

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 COMMERCIAL

Report Number: P837282

Luminaire Tested: HCSQ410D010-HM40525830-41SQMW

Issue Date: 5/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P837282
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2309-165-3)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 5/17/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCSQ410D010-HM40525830-41SQMW
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, MATTE WHITE TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 3000K CCT
Ballast/Driver: -

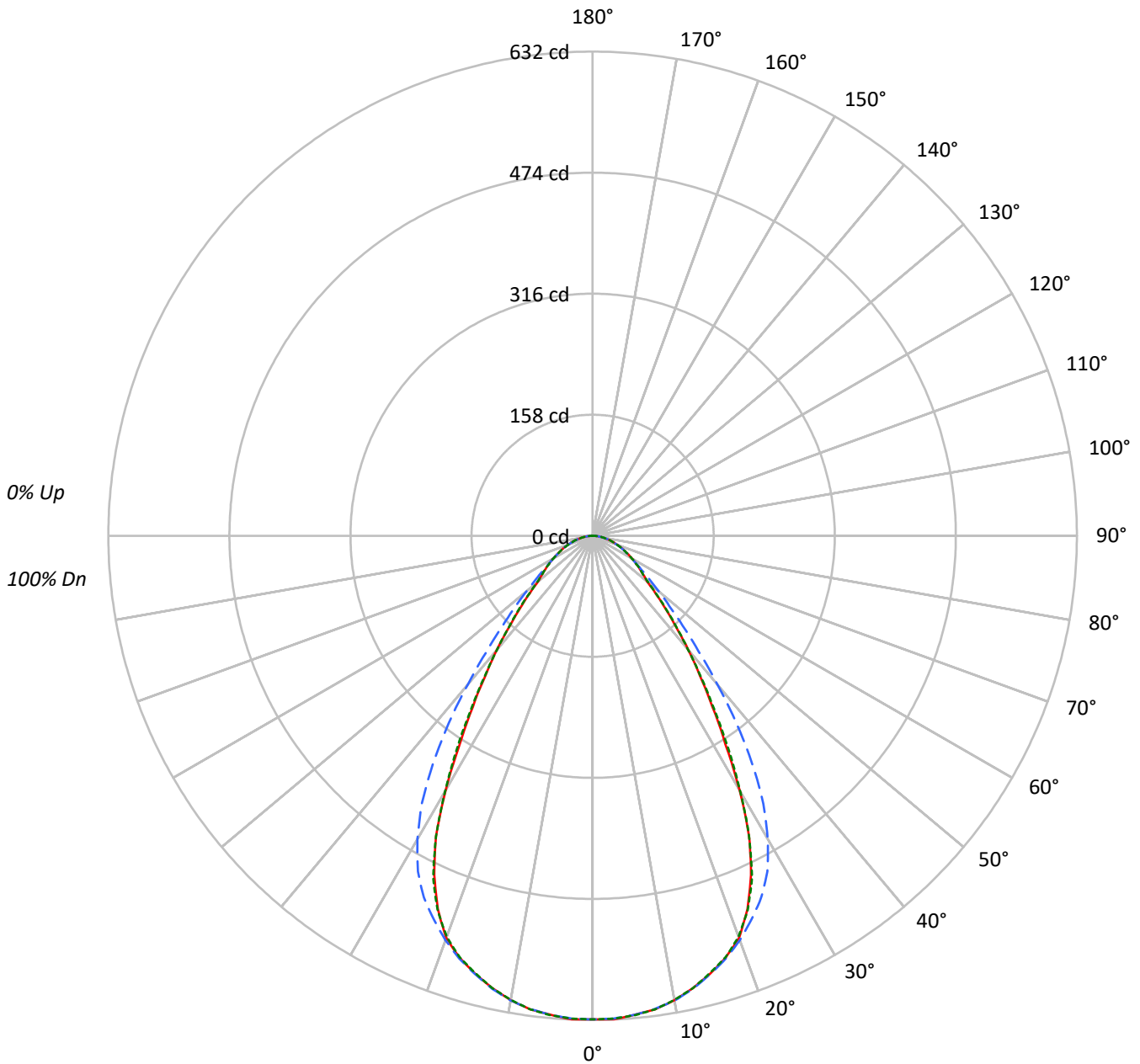
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 916.0 lumens
Efficiency: N/A
Efficacy: 92.5 lumens/watt
Spacing Criteria (0/90/45): 1.03 / 1.03 / 1.07
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 9.9
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	0					
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100								
1	111	108	105	102	109	106	103	100	101	99	97	98	96	94	94	93	91	89								
2	104	98	92	88	102	96	91	87	92	88	85	89	86	83	86	84	81	79								
3	97	89	82	77	95	87	81	77	84	79	75	82	78	74	79	76	73	71								
4	91	81	74	69	89	80	73	68	77	72	67	75	70	66	73	69	66	64								
5	85	74	67	62	83	73	66	61	71	65	61	70	64	60	68	63	60	58								
6	79	69	61	56	78	68	61	56	66	60	55	64	59	55	63	58	54	53								
7	75	63	56	51	73	63	56	51	61	55	50	60	54	50	59	54	50	48								
8	70	59	52	47	69	58	51	47	57	51	46	56	50	46	55	50	46	44								
9	66	55	48	43	65	54	48	43	53	47	43	52	47	43	51	46	43	41								
10	63	51	45	40	62	51	44	40	50	44	40	49	44	40	48	43	40	38								

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	61148	61148	61148
5°	61051	61051	61099
10°	60547	60596	60497
15°	59373	59423	59273
20°	57588	57897	57392
25°	52269	55679	52633
30°	42899	51132	43067
35°	32250	42918	32712
40°	24559	32008	24496
45°	18345	22715	18673
50°	13971	16925	14272
55°	12600	13258	12600
60°	11489	11412	11412
65°	10453	10453	10453
70°	9715	9574	9574
75°	8983	8796	8983
80°	8201	7922	8201
85°	7114	7114	7114

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°

Vertical Angle: 45°

Luminance: 22715 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	59.5	6.5
10°-20°	166.7	18.2
20°-30°	229.2	25.0
30°-40°	195.1	21.3
40°-50°	117.9	12.9
50°-60°	69.5	7.6
60°-70°	45.5	5.0
70°-80°	25.2	2.8
80°-90°	7.4	0.8
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°	455.4	49.7
0°-40°	650.5	71.0
0°-60°	837.8	91.5
0°-90°	916.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	916.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	631	631	631	631	631	
5°	628	628	628	627	628	60
15°	592	594	592	592	591	167
25°	489	504	521	505	492	221
35°	273	300	363	308	277	173
45°	134	148	166	150	136	105
55°	75	76	78	76	75	67
65°	46	46	46	46	46	46
75°	24	24	24	24	24	25
85°	6	6	6	6	6	7
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	631.2	631.2	631.2	631.2	631.2
2.5°	631.7	630.2	630.7	630.2	630.7
5°	627.8	628.3	627.8	627.3	628.3
7.5°	623.4	622.9	622.9	622.4	623.4
10°	615.5	614.6	616.0	615.0	615.0
12.5°	604.7	606.2	605.7	605.7	604.7
15°	592.0	593.5	592.5	592.0	591.0
17.5°	577.3	578.3	578.7	576.8	576.8
20°	558.6	560.6	561.6	558.1	556.7
22.5°	527.7	536.6	542.0	536.1	528.7
25°	489.0	504.2	520.9	505.2	492.4
27.5°	442.4	464.0	493.9	467.4	442.4
30°	383.5	415.4	457.1	418.9	385.0
32.5°	322.7	356.6	414.9	362.5	329.6
35°	272.7	300.2	362.9	308.5	276.6
37.5°	229.5	253.1	308.5	258.5	232.0
40°	194.2	212.9	253.1	215.3	193.7
42.5°	160.4	178.0	205.0	180.5	162.3
45°	133.9	148.1	165.8	149.6	136.3
47.5°	111.3	123.1	135.9	123.1	112.8
50°	92.7	102.0	112.3	102.0	94.7
52.5°	82.9	85.8	92.7	86.3	82.9
55°	74.6	76.0	78.5	76.0	74.6
57.5°	66.7	67.7	67.2	67.2	66.7
60°	59.3	59.8	58.9	59.3	58.9
62.5°	52.5	52.5	51.5	52.5	52.0
65°	45.6	46.1	45.6	45.6	45.6
67.5°	39.7	39.7	39.2	39.7	39.7
70°	34.3	34.3	33.8	34.3	33.8
72.5°	28.9	28.9	28.4	28.4	28.4
75°	24.0	24.0	23.5	23.5	24.0
77.5°	19.1	19.1	18.6	19.1	19.1
80°	14.7	14.7	14.2	14.7	14.7
82.5°	10.3	10.3	10.3	10.8	10.8
85°	6.4	6.4	6.4	6.4	6.4
87.5°	2.9	2.9	2.9	2.9	3.4
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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