

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: P886765

Luminaire Tested: ML310LSFL9FS1E-TIR4D55WFL-TL3SDMW-1000LM-4000K

Issue Date: 7/8/2024

Test Information

Test Method: LM-79-2019
Report Number: P886765
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2402-314-19)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 7/8/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO
Catalog Number: ML310LSFL9FS1E-TIR4D55WFL-TL3SDMW-1000LM-4000K
Description: 3IN SQUARE ML FLEX, SELECTABLE CCT, WITH 55D TIR, MATTE WHITE TRIM
Light Source: (1) STANDARD SELECTABLE LUMEN LED 90CRI / 4000K CCT
Ballast/Driver: -

Summary

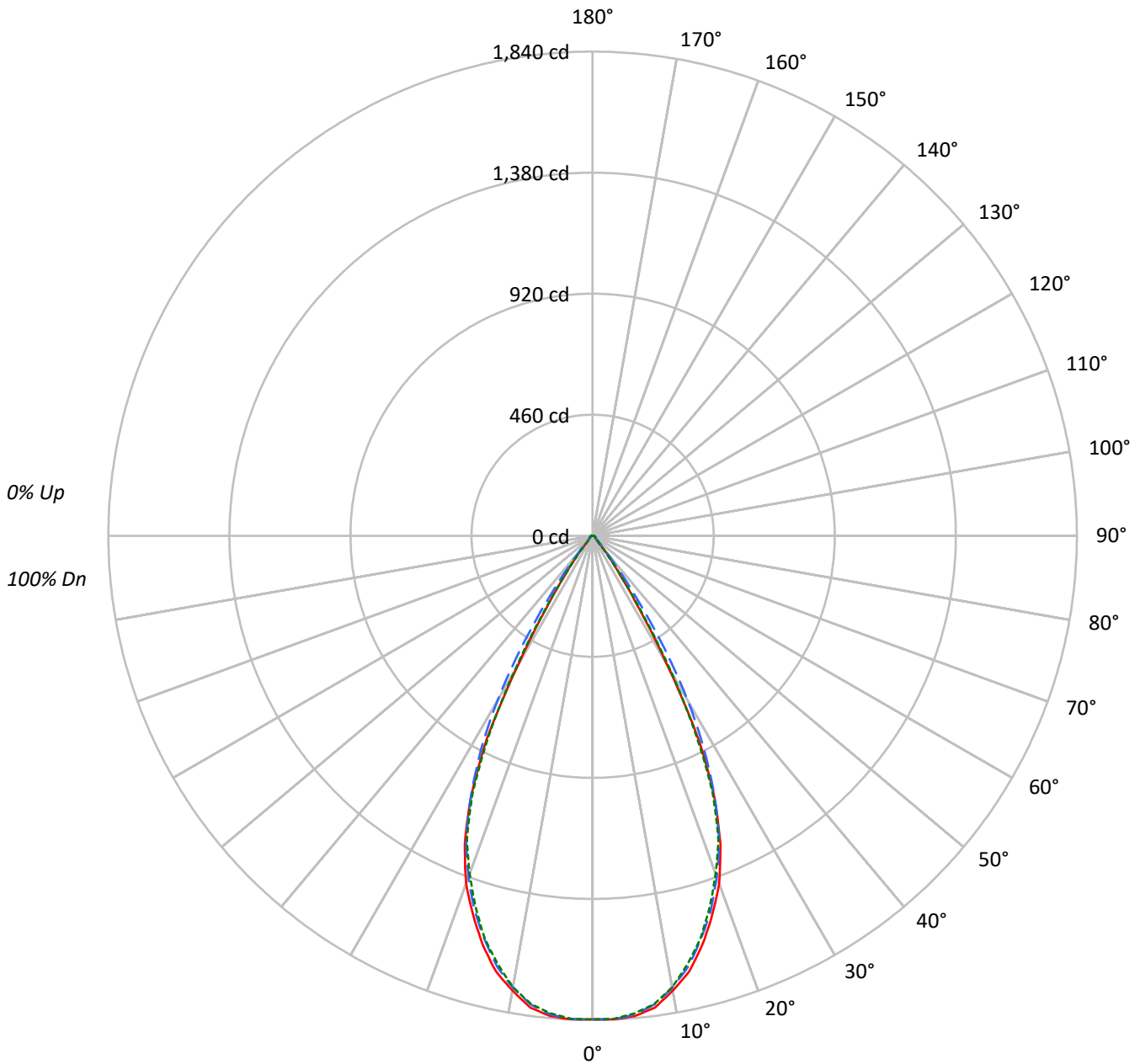
Lumens per Lamp: N/A
Luminaire Lumens: 1318.1 lumens
Efficiency: N/A
Efficacy: 95.5 lumens/watt
Spacing Criteria (0/90/45): 0.87 / 0.86 / 0.82
Luminous Opening: Rectangular (W 0.25' x L: 0.25' x H: 0')
CIE Type: Direct

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								
1	114	111	109	107	111	109	107	105	105	103	102	101	100	99	98	97	96	94								
2	109	104	100	97	106	102	99	96	99	96	94	96	94	92	93	92	90	88								
3	104	98	93	89	102	96	92	89	94	90	87	91	88	86	89	87	84	83								
4	99	92	87	83	97	91	86	82	89	85	81	87	83	80	85	82	80	78								
5	94	87	81	77	93	86	81	77	84	80	76	82	79	76	81	78	75	74								
6	90	82	77	73	89	81	76	72	80	75	72	78	74	71	77	74	71	70								
7	86	78	72	68	85	77	72	68	76	71	68	75	71	67	74	70	67	66								
8	83	74	68	64	81	73	68	64	72	67	64	71	67	64	70	66	64	62								
9	79	70	65	61	78	70	65	61	69	64	61	68	64	61	67	63	60	59								
10	76	67	61	58	75	66	61	58	66	61	58	65	61	58	64	60	57	56								

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	316459	316459	316459
5°	316717	315766	315006
10°	306861	304937	304553
15°	287078	283137	282353
20°	257649	252792	250354
25°	207965	208383	205020
30°	111782	144058	117927
35°	38307	63620	39926
40°	11668	17873	9690
45°	4043	7794	4311
50°	3858	4448	3858
55°	3993	4324	3993
60°	4168	4168	4168
65°	4034	4034	4034
70°	3877	3877	4431
75°	3660	4392	4392
80°	3273	4364	4364
85°	4347	4347	4347

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 7794 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	171.9	13.0
10°-20°	443.7	33.7
20°-30°	483.9	36.7
30°-40°	166.6	12.6
40°-50°	21.1	1.6
50°-60°	12.1	0.9
60°-70°	10.0	0.8
70°-80°	6.5	0.5
80°-90°	2.3	0.2
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°	1099.4	83.4
0°-40°	1266.0	96.0
0°-60°	1299.3	98.6
0°-90°	1318.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1318.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1838	1838	1838	1838	1838	
5°	1832	1830	1826	1822	1822	173
15°	1610	1607	1588	1588	1584	448
25°	1094	1103	1097	1090	1079	477
35°	182	199	303	204	190	138
45°	17	20	32	19	18	17
55°	13	13	14	13	13	12
65°	10	10	10	11	10	10
75°	6	6	7	7	7	6
85°	2	2	2	2	2	2
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1837.5	1837.5	1837.5	1837.5	1837.5
2.5°	1839.8	1839.8	1838.6	1838.6	1837.5
5°	1832.0	1829.8	1826.5	1822.1	1822.1
7.5°	1808.8	1802.2	1796.7	1794.5	1794.5
10°	1754.7	1755.8	1743.7	1738.2	1741.5
12.5°	1696.2	1687.4	1677.4	1671.9	1666.4
15°	1610.1	1606.7	1588.0	1588.0	1583.6
17.5°	1510.7	1509.6	1491.9	1486.4	1478.6
20°	1405.8	1391.4	1379.3	1376.0	1366.0
22.5°	1268.8	1260.0	1256.7	1252.3	1247.9
25°	1094.4	1103.2	1096.6	1089.9	1078.9
27.5°	871.3	905.5	919.9	902.2	849.2
30°	562.1	659.3	724.4	654.8	593.0
32.5°	328.0	389.8	505.8	400.9	357.8
35°	182.2	198.8	302.6	204.3	189.9
37.5°	101.6	109.3	154.6	103.8	97.2
40°	51.9	59.6	79.5	56.3	43.1
42.5°	24.3	34.2	48.6	28.7	23.2
45°	16.6	19.9	32.0	18.8	17.7
47.5°	15.5	16.6	22.1	16.6	15.5
50°	14.4	14.4	16.6	14.4	14.4
52.5°	13.3	14.4	14.4	14.4	13.3
55°	13.3	13.3	14.4	13.3	13.3
57.5°	12.1	13.3	13.3	13.3	12.1
60°	12.1	12.1	12.1	12.1	12.1
62.5°	11.0	11.0	11.0	11.0	11.0
65°	9.9	9.9	9.9	11.0	9.9
67.5°	8.8	8.8	8.8	9.9	8.8
70°	7.7	7.7	7.7	8.8	8.8
72.5°	6.6	6.6	7.7	7.7	7.7
75°	5.5	5.5	6.6	6.6	6.6
77.5°	4.4	4.4	5.5	5.5	5.5
80°	3.3	4.4	4.4	4.4	4.4
82.5°	2.2	3.3	3.3	3.3	3.3
85°	2.2	2.2	2.2	2.2	2.2
87.5°	1.1	1.1	1.1	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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