

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: P838452

Luminaire Tested: HCSQ620D010-HM60525940-61SQMB

Issue Date: 5/21/2024

**Test Information**

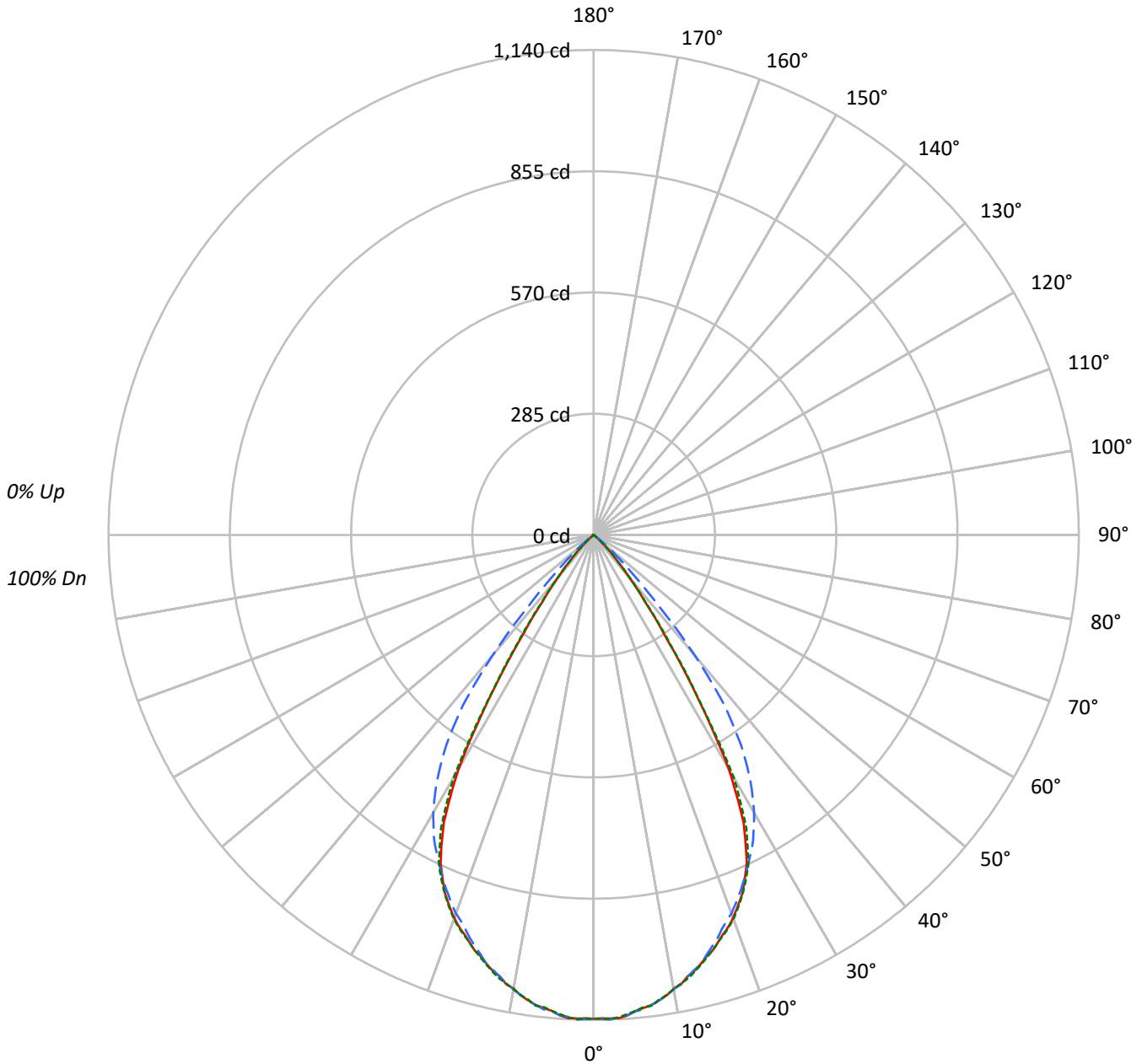
Test Method: LM-79-2019  
Report Number: P838452  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2309-166-4)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 5/21/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: HALO COMMERCIAL  
Catalog Number: HCSQ620D010-HM60525940-61SQMB  
Description: HALO COMMERCIAL 6" SQUARE, NEW CONSTRUCTION FRAME, MATTE BLACK TRIM  
Light Source: (1) HIGH LUMEN LED 90CRI / 4000K CCT  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1130.6 lumens  
Efficiency: N/A  
Efficacy: 56.5 lumens/watt  
Spacing Criteria (0/90/45): 1 / 1.01 / 1.03  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 20  
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					70					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	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	93								
2	108	103	99	96	106	101	98	94	98	95	92	95	93	90	92	90	89	87								
3	102	96	91	87	100	94	90	86	92	88	85	89	86	83	87	85	82	81								
4	97	89	84	80	95	88	83	79	86	82	78	84	80	77	82	79	76	75								
5	92	84	78	73	90	83	77	73	81	76	72	79	75	72	78	74	71	70								
6	87	78	72	68	86	77	72	68	76	71	67	75	70	67	73	69	66	65								
7	83	73	67	63	81	73	67	63	71	66	63	70	66	62	69	65	62	60								
8	79	69	63	59	77	68	63	59	67	62	58	66	62	58	65	61	58	56								
9	75	65	59	55	74	64	59	55	63	58	55	63	58	54	62	57	54	53								
10	71	61	55	51	70	61	55	51	60	55	51	59	54	51	58	54	51	50								

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

	0°	45°	90°
0°	48972	48972	48972
5°	48558	48597	48558
10°	47344	47423	47423
15°	45716	45591	45836
20°	43899	43390	44027
25°	40428	40732	40822
30°	31510	37481	32703
35°	15979	31763	16562
40°	7273	20773	7273
45°	2813	7818	2758
50°	435	2478	435
55°	135	488	135
60°	78	78	78
65°	92	0	92
70°	0	0	113
75°	0	0	150
80°	0	0	0
85°	0	0	0

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 45°  
 Vertical Angle: 45°  
 Luminance: 7818 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	106.2	9.4
10°-20°	288.0	25.5
20°-30°	388.2	34.3
30°-40°	273.0	24.1
40°-50°	69.7	6.2
50°-60°	4.8	0.4
60°-70°	0.6	0.1
70°-80°	0.1	0.0
80°-90°	0.0	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°	782.5	69.2
0°-40°	1055.4	93.4
0°-60°	1129.9	99.9
0°-90°	1130.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1130.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1137	1137	1137	1137	1137	
5°	1124	1125	1124	1125	1124	106
15°	1026	1024	1023	1026	1028	289
25°	851	854	857	860	859	380
35°	304	403	604	413	315	205
45°	46	69	128	70	45	40
55°	2	2	6	2	2	2
65°	1	1	0	1	1	1
75°	0	0	0	0	1	0
85°	0	0	0	0	0	0
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1137.4	1137.4	1137.4	1137.4	1137.4
1°	1136.4	1137.4	1138.3	1138.3	1137.4
2°	1137.4	1134.6	1140.1	1137.4	1138.3
3°	1137.4	1131.8	1134.6	1136.4	1135.5
4°	1132.8	1129.1	1131.8	1130.9	1129.1
5°	1123.5	1125.4	1124.4	1125.4	1123.5
6°	1118.0	1119.8	1121.7	1118.9	1116.1
7°	1113.4	1112.4	1113.4	1115.2	1115.2
8°	1105.0	1106.9	1105.0	1106.0	1103.2
9°	1095.8	1095.8	1095.8	1097.6	1094.9
10°	1082.9	1087.5	1084.7	1086.6	1084.7
11°	1076.4	1074.5	1074.5	1075.5	1074.5
12°	1060.7	1062.5	1061.6	1063.5	1066.2
13°	1052.4	1053.3	1049.6	1054.2	1054.2
14°	1039.4	1038.5	1040.4	1039.4	1041.3
15°	1025.6	1023.7	1022.8	1025.6	1028.3
16°	1015.4	1010.8	1008.0	1011.7	1015.4
17°	1000.6	996.0	992.3	999.7	1000.6
18°	985.8	984.0	974.8	984.0	988.6
19°	973.8	967.4	959.1	969.2	974.8
20°	958.1	952.6	947.0	952.6	960.9
22.5°	912.9	908.2	903.6	910.1	914.7
25°	851.0	853.7	857.4	860.2	859.3
27.5°	763.2	788.1	811.2	796.4	777.0
30°	633.8	696.7	753.9	706.8	657.8
32.5°	459.2	566.4	685.6	587.6	463.8
35°	304.0	402.8	604.3	413.0	315.1
37.5°	197.7	270.7	504.5	271.6	207.0
40°	129.4	176.5	369.6	180.2	129.4
42.5°	79.5	111.8	224.5	116.4	79.5
45°	46.2	69.3	128.4	70.2	45.3
47.5°	21.3	37.9	73.0	37.0	22.2
50°	6.5	16.6	37.0	16.6	6.5
52.5°	2.8	4.6	17.6	4.6	2.8
55°	1.8	1.8	6.5	1.8	1.8
57.5°	1.8	0.9	1.8	1.8	1.8
60°	0.9	0.9	0.9	0.9	0.9
62.5°	0.9	0.9	0.9	0.9	0.9
65°	0.9	0.9	0.0	0.9	0.9
67.5°	0.9	0.0	0.0	0.0	0.9
70°	0.0	0.0	0.0	0.0	0.9
72.5°	0.0	0.0	0.0	0.0	0.9
75°	0.0	0.0	0.0	0.0	0.9



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
82.5°	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0
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°	0.0	0.0	0.0	0.0	0.0
80°	0.0	0.0	0.0	0.0	0.0

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Scaled Data Report



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