°	1.7	0.1
80°-90°	0.4	0.0
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°	892.6	71.8
0°-40°	1104.9	88.8
0°-60°	1233.4	99.2
0°-90°	1243.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1243.8	100.0

**CANDELA DISTRIBUTION:**

	0°	Flux
0°	2016	
5°	1947	177
15°	1351	373
25°	748	343
35°	334	212
45°	123	97
55°	32	31
65°	8	8
75°	1	2
85°	0	0
90°	0	



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**CANDELA DISTRIBUTION (FULL):**

0°	
0°	2015.6
2.5°	2002.7
5°	1946.7
7.5°	1831.4
10°	1679.5
12.5°	1509.3
15°	1350.9
17.5°	1182.9
20°	1024.5
22.5°	878.0
25°	747.6
27.5°	625.9
30°	514.9
32.5°	418.0
35°	334.0
37.5°	263.9
40°	204.7
42.5°	159.4
45°	122.8
47.5°	91.6
50°	65.7
52.5°	46.3
55°	32.3
57.5°	22.6
60°	16.2
62.5°	11.9
65°	7.5
67.5°	4.3
70°	3.2
72.5°	2.2
75°	1.1
77.5°	1.1
80°	1.1
82.5°	1.1
85°	0.0
87.5°	0.0
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

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— 0°-180°

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(END OF REPORT)