

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: P838525

Luminaire Tested: HCSQ630D010-HM63040935-61SQH

Issue Date: 5/21/2024

**Test Information**

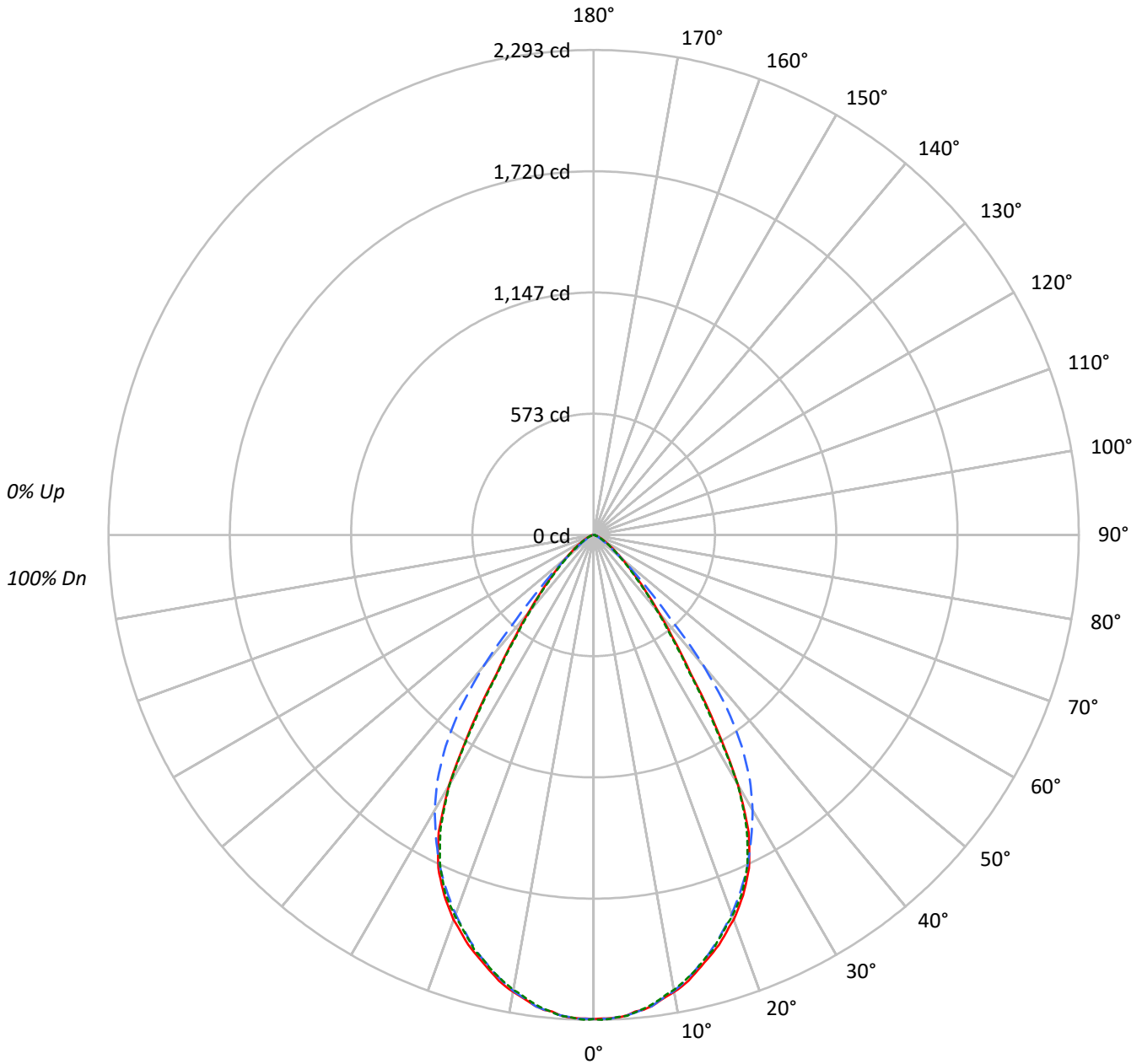
Test Method: LM-79-2019  
Report Number: P838525  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2309-166-2)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 5/21/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: HALO COMMERCIAL  
Catalog Number: HCSQ630D010-HM63040935-61SQH  
Description: HALO COMMERCIAL 6" SQUARE, NEW CONSTRUCTION FRAME, HAZE TRIM  
Light Source: (1) HIGH LUMEN LED 90CRI / 3500K CCT  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2574.6 lumens  
Efficiency: N/A  
Efficacy: 91.3 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°	98563	98563	98563
5°	97786	97954	97898
10°	95921	95698	95475
15°	92532	92024	91966
20°	88715	87436	87844
25°	82576	81849	81669
30°	67858	74674	67669
35°	41912	64135	40908
40°	26905	45459	25978
45°	17548	22036	16696
50°	11648	10972	10885
55°	7912	5720	7341
60°	5356	3496	4917
65°	3749	2588	3362
70°	2392	1913	2241
75°	1697	1481	1481
80°	1265	942	942
85°	642	1235	642

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 45°  
 Vertical Angle: 45°  
 Luminance: 22036 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	213.8	8.3
10°-20°	580.3	22.5
20°-30°	783.3	30.4
30°-40°	611.3	23.7
40°-50°	256.1	9.9
50°-60°	86.8	3.4
60°-70°	31.0	1.2
70°-80°	10.1	0.4
80°-90°	2.1	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°	1577.3	61.3
0°-40°	2188.7	85.0
0°-60°	2531.6	98.3
0°-90°	2574.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2574.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2289	2289	2289	2289	2289	
5°	2262	2265	2266	2262	2265	214
15°	2076	2071	2064	2062	2063	584
25°	1738	1731	1723	1723	1719	782
35°	797	936	1220	934	778	524
45°	288	308	362	295	274	231
55°	105	96	76	91	98	97
65°	37	30	25	29	33	38
75°	10	9	9	9	9	11
85°	1	1	2	1	1	2
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2289.2	2289.2	2289.2	2289.2	2289.2
1°	2286.7	2290.5	2287.9	2289.2	2293.0
2°	2286.7	2286.7	2289.2	2287.9	2289.2
3°	2284.1	2284.1	2281.6	2281.6	2281.6
4°	2276.5	2276.5	2276.5	2274.0	2279.1
5°	2262.5	2265.1	2266.4	2262.5	2265.1
6°	2257.5	2258.7	2256.2	2254.9	2252.4
7°	2246.0	2242.2	2246.0	2237.2	2238.4
8°	2227.0	2227.0	2224.5	2221.9	2219.4
9°	2209.2	2209.2	2206.7	2202.9	2200.3
10°	2194.0	2190.2	2188.9	2185.1	2183.8
11°	2176.2	2168.6	2167.3	2163.5	2163.5
12°	2154.6	2150.8	2141.9	2140.7	2140.7
13°	2128.0	2124.2	2117.8	2112.7	2117.8
14°	2102.6	2100.0	2088.6	2092.4	2091.1
15°	2075.9	2070.8	2064.5	2061.9	2063.2
16°	2051.8	2042.9	2034.0	2035.3	2042.9
17°	2026.4	2013.7	2004.8	2003.5	2007.3
18°	1994.6	1984.5	1970.5	1975.6	1975.6
19°	1962.9	1948.9	1940.1	1938.8	1943.9
20°	1936.2	1914.7	1908.3	1907.0	1917.2
22.5°	1844.8	1823.2	1818.2	1823.2	1833.4
25°	1738.2	1730.6	1722.9	1722.9	1719.1
27.5°	1587.1	1604.9	1613.7	1596.0	1566.8
30°	1364.9	1439.8	1502.0	1430.9	1361.1
32.5°	1075.4	1230.3	1373.8	1226.5	1050.0
35°	797.4	935.7	1220.2	934.5	778.3
37.5°	614.5	703.4	1037.3	692.0	596.7
40°	478.7	530.7	808.8	524.4	462.2
42.5°	372.0	405.0	538.3	397.4	359.3
45°	288.2	308.5	361.9	294.6	274.2
47.5°	224.7	233.6	247.6	223.5	212.0
50°	173.9	173.9	163.8	167.6	162.5
52.5°	134.6	129.5	110.5	121.9	124.4
55°	105.4	96.5	76.2	91.4	97.8
57.5°	80.0	71.1	54.6	67.3	73.6
60°	62.2	53.3	40.6	50.8	57.1
62.5°	48.2	40.6	31.7	38.1	43.2
65°	36.8	30.5	25.4	29.2	33.0
67.5°	27.9	22.9	19.0	21.6	25.4
70°	19.0	17.8	15.2	16.5	17.8
72.5°	14.0	12.7	11.4	11.4	12.7
75°	10.2	8.9	8.9	8.9	8.9



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
82.5°	2.5	2.5	2.5	2.5	2.5
85°	1.3	1.3	2.5	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°	6.3	6.3	6.3	6.3	6.3
80°	5.1	5.1	3.8	3.8	3.8

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Scaled Data Report



(END OF REPORT)