

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: P838749

Luminaire Tested: HCSQ660D010-HM64560840-61SQC

Issue Date: 5/21/2024



**Test Information**

Test Method: LM-79-2019  
Report Number: P838749  
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: HCSQ660D010-HM64560840-61SQC  
Description: HALO COMMERCIAL 6" SQUARE, NEW CONSTRUCTION FRAME, SPECULAR CLEAR TRIM  
Light Source: (1) HIGH LUMEN LED 80CRI / 4000K CCT  
Ballast/Driver: -

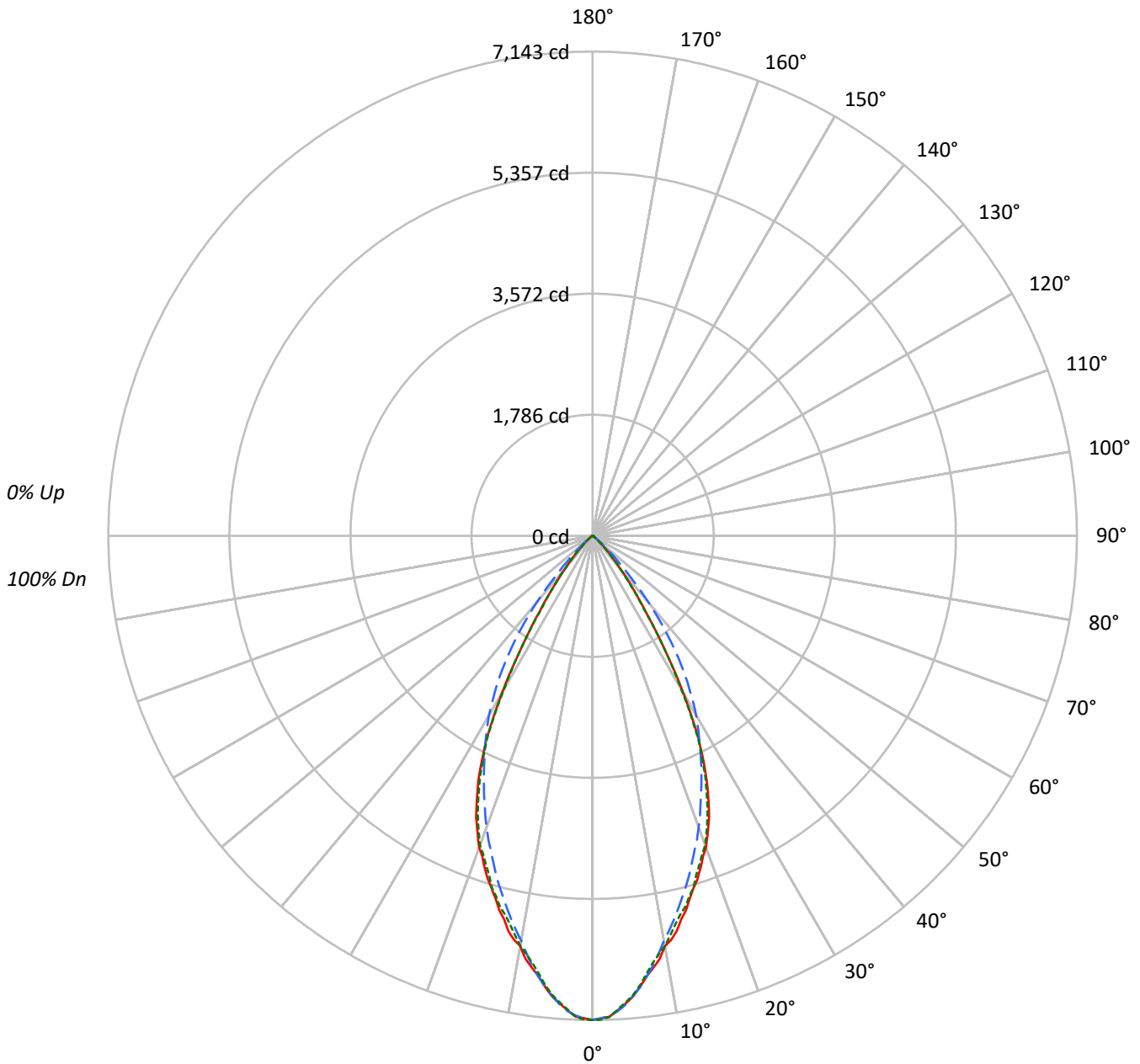
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5350.4 lumens  
Efficiency: N/A  
Efficacy: 95.5 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): 56  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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°	307547	307547	307547
5°	295008	294493	294083
10°	268694	265043	268484
15°	246934	237894	245445
20°	224096	209663	222565
25°	189395	180212	186787
30°	132609	151705	130356
35°	71226	116371	69849
40°	35269	72010	34999
45°	15399	30360	15107
50°	4957	11025	4957
55°	2507	3581	2327
60°	1645	1645	1645
65°	1212	1212	1212
70°	906	906	906
75°	799	799	799
80°	595	595	595
85°	1186	1186	1186

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 45°  
 Vertical Angle: 45°  
 Luminance: 30360 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	627.2	11.7
10°-20°	1514.6	28.3
20°-30°	1749.7	32.7
30°-40°	1092.7	20.4
40°-50°	303.6	5.7
50°-60°	42.5	0.8
60°-70°	12.5	0.2
70°-80°	5.4	0.1
80°-90°	2.3	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°	3891.5	72.7
0°-40°	4984.2	93.2
0°-60°	5330.2	99.6
0°-90°	5350.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5350.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	7143	7143	7143	7143	7143	
5°	6826	6807	6814	6804	6804	629
15°	5540	5435	5337	5420	5506	1552
25°	3987	3870	3793	3867	3932	1781
35°	1355	1672	2214	1653	1329	900
45°	253	322	499	320	248	219
55°	33	33	48	33	31	33
65°	12	12	12	12	12	13
75°	5	5	5	5	5	5
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°	7143.0	7143.0	7143.0	7143.0	7143.0
1°	7121.6	7121.6	7121.6	7140.7	7140.7
2°	7100.1	7095.3	7083.4	7097.7	7104.9
3°	7011.8	7021.4	7026.1	7019.0	7002.3
4°	6921.2	6911.6	6937.9	6921.2	6906.9
5°	6825.7	6806.7	6813.8	6804.3	6804.3
6°	6692.1	6716.0	6696.9	6680.2	6670.7
7°	6546.6	6565.7	6553.8	6529.9	6513.2
8°	6432.1	6420.2	6401.1	6396.3	6367.7
9°	6322.3	6279.4	6236.4	6243.6	6250.8
10°	6145.8	6150.6	6062.3	6129.1	6141.0
11°	6071.8	6045.6	5928.7	5983.6	6002.6
12°	5964.5	5881.0	5780.8	5826.1	5861.9
13°	5809.4	5723.5	5632.8	5702.0	5737.8
14°	5692.5	5594.7	5480.2	5568.4	5642.4
15°	5539.8	5434.8	5337.0	5420.5	5506.4
16°	5406.2	5284.5	5186.7	5267.8	5396.7
17°	5289.3	5139.0	5019.7	5105.6	5229.6
18°	5153.3	4979.1	4869.4	4960.1	5100.8
19°	5003.0	4826.4	4728.6	4802.6	4964.8
20°	4890.9	4692.8	4575.9	4647.5	4857.5
22.5°	4490.1	4282.5	4175.1	4261.0	4428.0
25°	3986.7	3869.7	3793.4	3867.4	3931.8
27.5°	3390.2	3390.2	3416.4	3385.4	3366.3
30°	2667.3	2860.6	3051.4	2851.0	2622.0
32.5°	1946.8	2257.0	2641.1	2297.5	1944.4
35°	1355.1	1672.4	2214.0	1653.4	1328.9
37.5°	942.4	1152.3	1746.4	1164.3	930.5
40°	627.5	773.0	1281.2	787.3	622.7
42.5°	410.4	510.6	827.9	512.9	400.8
45°	252.9	322.1	498.6	319.7	248.1
47.5°	147.9	190.9	291.1	193.2	145.5
50°	74.0	112.1	164.6	109.7	74.0
52.5°	42.9	59.6	90.7	57.3	42.9
55°	33.4	33.4	47.7	33.4	31.0
57.5°	26.2	26.2	26.2	26.2	23.9
60°	19.1	21.5	19.1	19.1	19.1
62.5°	16.7	16.7	14.3	16.7	14.3
65°	11.9	11.9	11.9	11.9	11.9
67.5°	9.5	9.5	9.5	9.5	9.5
70°	7.2	7.2	7.2	7.2	7.2
72.5°	4.8	7.2	4.8	7.2	7.2
75°	4.8	4.8	4.8	4.8	4.8



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
82.5°	2.4	2.4	2.4	2.4	2.4
85°	2.4	2.4	2.4	2.4	2.4
87.5°	2.4	2.4	2.4	2.4	2.4
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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77.5°	4.8	4.8	4.8	4.8	2.4
80°	2.4	2.4	2.4	2.4	2.4

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