

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



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: P837693

Luminaire Tested: HCSQ460D010-HM44560927-41SQC

Issue Date: 5/17/2024



Test Information

Test Method: LM-79-2019
Report Number: P837693
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2309-165-1)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 5/17/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCSQ460D010-HM44560927-41SQC
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, SPECULAR CLEAR TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 2700K CCT
Ballast/Driver: -

Summary

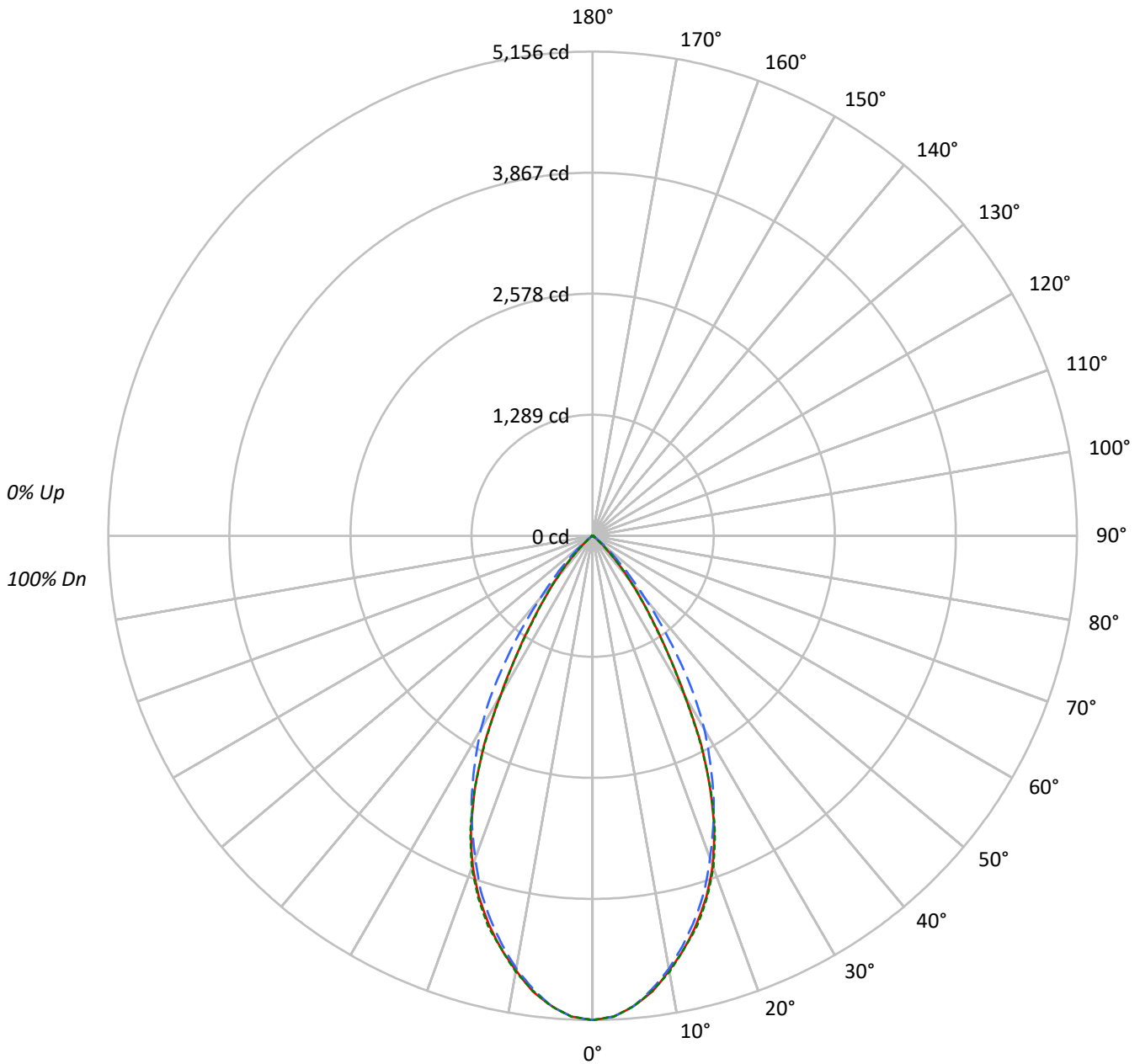
Lumens per Lamp: N/A
Luminaire Lumens: 4167.1 lumens
Efficiency: N/A
Efficacy: 74.4 lumens/watt
Spacing Criteria (0/90/45): 0.85 / 0.85 / 0.87
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 56
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

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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									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	114	111	108	106	111	109	106	104	105	103	101	101	99	98	97	96	95	94																			
2	108	103	99	96	106	101	98	95	98	95	93	95	93	91	93	91	89	87																			
3	103	96	91	87	101	95	90	87	92	89	85	90	87	84	88	85	83	81																			
4	98	90	85	80	96	89	84	80	87	82	79	85	81	78	83	80	77	76																			
5	93	84	79	74	91	83	78	74	82	77	73	80	76	73	78	75	72	71																			
6	88	79	73	69	87	79	73	69	77	72	68	76	71	68	74	70	68	66																			
7	84	75	69	65	82	74	68	64	73	68	64	71	67	64	70	66	63	62																			
8	80	70	64	60	79	70	64	60	69	64	60	68	63	60	67	63	60	58																			
9	76	67	61	57	75	66	60	57	65	60	56	64	60	56	63	59	56	55																			
10	73	63	57	53	72	63	57	53	62	57	53	61	56	53	60	56	53	52																			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	499538	499538	499538
5°	488834	489038	489038
10°	462368	460312	463607
15°	429013	423135	431319
20°	385103	376474	387484
25°	316299	325470	317421
30°	218646	265941	217012
35°	134642	187849	131414
40°	75953	109832	75422
45°	34689	55048	33264
50°	8832	22079	9148
55°	4239	6722	3885
60°	2829	2441	3236
65°	2407	1926	2407
70°	1784	1784	2379
75°	1572	1572	2358
80°	2343	2343	2343
85°	2334	4668	4668

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 55048 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	469.1	11.3
10°-20°	1184.7	28.4
20°-30°	1354.3	32.5
30°-40°	840.7	20.2
40°-50°	264.9	6.4
50°-60°	34.3	0.8
60°-70°	10.2	0.2
70°-80°	5.4	0.1
80°-90°	3.6	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°	3008.0	72.2
0°-40°	3848.6	92.4
0°-60°	4147.8	99.5
0°-90°	4167.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4167.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5156	5156	5156	5156	5156	
5°	5027	5023	5029	5025	5029	470
15°	4278	4246	4219	4246	4301	1193
25°	2959	3001	3045	3001	2970	1328
35°	1138	1314	1588	1283	1111	732
45°	253	303	402	306	243	214
55°	25	25	40	25	23	25
65°	10	10	8	10	10	10
75°	4	4	4	4	6	5
85°	2	4	4	4	4	2
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5156.5	5156.5	5156.5	5156.5	5156.5
2.5°	5125.1	5129.3	5125.1	5133.5	5125.1
5°	5026.8	5022.6	5028.9	5024.7	5028.9
7.5°	4892.8	4867.7	4865.6	4882.4	4884.5
10°	4700.3	4694.0	4679.4	4694.0	4712.9
12.5°	4503.6	4478.5	4457.5	4486.8	4503.6
15°	4277.6	4246.2	4219.0	4246.2	4300.6
17.5°	4028.5	3984.6	3961.6	3992.9	4045.3
20°	3735.5	3689.5	3651.8	3679.0	3758.6
22.5°	3384.0	3379.8	3354.7	3369.3	3398.6
25°	2959.1	3001.0	3044.9	3001.0	2969.6
27.5°	2492.5	2605.5	2705.9	2574.1	2473.6
30°	1954.6	2126.2	2377.4	2113.7	1940.0
32.5°	1511.0	1690.9	2011.1	1667.9	1498.4
35°	1138.5	1314.2	1588.4	1282.9	1111.2
37.5°	837.1	968.9	1207.5	960.6	837.1
40°	600.6	686.4	868.5	684.3	596.4
42.5°	416.5	473.0	606.9	468.8	403.9
45°	253.2	303.4	401.8	305.5	242.8
47.5°	133.9	192.5	253.2	184.2	133.9
50°	58.6	102.5	146.5	100.5	60.7
52.5°	31.4	43.9	79.5	43.9	31.4
55°	25.1	25.1	39.8	25.1	23.0
57.5°	18.8	18.8	20.9	18.8	18.8
60°	14.6	14.6	12.6	14.6	16.7
62.5°	12.6	12.6	10.5	12.6	12.6
65°	10.5	10.5	8.4	10.5	10.5
67.5°	8.4	8.4	8.4	8.4	8.4
70°	6.3	6.3	6.3	8.4	8.4
72.5°	6.3	6.3	6.3	6.3	6.3
75°	4.2	4.2	4.2	4.2	6.3
77.5°	4.2	4.2	4.2	4.2	4.2
80°	4.2	4.2	4.2	4.2	4.2
82.5°	2.1	4.2	4.2	4.2	4.2
85°	2.1	4.2	4.2	4.2	4.2
87.5°	2.1	2.1	4.2	4.2	4.2
90°	0.0	0.0	0.0	0.0	0.0

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Scaled Data Report





— 0°-180° - - 45°-225° - - - - 90°-270°

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