

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: P838520

Luminaire Tested: HCSQ630D010-HM63040930-61SQH

Issue Date: 5/21/2024

**Test Information**

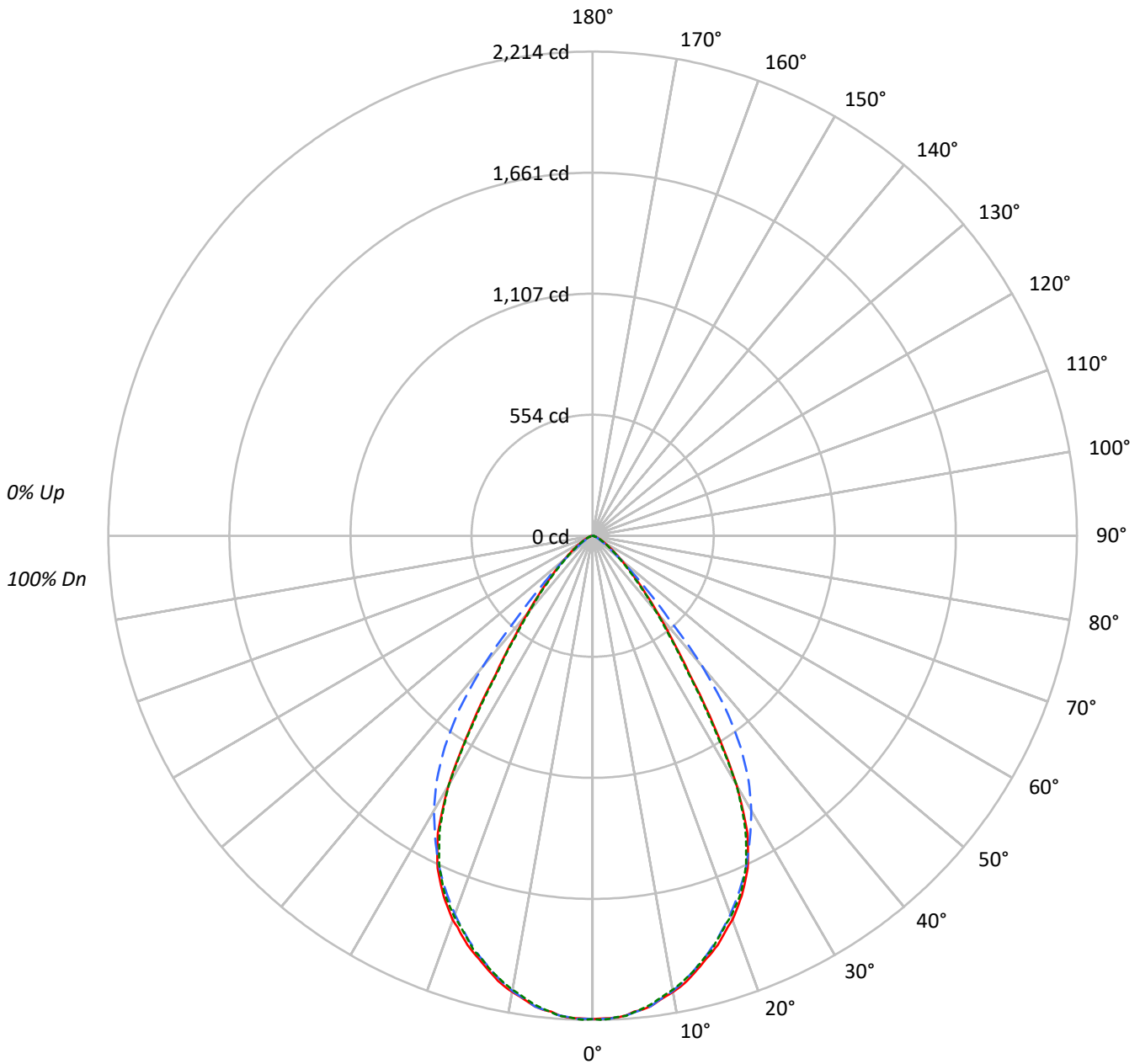
Test Method: LM-79-2019  
Report Number: P838520  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2309-166-2)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 5/21/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: HALO COMMERCIAL  
Catalog Number: HCSQ630D010-HM63040930-61SQH  
Description: HALO COMMERCIAL 6" SQUARE, NEW CONSTRUCTION FRAME, HAZE TRIM  
Light Source: (1) HIGH LUMEN LED 90CRI / 3000K CCT  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2485.6 lumens  
Efficiency: N/A  
Efficacy: 88.1 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°	95157	95157	95157
5°	94410	94566	94514
10°	92607	92393	92179
15°	89336	88841	88788
20°	85649	84417	84806
25°	79721	79023	78847
30°	65511	72094	65327
35°	40462	61917	39495
40°	25972	43885	25079
45°	16946	21269	16124
50°	11246	10590	10510
55°	7634	5517	7086
60°	5175	3376	4753
65°	3617	2496	3250
70°	2316	1851	2165
75°	1630	1431	1431
80°	1215	917	917
85°	593	1235	593

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 45°  
 Vertical Angle: 45°  
 Luminance: 21269 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	206.4	8.3
10°-20°	560.2	22.5
20°-30°	756.2	30.4
30°-40°	590.2	23.7
40°-50°	247.2	9.9
50°-60°	83.8	3.4
60°-70°	29.9	1.2
70°-80°	9.7	0.4
80°-90°	2.0	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°	1522.8	61.3
0°-40°	2113.0	85.0
0°-60°	2444.0	98.3
0°-90°	2485.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2485.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2210	2210	2210	2210	2210	
5°	2184	2187	2188	2184	2187	207
15°	2004	1999	1993	1991	1992	564
25°	1678	1671	1663	1663	1660	755
35°	770	903	1178	902	751	506
45°	278	298	349	284	265	223
55°	102	93	74	88	94	94
65°	36	29	24	28	32	37
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°	2210.1	2210.1	2210.1	2210.1	2210.1
1°	2207.6	2211.3	2208.9	2210.1	2213.8
2°	2207.6	2207.6	2210.1	2208.9	2210.1
3°	2205.2	2205.2	2202.7	2202.7	2202.7
4°	2197.8	2197.8	2197.8	2195.4	2200.3
5°	2184.4	2186.8	2188.0	2184.4	2186.8
6°	2179.4	2180.7	2178.2	2177.0	2174.5
7°	2168.4	2164.7	2168.4	2159.8	2161.1
8°	2150.0	2150.0	2147.6	2145.1	2142.7
9°	2132.9	2132.9	2130.4	2126.7	2124.3
10°	2118.2	2114.5	2113.3	2109.6	2108.4
11°	2101.0	2093.6	2092.4	2088.7	2088.7
12°	2080.2	2076.5	2067.9	2066.7	2066.7
13°	2054.4	2050.7	2044.6	2039.7	2044.6
14°	2029.9	2027.5	2016.4	2020.1	2018.9
15°	2004.2	1999.3	1993.1	1990.7	1991.9
16°	1980.9	1972.3	1963.7	1964.9	1972.3
17°	1956.4	1944.1	1935.5	1934.3	1938.0
18°	1925.7	1915.9	1902.4	1907.3	1907.3
19°	1895.1	1881.6	1873.0	1871.8	1876.7
20°	1869.3	1848.5	1842.4	1841.1	1850.9
22.5°	1781.1	1760.2	1755.3	1760.2	1770.0
25°	1678.1	1670.7	1663.4	1663.4	1659.7
27.5°	1532.2	1549.4	1558.0	1540.8	1512.6
30°	1317.7	1390.0	1450.1	1381.5	1314.0
32.5°	1038.2	1187.8	1326.3	1184.1	1013.7
35°	769.8	903.4	1178.0	902.2	751.4
37.5°	593.3	679.1	1001.5	668.1	576.1
40°	462.1	512.4	780.8	506.2	446.2
42.5°	359.2	391.0	519.7	383.7	346.9
45°	278.3	297.9	349.3	284.4	264.8
47.5°	217.0	225.5	239.0	215.7	204.7
50°	167.9	167.9	158.1	161.8	156.9
52.5°	129.9	125.0	106.6	117.7	120.1
55°	101.7	93.2	73.5	88.3	94.4
57.5°	77.2	68.6	52.7	65.0	71.1
60°	60.1	51.5	39.2	49.0	55.2
62.5°	46.6	39.2	30.6	36.8	41.7
65°	35.5	29.4	24.5	28.2	31.9
67.5°	27.0	22.1	18.4	20.8	24.5
70°	18.4	17.2	14.7	15.9	17.2
72.5°	13.5	12.3	11.0	11.0	12.3
75°	9.8	8.6	8.6	8.6	8.6



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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°	1.2	1.2	2.5	1.2	1.2
87.5°	1.2	1.2	1.2	1.2	1.2
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°	6.1	6.1	6.1	6.1	6.1
80°	4.9	4.9	3.7	3.7	3.7

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Scaled Data Report



(END OF REPORT)