

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: P886769

Luminaire Tested: ML310LSFL9FS1E-TIR4D55WFL-TL3SDSL-1000LM-3500K

Issue Date: 7/8/2024

Test Information

Test Method: LM-79-2019
Report Number: P886769
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2402-314-20)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 7/8/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO
Catalog Number: ML310LSFL9FS1E-TIR4D55WFL-TL3SDSL-1000LM-3500K
Description: 3IN SQUARE ML FLEX, SELECTABLE CCT, WITH 55D TIR, METALLIC SILVER TRIM
Light Source: (1) STANDARD SELECTABLE LUMEN LED 90CRI / 3500K CCT
Ballast/Driver: -

Summary

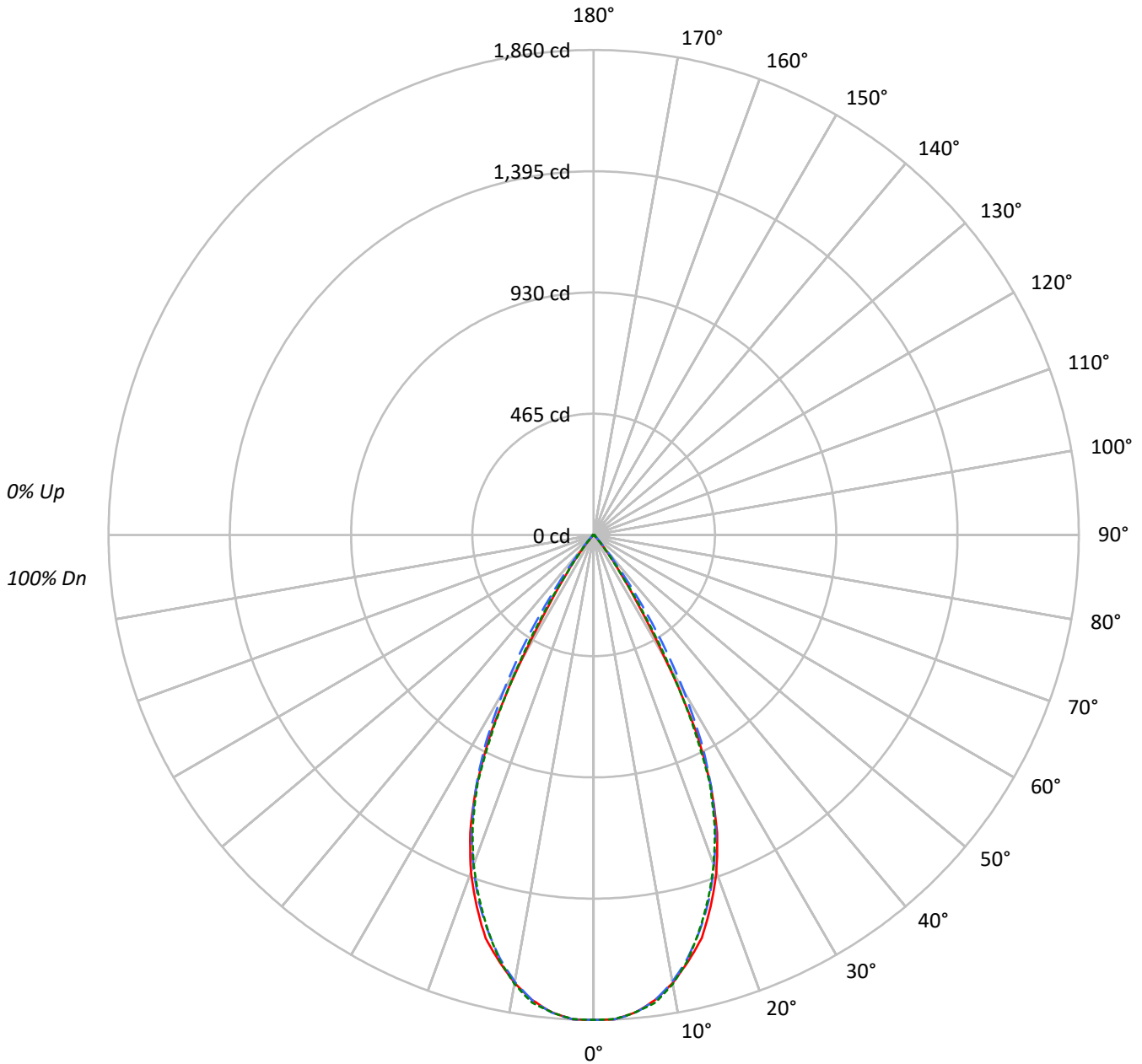
Lumens per Lamp: N/A
Luminaire Lumens: 1270.3 lumens
Efficiency: N/A
Efficacy: 92.1 lumens/watt
Spacing Criteria (0/90/45): 0.85 / 0.84 / 0.81
Luminous Opening: Rectangular (W 0.25' x L: 0.25' x H: 0')
CIE Type: Direct

Input Watts (W): 13.8
Input Voltage (V): NR
Input Current (A_{in}): 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										
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	100	100	100	100		
	1	114	111	109	107	112	109	107	105	105	104	102	102	100	99	98	97	96	94	94	94	94	94	94		
	2	109	104	101	98	107	103	99	97	100	97	94	97	94	92	94	92	91	89	94	92	91	91	89		
	3	104	98	94	90	102	97	93	89	94	91	88	92	89	87	90	87	85	84	90	87	85	85	84		
	4	100	93	88	84	98	92	87	83	90	86	82	88	84	81	86	83	81	79	86	83	81	81	79		
	5	95	88	82	78	94	87	82	78	85	81	77	83	80	77	82	79	76	75	82	79	76	76	75		
	6	91	83	78	74	90	82	77	73	81	76	73	79	76	73	78	75	72	71	78	75	72	72	71		
	7	87	79	73	69	86	78	73	69	77	72	69	76	72	69	75	71	68	67	75	71	68	68	67		
	8	83	75	69	66	82	74	69	66	73	69	65	72	68	65	71	68	65	64	71	68	65	65	64		
	9	80	71	66	62	79	71	66	62	70	65	62	69	65	62	68	64	62	60	68	64	62	62	60		
	10	77	68	63	59	76	67	62	59	67	62	59	66	62	59	65	61	59	57	65	61	59	59	57		

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	320282	320282	320282
5°	317806	317979	317806
10°	305200	304273	305759
15°	285437	280088	279518
20°	252040	247349	246359
25°	201998	202606	200155
30°	109515	137177	114626
35°	37781	60025	36877
40°	9622	15625	8408
45°	2338	5724	2606
50°	1715	2304	2009
55°	1922	1922	1922
60°	1826	1826	1826
65°	1304	1752	1752
70°	1611	1611	1611
75°	1397	2129	2129
80°	1091	2083	2083
85°	2174	2174	2174

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 5724 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	172.6	13.6
10°-20°	438.8	34.5
20°-30°	471.8	37.1
30°-40°	158.3	12.5
40°-50°	15.2	1.2
50°-60°	5.7	0.4
60°-70°	4.3	0.3
70°-80°	2.7	0.2
80°-90°	0.9	0.1
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°	1083.2	85.3
0°-40°	1241.5	97.7
0°-60°	1262.4	99.4
0°-90°	1270.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1270.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1860	1860	1860	1860	1860	
5°	1838	1838	1839	1839	1838	172
15°	1601	1585	1571	1572	1568	443
25°	1063	1078	1066	1072	1053	465
35°	180	185	286	190	175	133
45°	10	12	24	13	11	11
55°	6	6	6	6	6	5
65°	3	4	4	4	4	4
75°	2	2	3	3	3	2
85°	1	1	1	1	1	1
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1859.7	1859.7	1859.7	1859.7	1859.7
2.5°	1859.7	1858.6	1859.7	1859.7	1858.6
5°	1838.3	1838.3	1839.3	1839.3	1838.3
7.5°	1799.8	1799.8	1800.8	1807.3	1809.4
10°	1745.2	1742.0	1739.9	1744.2	1748.4
12.5°	1674.7	1672.5	1662.9	1661.8	1669.3
15°	1600.9	1584.8	1570.9	1572.0	1567.7
17.5°	1492.9	1486.4	1469.3	1469.3	1460.8
20°	1375.2	1361.3	1349.6	1350.6	1344.2
22.5°	1237.3	1237.3	1222.3	1230.9	1212.7
25°	1063.0	1077.9	1066.2	1071.5	1053.3
27.5°	850.2	875.8	890.8	879.0	824.5
30°	550.7	642.7	689.8	632.0	576.4
32.5°	312.3	371.1	486.6	386.0	358.2
35°	179.7	185.0	285.5	190.4	175.4
37.5°	93.0	98.4	143.3	95.2	88.8
40°	42.8	49.2	69.5	49.2	37.4
42.5°	17.1	26.7	39.6	21.4	17.1
45°	9.6	11.8	23.5	12.8	10.7
47.5°	8.6	8.6	13.9	9.6	8.6
50°	6.4	7.5	8.6	7.5	7.5
52.5°	6.4	6.4	7.5	6.4	6.4
55°	6.4	6.4	6.4	6.4	6.4
57.5°	5.3	5.3	6.4	6.4	5.3
60°	5.3	5.3	5.3	5.3	5.3
62.5°	4.3	4.3	5.3	5.3	5.3
65°	3.2	4.3	4.3	4.3	4.3
67.5°	3.2	3.2	4.3	4.3	4.3
70°	3.2	3.2	3.2	3.2	3.2
72.5°	2.1	3.2	3.2	3.2	3.2
75°	2.1	2.1	3.2	3.2	3.2
77.5°	1.1	2.1	2.1	2.1	2.1
80°	1.1	1.1	2.1	2.1	2.1
82.5°	1.1	1.1	1.1	1.1	1.1
85°	1.1	1.1	1.1	1.1	1.1
87.5°	0.0	0.0	0.0	1.1	1.1
90°	0.0	0.0	0.0	0.0	0.0

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

Scaled Data Report



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Scaled Data Report





— 0°-180° - - 45°-225° - - - 90°-270°

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