

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: P838349

Luminaire Tested: HCSQ610D010-HM60525840-61SQC

Issue Date: 5/21/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P838349  
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: HCSQ610D010-HM60525840-61SQC  
Description: HALO COMMERCIAL 6" SQUARE, NEW CONSTRUCTION FRAME, SPECULAR CLEAR TRIM  
Light Source: (1) HIGH LUMEN LED 80CRI / 4000K CCT  
Ballast/Driver: -

**Summary**

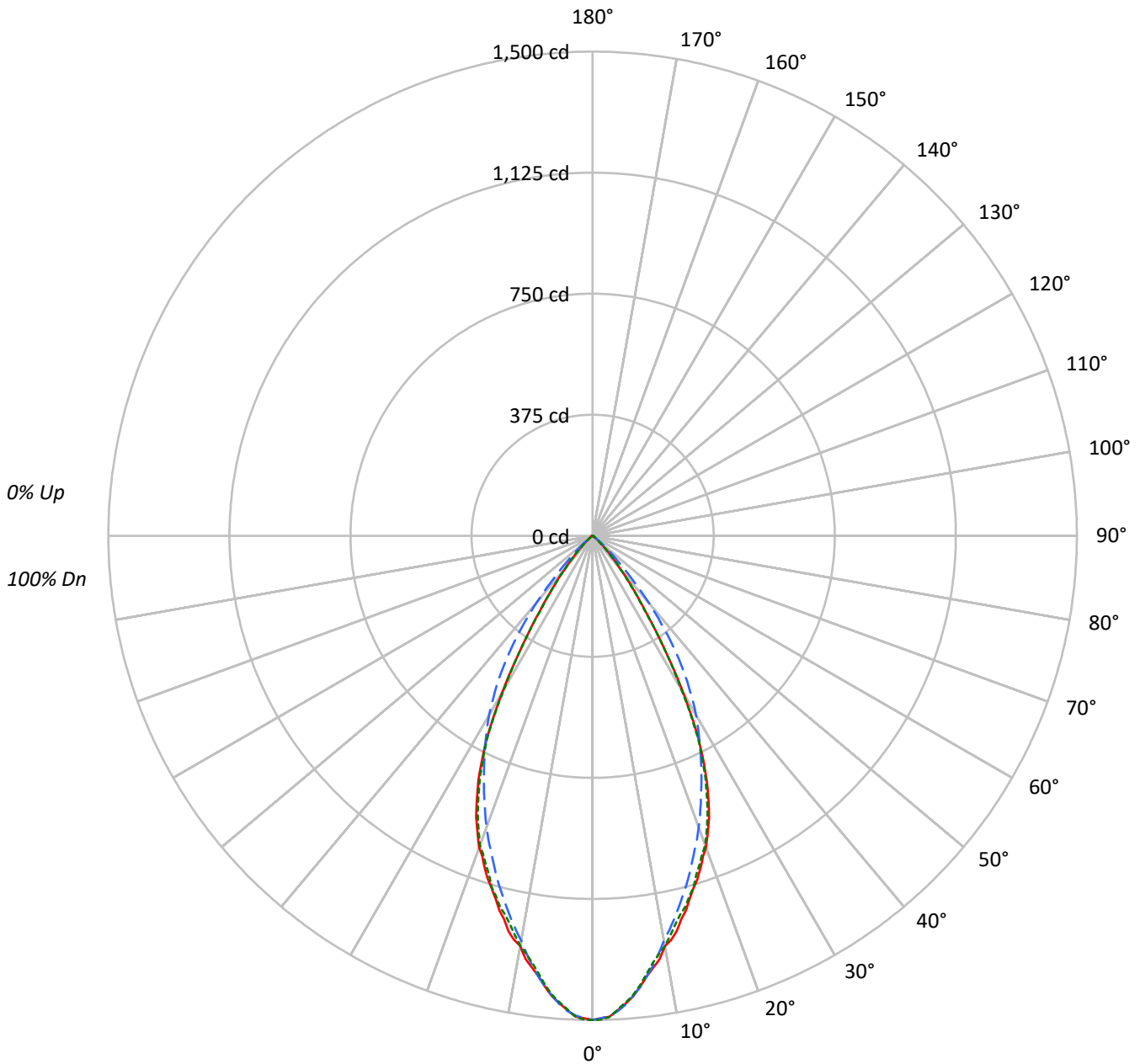
Lumens per Lamp: N/A  
Luminaire Lumens: 1123.5 lumens  
Efficiency: N/A  
Efficacy: 113.5 lumens/watt  
Spacing Criteria (0/90/45): 0.82 / 0.81 / 0.85  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
CIE Type: Direct

Input Watts (W): 9.9  
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°	64583	64583	64583
5°	61952	61844	61757
10°	56425	55660	56381
15°	51858	49959	51541
20°	47061	44027	46740
25°	39773	37844	39226
30°	27846	31858	27374
35°	14959	24436	14670
40°	7408	15119	7352
45°	3233	6375	3172
50°	1038	2318	1038
55°	525	751	488
60°	344	344	344
65°	255	255	255
70°	189	189	189
75°	166	166	166
80°	124	124	124
85°	247	247	247

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 45°  
 Vertical Angle: 45°  
 Luminance: 6375 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	131.7	11.7
10°-20°	318.1	28.3
20°-30°	367.4	32.7
30°-40°	229.5	20.4
40°-50°	63.7	5.7
50°-60°	8.9	0.8
60°-70°	2.6	0.2
70°-80°	1.1	0.1
80°-90°	0.5	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°	817.2	72.7
0°-40°	1046.7	93.2
0°-60°	1119.3	99.6
0°-90°	1123.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1123.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1500	1500	1500	1500	1500	
5°	1433	1429	1431	1429	1429	132
15°	1163	1141	1121	1138	1156	326
25°	837	813	797	812	826	374
35°	285	351	465	347	279	189
45°	53	68	105	67	52	46
55°	7	7	10	7	6	7
65°	2	2	2	2	2	3
75°	1	1	1	1	1	1
85°	0	0	0	0	0	0
90°	0	0	0	0	0	0



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1500.0	1500.0	1500.0	1500.0	1500.0
1°	1495.5	1495.5	1495.5	1499.5	1499.5
2°	1491.0	1490.0	1487.5	1490.5	1492.0
3°	1472.5	1474.5	1475.5	1474.0	1470.5
4°	1453.4	1451.4	1457.0	1453.4	1450.4
5°	1433.4	1429.4	1430.9	1428.9	1428.9
6°	1405.3	1410.4	1406.4	1402.8	1400.8
7°	1374.8	1378.8	1376.3	1371.3	1367.8
8°	1350.7	1348.2	1344.2	1343.2	1337.2
9°	1327.7	1318.7	1309.7	1311.2	1312.7
10°	1290.6	1291.6	1273.1	1287.1	1289.6
11°	1275.1	1269.6	1245.0	1256.5	1260.6
12°	1252.5	1235.0	1214.0	1223.5	1231.0
13°	1220.0	1201.9	1182.9	1197.4	1204.9
14°	1195.4	1174.9	1150.8	1169.4	1184.9
15°	1163.4	1141.3	1120.8	1138.3	1156.3
16°	1135.3	1109.7	1089.2	1106.2	1133.3
17°	1110.8	1079.2	1054.1	1072.2	1098.2
18°	1082.2	1045.6	1022.6	1041.6	1071.2
19°	1050.6	1013.6	993.0	1008.5	1042.6
20°	1027.1	985.5	960.9	976.0	1020.1
22.5°	942.9	899.3	876.8	894.8	929.9
25°	837.2	812.6	796.6	812.1	825.7
27.5°	711.9	711.9	717.5	710.9	706.9
30°	560.1	600.7	640.8	598.7	550.6
32.5°	408.8	474.0	554.6	482.5	408.3
35°	284.6	351.2	464.9	347.2	279.1
37.5°	197.9	242.0	366.7	244.5	195.4
40°	131.8	162.3	269.0	165.3	130.8
42.5°	86.2	107.2	173.9	107.7	84.2
45°	53.1	67.6	104.7	67.1	52.1
47.5°	31.1	40.1	61.1	40.6	30.6
50°	15.5	23.5	34.6	23.0	15.5
52.5°	9.0	12.5	19.0	12.0	9.0
55°	7.0	7.0	10.0	7.0	6.5
57.5°	5.5	5.5	5.5	5.5	5.0
60°	4.0	4.5	4.0	4.0	4.0
62.5°	3.5	3.5	3.0	3.5	3.0
65°	2.5	2.5	2.5	2.5	2.5
67.5°	2.0	2.0	2.0	2.0	2.0
70°	1.5	1.5	1.5	1.5	1.5
72.5°	1.0	1.5	1.0	1.5	1.5
75°	1.0	1.0	1.0	1.0	1.0



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
82.5°	0.5	0.5	0.5	0.5	0.5
85°	0.5	0.5	0.5	0.5	0.5
87.5°	0.5	0.5	0.5	0.5	0.5
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°	1.0	1.0	1.0	1.0	0.5
80°	0.5	0.5	0.5	0.5	0.5

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Scaled Data Report



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