

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: P838505

Luminaire Tested: HCSQ630D010-HM63040835-61SQH

Issue Date: 5/21/2024

**Test Information**

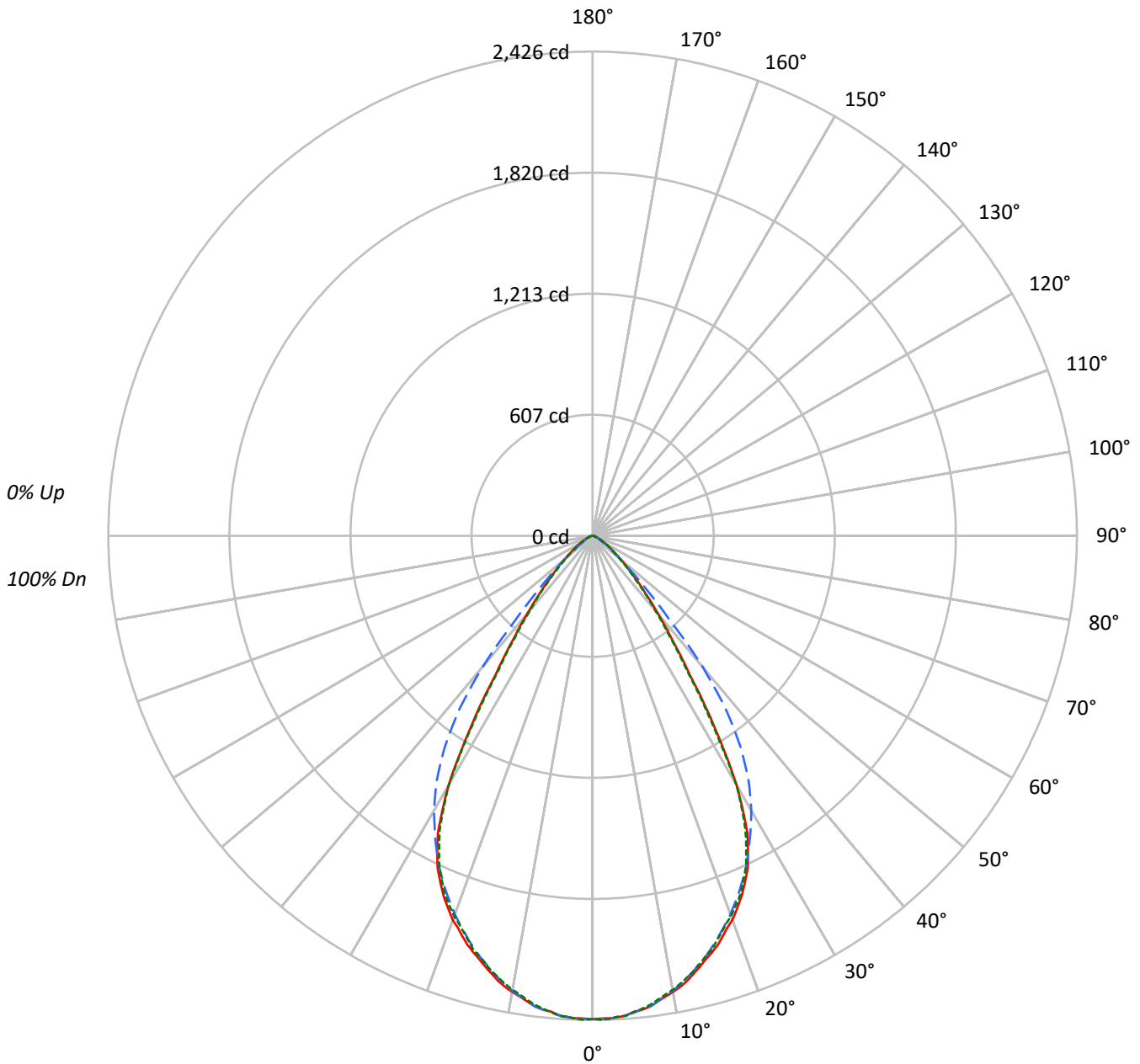
Test Method: LM-79-2019  
Report Number: P838505  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2309-166-2)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 5/21/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: HALO COMMERCIAL  
Catalog Number: HCSQ630D010-HM63040835-61SQH  
Description: HALO COMMERCIAL 6" SQUARE, NEW CONSTRUCTION FRAME, HAZE TRIM  
Light Source: (1) HIGH LUMEN LED 80CRI / 3500K CCT  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2723.6 lumens  
Efficiency: N/A  
Efficacy: 96.6 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°	104264	104264	104264
5°	103443	103620	103560
10°	101469	101233	101002
15°	97886	97346	97288
20°	93851	92495	92925
25°	87351	86586	86396
30°	71786	78994	71582
35°	44335	67841	43274
40°	28462	48089	27479
45°	18565	23309	17664
50°	12325	11608	11514
55°	8370	6050	7762
60°	5666	3703	5201
65°	3973	2741	3556
70°	2530	2027	2367
75°	1780	1564	1564
80°	1339	992	992
85°	642	1334	642

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 45°  
 Vertical Angle: 45°  
 Luminance: 23309 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	226.2	8.3
10°-20°	613.8	22.5
20°-30°	828.6	30.4
30°-40°	646.7	23.7
40°-50°	270.9	9.9
50°-60°	91.8	3.4
60°-70°	32.7	1.2
70°-80°	10.6	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°	1668.6	61.3
0°-40°	2315.3	85.0
0°-60°	2678.0	98.3
0°-90°	2723.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2723.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2422	2422	2422	2422	2422	
5°	2393	2396	2398	2393	2396	226
15°	2196	2191	2184	2181	2183	618
25°	1839	1831	1823	1823	1819	827
35°	844	990	1291	988	823	555
45°	305	326	383	312	290	245
55°	112	102	81	97	103	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°	2421.6	2421.6	2421.6	2421.6	2421.6
1°	2419.0	2423.0	2420.3	2421.6	2425.7
2°	2419.0	2419.0	2421.6	2420.3	2421.6
3°	2416.3	2416.3	2413.6	2413.6	2413.6
4°	2408.2	2408.2	2408.2	2405.5	2410.9
5°	2393.4	2396.1	2397.5	2393.4	2396.1
6°	2388.1	2389.4	2386.7	2385.4	2382.7
7°	2376.0	2371.9	2376.0	2366.6	2367.9
8°	2355.8	2355.8	2353.1	2350.5	2347.8
9°	2337.0	2337.0	2334.3	2330.3	2327.6
10°	2320.9	2316.9	2315.5	2311.5	2310.2
11°	2302.1	2294.0	2292.7	2288.7	2288.7
12°	2279.3	2275.2	2265.8	2264.5	2264.5
13°	2251.1	2247.0	2240.3	2234.9	2240.3
14°	2224.2	2221.5	2209.4	2213.5	2212.1
15°	2196.0	2190.6	2183.9	2181.2	2182.6
16°	2170.5	2161.1	2151.7	2153.0	2161.1
17°	2143.6	2130.2	2120.8	2119.4	2123.5
18°	2110.0	2099.3	2084.5	2089.9	2089.9
19°	2076.5	2061.7	2052.3	2050.9	2056.3
20°	2048.3	2025.4	2018.7	2017.4	2028.1
22.5°	1951.6	1928.7	1923.3	1928.7	1939.5
25°	1838.7	1830.7	1822.6	1822.6	1818.6
27.5°	1678.9	1697.7	1707.1	1688.3	1657.4
30°	1443.9	1523.1	1588.9	1513.7	1439.8
32.5°	1137.6	1301.5	1453.3	1297.5	1110.8
35°	843.5	989.9	1290.7	988.5	823.3
37.5°	650.1	744.1	1097.3	732.0	631.3
40°	506.4	561.4	855.6	554.7	488.9
42.5°	393.5	428.5	569.5	420.4	380.1
45°	304.9	326.4	382.8	311.6	290.1
47.5°	237.7	247.1	261.9	236.4	224.3
50°	184.0	184.0	173.3	177.3	171.9
52.5°	142.4	137.0	116.9	128.9	131.6
55°	111.5	102.1	80.6	96.7	103.4
57.5°	84.6	75.2	57.8	71.2	77.9
60°	65.8	56.4	43.0	53.7	60.4
62.5°	51.0	43.0	33.6	40.3	45.7
65°	39.0	32.2	26.9	30.9	34.9
67.5°	29.5	24.2	20.1	22.8	26.9
70°	20.1	18.8	16.1	17.5	18.8
72.5°	14.8	13.4	12.1	12.1	13.4
75°	10.7	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)