

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: P838679

Luminaire Tested: HCSQ650D010-HM64560930-61SQC

Issue Date: 5/21/2024



Test Information

Test Method: LM-79-2019
Report Number: P838679
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2309-166-1)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 5/21/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCSQ650D010-HM64560930-61SQC
Description: HALO COMMERCIAL 6" SQUARE, NEW CONSTRUCTION FRAME, SPECULAR CLEAR TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 3000K CCT
Ballast/Driver: -

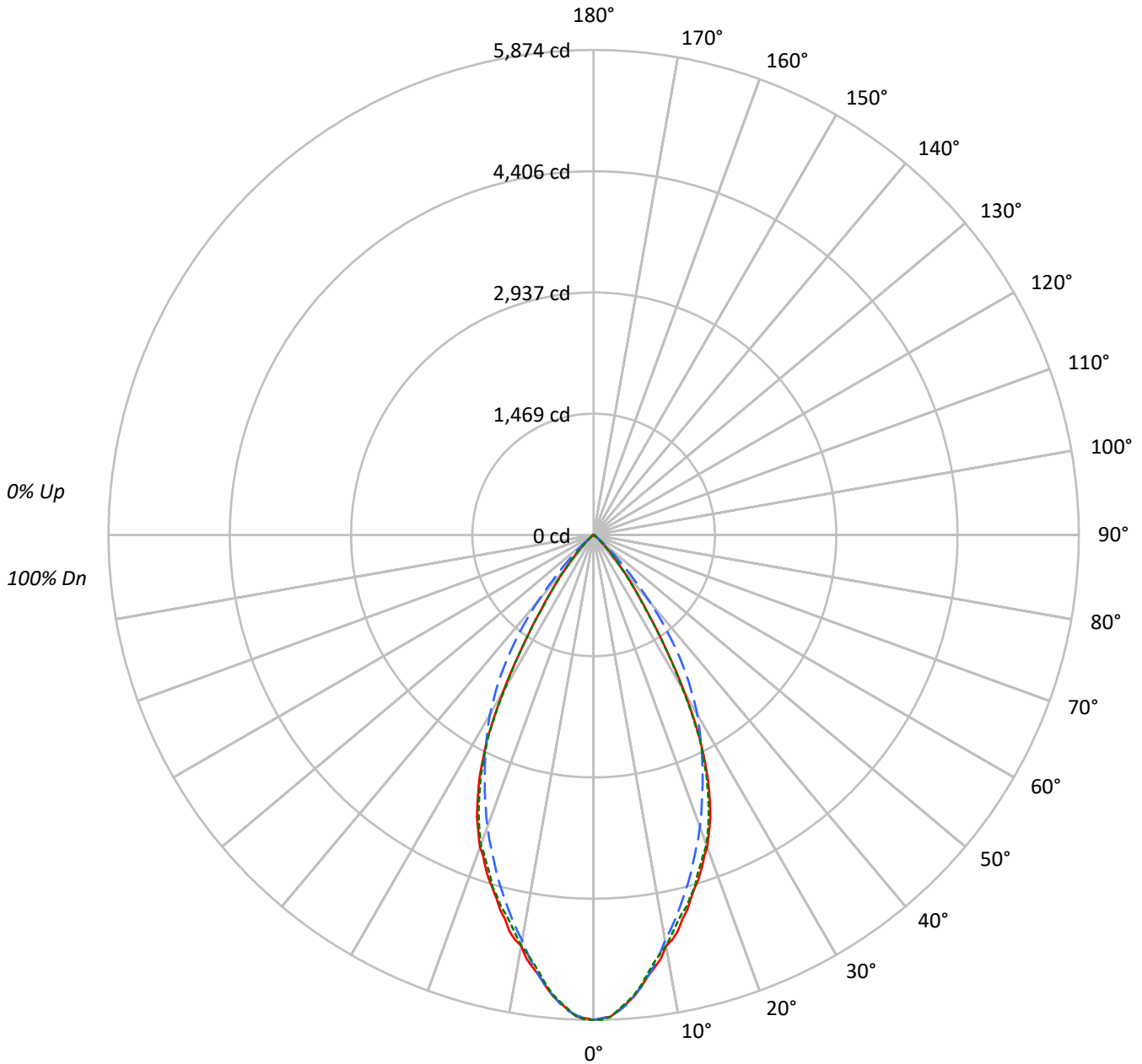
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4399.9 lumens
Efficiency: N/A
Efficacy: 88.5 lumens/watt
Spacing Criteria (0/90/45): 0.82 / 0.81 / 0.85
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
CIE Type: Direct

Input Watts (W): 49.7
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									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	107	105	105	103	101	101	100	98	98	96	95	94																			
2	108	103	99	96	106	102	98	95	98	95	93	95	93	91	93	91	89	87																			
3	103	97	92	88	101	95	91	87	93	89	86	90	87	84	88	85	83	81																			
4	98	90	85	81	96	89	84	80	87	83	79	85	81	78	83	80	78	76																			
5	93	85	79	75	91	84	78	74	82	77	74	80	76	73	79	75	72	71																			
6	88	80	74	70	87	79	73	69	77	72	69	76	72	68	75	71	68	66																			
7	84	75	69	65	83	74	69	65	73	68	64	72	67	64	71	67	64	62																			
8	80	71	65	61	79	70	65	61	69	64	60	68	64	60	67	63	60	59																			
9	76	67	61	57	75	66	61	57	65	60	57	65	60	57	64	60	56	55																			
10	73	63	58	54	72	63	57	54	62	57	54	61	57	53	61	56	53	52																			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	252909	252909	252909
5°	242599	242175	241834
10°	220960	217957	220785
15°	203064	195633	201842
20°	184284	172416	183024
25°	155746	148197	153603
30°	109048	124753	107198
35°	58574	95698	57439
40°	29002	59218	28783
45°	12665	24965	12422
50°	4073	9069	4073
55°	2064	2943	1914
60°	1352	1352	1352
65°	998	998	998
70°	743	743	743
75°	649	649	649
80°	496	496	496
85°	988	988	988

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°

Vertical Angle: 45°

Luminance: 24965 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	515.8	11.7
10°-20°	1245.6	28.3
20°-30°	1438.8	32.7
30°-40°	898.5	20.4
40°-50°	249.6	5.7
50°-60°	34.9	0.8
60°-70°	10.3	0.2
70°-80°	4.4	0.1
80°-90°	1.9	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°	3200.2	72.7
0°-40°	4098.7	93.2
0°-60°	4383.3	99.6
0°-90°	4399.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4399.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5874	5874	5874	5874	5874	
5°	5613	5597	5603	5595	5595	517
15°	4556	4469	4389	4458	4528	1276
25°	3278	3182	3120	3180	3233	1464
35°	1114	1375	1821	1360	1093	740
45°	208	265	410	263	204	180
55°	28	28	39	28	26	27
65°	10	10	10	10	10	10
75°	4	4	4	4	4	4
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°	5874.0	5874.0	5874.0	5874.0	5874.0
1°	5856.4	5856.4	5856.4	5872.1	5872.1
2°	5838.7	5834.8	5825.0	5836.8	5842.7
3°	5766.1	5774.0	5777.9	5772.0	5758.3
4°	5691.6	5683.7	5705.3	5691.6	5679.8
5°	5613.1	5597.4	5603.3	5595.4	5595.4
6°	5503.2	5522.9	5507.2	5493.4	5485.6
7°	5383.6	5399.3	5389.4	5369.8	5356.1
8°	5289.4	5279.6	5263.9	5260.0	5236.4
9°	5199.1	5163.8	5128.5	5134.4	5140.3
10°	5054.0	5057.9	4985.3	5040.2	5050.0
11°	4993.1	4971.6	4875.4	4920.5	4936.2
12°	4904.8	4836.2	4753.8	4791.1	4820.5
13°	4777.3	4706.7	4632.1	4689.0	4718.5
14°	4681.2	4600.7	4506.6	4579.2	4640.0
15°	4555.6	4469.3	4388.9	4457.5	4528.2
16°	4445.8	4345.7	4265.3	4332.0	4437.9
17°	4349.6	4226.0	4127.9	4198.5	4300.6
18°	4237.8	4094.6	4004.3	4078.9	4194.6
19°	4114.2	3969.0	3888.6	3949.4	4082.8
20°	4022.0	3859.1	3763.0	3821.9	3994.5
22.5°	3692.4	3521.7	3433.4	3504.0	3641.4
25°	3278.4	3182.3	3119.5	3180.3	3233.3
27.5°	2787.9	2787.9	2809.5	2784.0	2768.3
30°	2193.4	2352.4	2509.3	2344.5	2156.2
32.5°	1600.9	1856.0	2171.9	1889.3	1599.0
35°	1114.4	1375.3	1820.7	1359.6	1092.8
37.5°	775.0	947.6	1436.1	957.4	765.2
40°	516.0	635.7	1053.6	647.4	512.1
42.5°	337.5	419.9	680.8	421.8	329.6
45°	208.0	264.9	410.0	262.9	204.0
47.5°	121.6	157.0	239.4	158.9	119.7
50°	60.8	92.2	135.4	90.2	60.8
52.5°	35.3	49.0	74.6	47.1	35.3
55°	27.5	27.5	39.2	27.5	25.5
57.5°	21.6	21.6	21.6	21.6	19.6
60°	15.7	17.7	15.7	15.7	15.7
62.5°	13.7	13.7	11.8	13.7	11.8
65°	9.8	9.8	9.8	9.8	9.8
67.5°	7.8	7.8	7.8	7.8	7.8
70°	5.9	5.9	5.9	5.9	5.9
72.5°	3.9	5.9	3.9	5.9	5.9
75°	3.9	3.9	3.9	3.9	3.9



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
82.5°	2.0	2.0	2.0	2.0	2.0
85°	2.0	2.0	2.0	2.0	2.0
87.5°	2.0	2.0	2.0	2.0	2.0
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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77.5°	3.9	3.9	3.9	3.9	2.0
80°	2.0	2.0	2.0	2.0	2.0

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