

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: P838390

Luminaire Tested: HCSQ615D010-HM60525840-61SQH

Issue Date: 5/21/2024



**Test Information**

Test Method: LM-79-2019  
Report Number: P838390  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2309-166-2)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 5/21/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: HALO COMMERCIAL  
Catalog Number: HCSQ615D010-HM60525840-61SQH  
Description: HALO COMMERCIAL 6" SQUARE, NEW CONSTRUCTION FRAME, HAZE TRIM  
Light Source: (1) HIGH LUMEN LED 80CRI / 4000K CCT  
Ballast/Driver: -

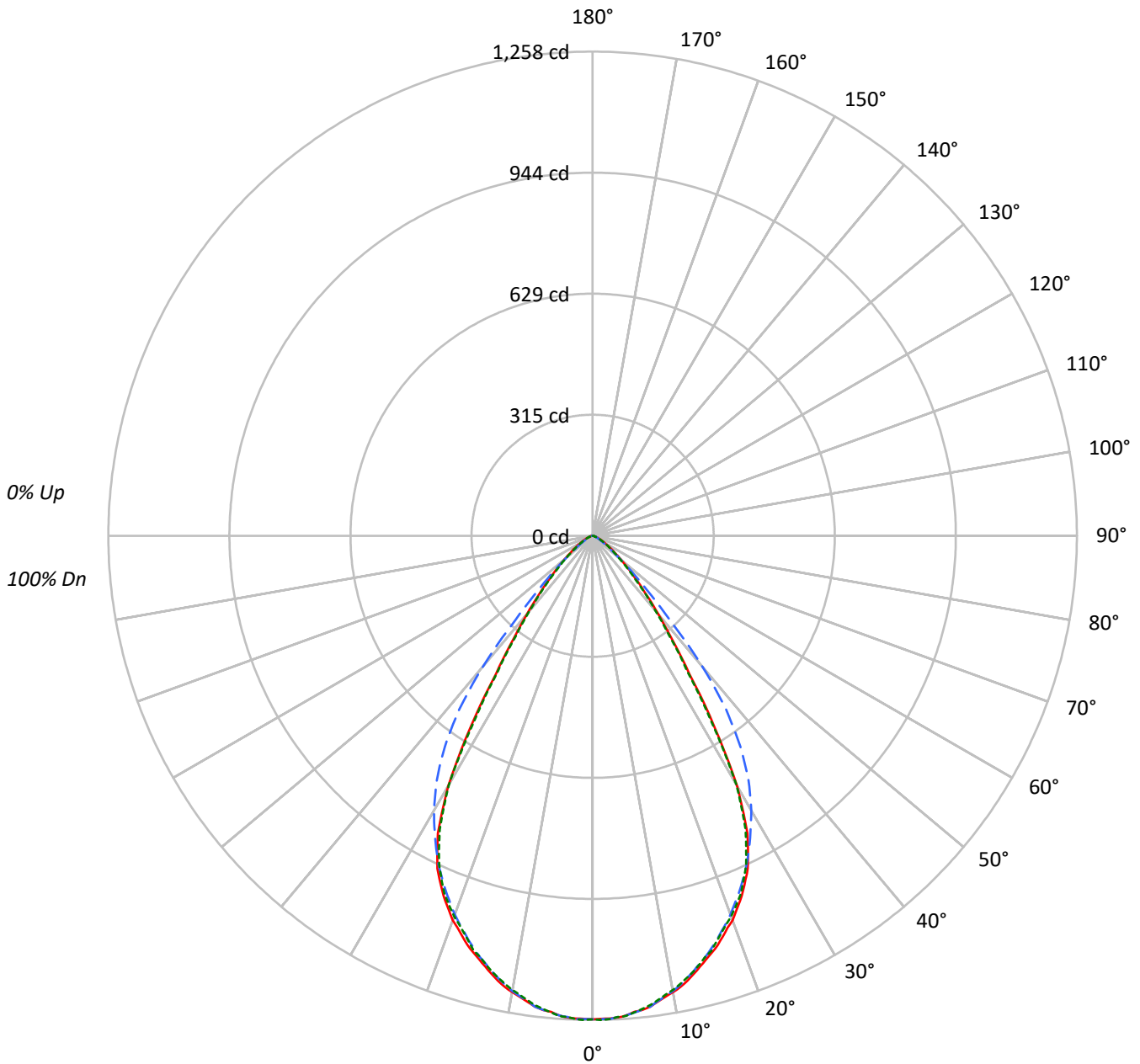
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1413.1 lumens  
Efficiency: N/A  
Efficacy: 100.9 lumens/watt  
Spacing Criteria (0/90/45): 1.02 / 1.01 / 1.04  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 14  
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	113	110	107	105	110	108	105	103	104	102	100	100	98	97	97	95	94	92																			
2	107	101	97	93	104	100	96	92	96	93	90	93	91	88	91	88	86	85																			
3	101	94	88	84	99	92	87	83	90	85	82	87	84	81	85	82	79	78																			
4	95	87	81	76	93	86	80	76	83	78	75	81	77	74	79	76	73	71																			
5	90	80	74	69	88	79	74	69	78	72	68	76	71	68	74	70	67	66																			
6	85	75	68	64	83	74	68	63	72	67	63	71	66	63	70	65	62	61																			
7	80	70	63	59	78	69	63	59	68	62	58	67	62	58	65	61	58	56																			
8	76	65	59	54	74	65	59	54	64	58	54	63	57	54	62	57	54	52																			
9	72	61	55	51	70	61	55	50	60	54	50	59	54	50	58	53	50	48																			
10	68	58	51	47	67	57	51	47	56	51	47	55	50	47	55	50	47	45																			

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	54095	54095	54095
5°	53666	53757	53727
10°	52643	52521	52398
15°	50784	50503	50472
20°	48692	47986	48211
25°	45317	44922	44823
30°	37243	40981	37138
35°	23001	35195	22454
40°	14765	24949	14254
45°	9633	12093	9164
50°	6397	6022	5975
55°	4339	3138	4031
60°	2936	1920	2704
65°	2058	1416	1844
70°	1322	1057	1234
75°	932	815	815
80°	694	521	521
85°	346	692	346

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 45°  
 Vertical Angle: 45°  
 Luminance: 12093 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	117.3	8.3
10°-20°	318.5	22.5
20°-30°	429.9	30.4
30°-40°	335.5	23.7
40°-50°	140.6	9.9
50°-60°	47.7	3.4
60°-70°	17.0	1.2
70°-80°	5.6	0.4
80°-90°	1.1	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°	865.7	61.3
0°-40°	1201.2	85.0
0°-60°	1389.4	98.3
0°-90°	1413.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1413.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1256	1256	1256	1256	1256	
5°	1242	1243	1244	1242	1243	117
15°	1139	1136	1133	1132	1132	320
25°	954	950	946	946	944	429
35°	438	514	670	513	427	288
45°	158	169	199	162	150	127
55°	58	53	42	50	54	53
65°	20	17	14	16	18	21
75°	6	5	5	5	5	6
85°	1	1	1	1	1	1
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1256.4	1256.4	1256.4	1256.4	<i>1256.4</i>
1°	<i>1255.0</i>	<i>1257.1</i>	<i>1255.7</i>	<i>1256.4</i>	<i>1258.5</i>
2°	1255.0	1255.0	1256.4	1255.7	<i>1256.4</i>
3°	1253.6	1253.6	1252.2	1252.2	<i>1252.2</i>
4°	1249.4	1249.4	1249.4	1248.0	<i>1250.8</i>
5°	1241.7	1243.1	1243.8	1241.7	<i>1243.1</i>
6°	1238.9	1239.6	1238.3	1237.6	<i>1236.2</i>
7°	1232.7	1230.6	1232.7	1227.8	<i>1228.5</i>
8°	1222.2	1222.2	1220.8	1219.4	<i>1218.0</i>
9°	1212.5	1212.5	1211.1	1209.0	<i>1207.6</i>
10°	1204.1	1202.0	1201.3	1199.2	<i>1198.5</i>
11°	1194.4	1190.2	1189.5	1187.4	<i>1187.4</i>
12°	1182.5	1180.4	1175.5	1174.8	<i>1174.8</i>
13°	1167.9	1165.8	1162.3	1159.5	<i>1162.3</i>
14°	1153.9	1152.5	1146.3	1148.4	<i>1147.7</i>
15°	1139.3	1136.5	1133.0	1131.6	<i>1132.3</i>
16°	1126.1	1121.2	1116.3	1117.0	<i>1121.2</i>
17°	1112.1	1105.2	1100.3	1099.6	<i>1101.7</i>
18°	1094.7	1089.1	1081.5	1084.3	<i>1084.3</i>
19°	1077.3	1069.6	1064.7	1064.0	<i>1066.8</i>
20°	1062.7	1050.8	1047.3	1046.6	<i>1052.2</i>
22.5°	1012.5	1000.6	997.8	1000.6	<i>1006.2</i>
25°	953.9	949.8	945.6	945.6	<i>943.5</i>
27.5°	871.0	880.8	885.7	875.9	<i>859.9</i>
30°	749.1	790.2	824.3	785.3	<i>747.0</i>
32.5°	590.2	675.2	754.0	673.1	<i>576.3</i>
35°	437.6	513.6	669.6	512.9	<i>427.2</i>
37.5°	337.3	386.0	569.3	379.8	<i>327.5</i>
40°	262.7	291.3	443.9	287.8	<i>253.6</i>
42.5°	204.2	222.3	295.5	218.1	<i>197.2</i>
45°	158.2	169.3	198.6	161.7	<i>150.5</i>
47.5°	123.3	128.2	135.9	122.6	<i>116.4</i>
50°	95.5	95.5	89.9	92.0	<i>89.2</i>
52.5°	73.9	71.1	60.6	66.9	<i>68.3</i>
55°	57.8	53.0	41.8	50.2	<i>53.7</i>
57.5°	43.9	39.0	30.0	36.9	<i>40.4</i>
60°	34.1	29.3	22.3	27.9	<i>31.4</i>
62.5°	26.5	22.3	17.4	20.9	<i>23.7</i>
65°	20.2	16.7	13.9	16.0	<i>18.1</i>
67.5°	15.3	12.5	10.5	11.8	<i>13.9</i>
70°	10.5	9.8	8.4	9.1	<i>9.8</i>
72.5°	7.7	7.0	6.3	6.3	<i>7.0</i>
75°	5.6	4.9	4.9	4.9	<i>4.9</i>



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
82.5°	1.4	1.4	1.4	1.4	1.4
85°	0.7	0.7	1.4	0.7	0.7
87.5°	0.7	0.7	0.7	0.7	0.7
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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Scaled Data Report





77.5°	3.5	3.5	3.5	3.5	3.5
80°	2.8	2.8	2.1	2.1	2.1

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Scaled Data Report



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