

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: P838530

Luminaire Tested: HCSQ630D010-HM63040940-61SQH

Issue Date: 5/21/2024

**Test Information**

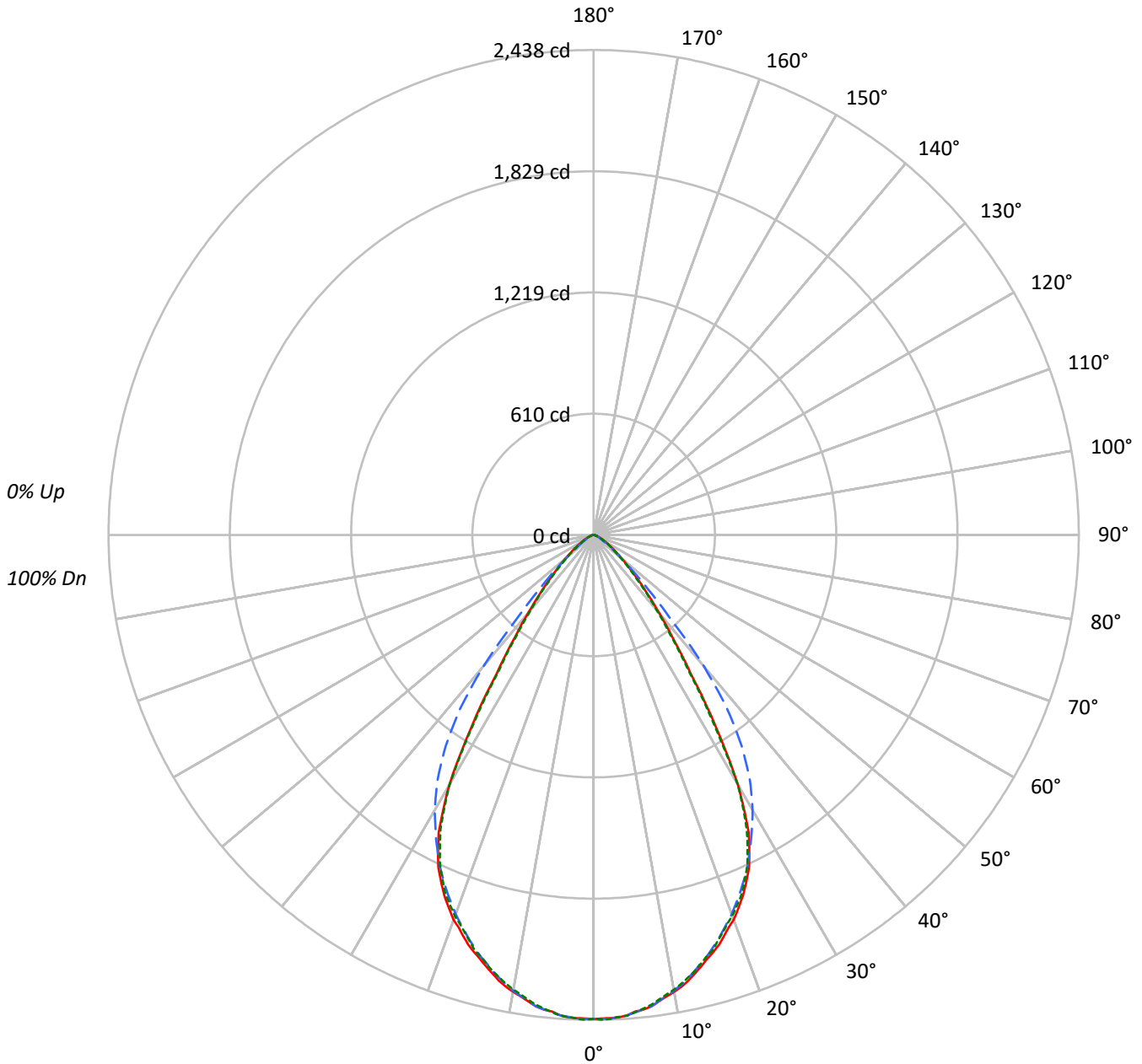
Test Method: LM-79-2019  
Report Number: P838530  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2309-166-2)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 5/21/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: HALO COMMERCIAL  
Catalog Number: HCSQ630D010-HM63040940-61SQH  
Description: HALO COMMERCIAL 6" SQUARE, NEW CONSTRUCTION FRAME, HAZE TRIM  
Light Source: (1) HIGH LUMEN LED 90CRI / 4000K CCT  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2737.0 lumens  
Efficiency: N/A  
Efficacy: 97.1 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): 28.2  
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			100																
1	113	110	107	105	110	108	105	103	104	102	100	100	98	97	97	95	94	92			92																
2	107	101	97	93	104	100	96	92	96	93	90	93	91	88	91	88	86	85			85																
3	101	94	88	84	99	92	87	83	90	85	82	87	84	81	85	82	79	78			78																
4	95	87	81	76	93	86	80	76	83	78	75	81	77	74	79	76	73	71			71																
5	90	80	74	69	88	79	74	69	78	72	68	76	71	68	74	70	67	66			66																
6	85	75	68	64	83	74	68	63	72	67	63	71	66	63	70	65	62	61			61																
7	80	70	63	59	79	69	63	59	68	62	58	67	62	58	65	61	58	56			56																
8	76	65	59	54	74	65	59	54	64	58	54	63	57	54	62	57	54	52			52																
9	72	61	55	51	70	61	55	50	60	54	50	59	54	50	58	53	50	48			48																
10	68	58	51	47	67	57	51	47	56	51	47	55	50	47	55	50	47	45			45																

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

	0°	45°	90°
0°	104785	104785	104785
5°	103957	104135	104074
10°	101972	101736	101500
15°	98371	97832	97770
20°	94314	92953	93388
25°	87788	87018	86823
30°	72138	79387	71940
35°	44556	68182	43489
40°	28603	48325	27614
45°	18657	23424	17755
50°	12385	11662	11575
55°	8407	6080	7799
60°	5692	3720	5227
65°	3983	2751	3576
70°	2543	2039	2379
75°	1797	1564	1564
80°	1339	992	992
85°	642	1334	642

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 45°  
 Vertical Angle: 45°  
 Luminance: 23424 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	227.3	8.3
10°-20°	616.9	22.5
20°-30°	832.7	30.4
30°-40°	649.9	23.7
40°-50°	272.3	9.9
50°-60°	92.3	3.4
60°-70°	32.9	1.2
70°-80°	10.7	0.4
80°-90°	2.2	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°	1676.9	61.3
0°-40°	2326.8	85.0
0°-60°	2691.3	98.3
0°-90°	2737.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2737.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2434	2434	2434	2434	2434	
5°	2405	2408	2409	2405	2408	228
15°	2207	2202	2195	2192	2193	621
25°	1848	1840	1832	1832	1828	831
35°	848	995	1297	994	827	557
45°	306	328	385	313	292	246
55°	112	103	81	97	104	103
65°	39	32	27	31	35	40
75°	11	9	9	9	9	12
85°	1	1	3	1	1	2
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2433.7	2433.7	2433.7	2433.7	2433.7
1°	2431.0	2435.0	2432.3	2433.7	2437.7
2°	2431.0	2431.0	2433.7	2432.3	2433.7
3°	2428.3	2428.3	2425.6	2425.6	2425.6
4°	2420.2	2420.2	2420.2	2417.5	2422.9
5°	2405.3	2408.0	2409.4	2405.3	2408.0
6°	2399.9	2401.3	2398.6	2397.2	2394.5
7°	2387.8	2383.7	2387.8	2378.3	2379.7
8°	2367.5	2367.5	2364.8	2362.1	2359.4
9°	2348.6	2348.6	2345.9	2341.9	2339.2
10°	2332.4	2328.4	2327.0	2323.0	2321.6
11°	2313.6	2305.5	2304.1	2300.1	2300.1
12°	2290.6	2286.6	2277.1	2275.8	2275.8
13°	2262.3	2258.2	2251.5	2246.1	2251.5
14°	2235.3	2232.6	2220.4	2224.5	2223.1
15°	2206.9	2201.5	2194.8	2192.1	2193.4
16°	2181.3	2171.8	2162.4	2163.7	2171.8
17°	2154.3	2140.8	2131.3	2130.0	2134.0
18°	2120.5	2109.7	2094.9	2100.3	2100.3
19°	2086.8	2071.9	2062.5	2061.1	2066.5
20°	2058.4	2035.5	2028.7	2027.4	2038.2
22.5°	1961.3	1938.3	1932.9	1938.3	1949.1
25°	1847.9	1839.8	1831.7	1831.7	1827.6
27.5°	1687.2	1706.1	1715.6	1696.7	1665.6
30°	1451.0	1530.7	1596.8	1521.2	1447.0
32.5°	1143.3	1308.0	1460.5	1303.9	1116.3
35°	847.7	994.8	1297.2	993.5	827.4
37.5°	653.3	747.8	1102.8	735.6	634.4
40°	508.9	564.2	859.8	557.5	491.3
42.5°	395.5	430.6	572.3	422.5	382.0
45°	306.4	328.0	384.7	313.2	291.6
47.5°	238.9	248.4	263.2	237.6	225.4
50°	184.9	184.9	174.1	178.2	172.8
52.5°	143.1	137.7	117.4	129.6	132.3
55°	112.0	102.6	81.0	97.2	103.9
57.5°	85.0	75.6	58.0	71.5	78.3
60°	66.1	56.7	43.2	54.0	60.7
62.5°	51.3	43.2	33.7	40.5	45.9
65°	39.1	32.4	27.0	31.0	35.1
67.5°	29.7	24.3	20.2	22.9	27.0
70°	20.2	18.9	16.2	17.5	18.9
72.5°	14.8	13.5	12.1	12.1	13.5
75°	10.8	9.4	9.4	9.4	9.4



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
82.5°	2.7	2.7	2.7	2.7	2.7
85°	1.3	1.3	2.7	1.3	1.3
87.5°	1.3	1.3	1.3	1.3	1.3
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°	6.7	6.7	6.7	6.7	6.7
80°	5.4	5.4	4.0	4.0	4.0

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Scaled Data Report



(END OF REPORT)