

Signify Classified - Internal
Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



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: P837358

Luminaire Tested: HCSQ420D010-HM40525830-41SQC

Issue Date: 5/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P837358
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2309-165-1)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 5/17/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCSQ420D010-HM40525830-41SQC
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, SPECULAR CLEAR TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 3000K CCT
Ballast/Driver: -

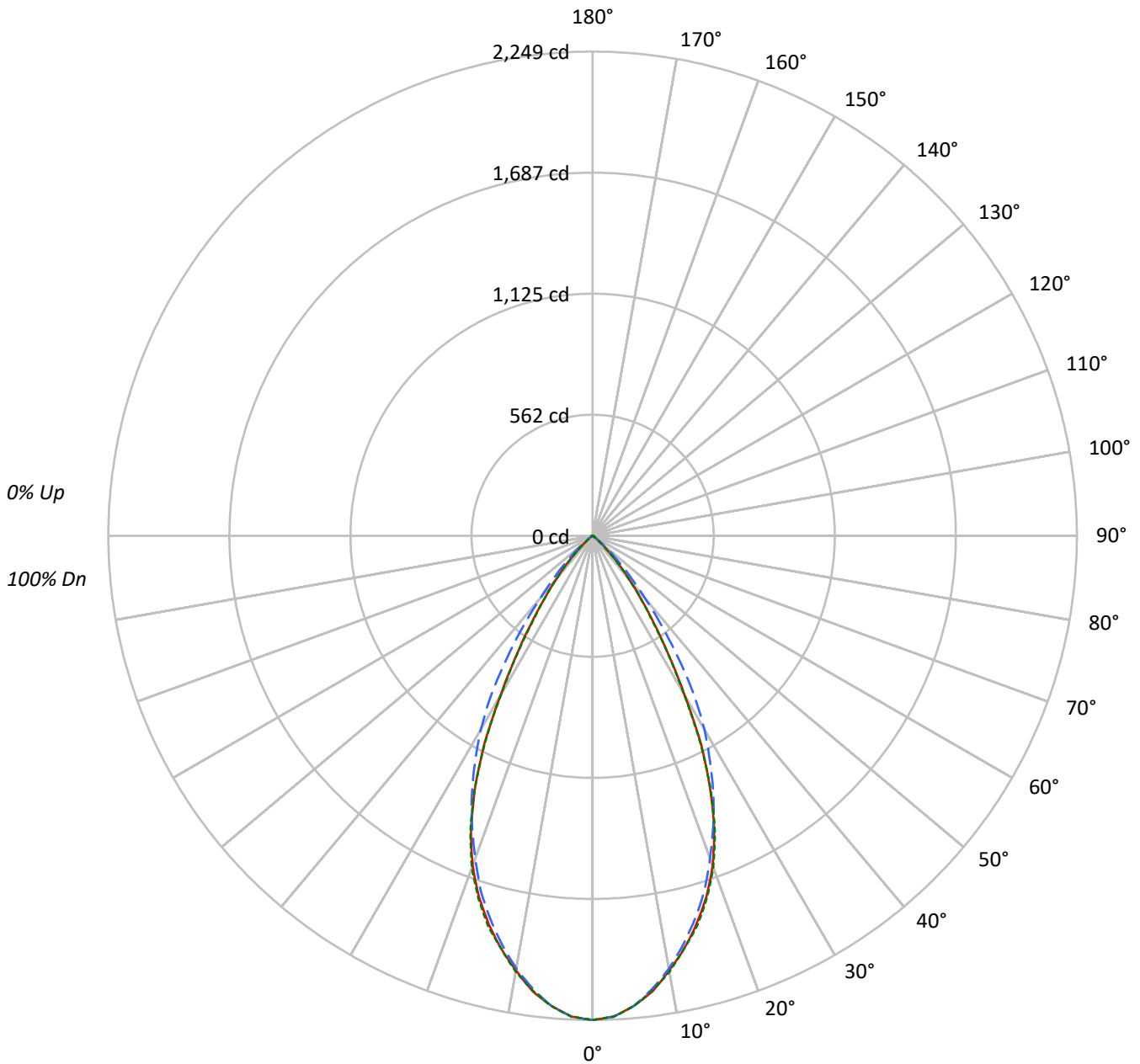
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1817.6 lumens
Efficiency: N/A
Efficacy: 90.9 lumens/watt
Spacing Criteria (0/90/45): 0.85 / 0.85 / 0.87
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 20
Input Voltage (V): NR
Input Current (Ain): 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	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	94								
2	108	103	99	96	106	101	98	95	98	95	93	95	93	91	93	91	89	87								
3	103	96	91	87	101	95	90	87	92	89	85	90	87	84	88	85	83	81								
4	98	90	85	80	96	89	84	80	87	82	79	85	81	78	83	80	77	76								
5	93	84	79	74	91	83	78	74	82	77	73	80	76	73	78	75	72	71								
6	88	79	73	69	87	79	73	69	77	72	68	76	71	68	74	70	68	66								
7	84	75	69	65	82	74	68	64	73	68	64	71	67	64	70	66	63	62								
8	80	70	64	60	79	70	64	60	69	64	60	68	63	60	67	63	60	58								
9	76	67	61	57	75	66	60	57	65	60	56	64	60	56	63	59	56	55								
10	73	63	57	53	72	63	57	53	62	57	53	61	56	53	60	56	53	52								

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	217892	217892	217892
5°	213220	213308	213308
10°	201678	200783	202219
15°	187126	184559	188129
20°	167979	164216	169010
25°	137963	141961	138455
30°	95374	116001	94658
35°	58729	81933	57322
40°	33133	47904	32905
45°	15139	24017	14509
50°	3858	9630	3994
55°	1858	2922	1689
60°	1240	1066	1414
65°	1054	848	1054
70°	765	765	1048
75°	674	674	1011
80°	1004	1004	1004
85°	1000	2001	2001

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 24017 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	204.6	11.3
10°-20°	516.7	28.4
20°-30°	590.7	32.5
30°-40°	366.7	20.2
40°-50°	115.6	6.4
50°-60°	15.0	0.8
60°-70°	4.5	0.2
70°-80°	2.3	0.1
80°-90°	1.6	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°	1312.0	72.2
0°-40°	1678.7	92.4
0°-60°	1809.2	99.5
0°-90°	1817.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1817.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2249	2249	2249	2249	2249	
5°	2193	2191	2194	2192	2194	205
15°	1866	1852	1840	1852	1876	520
25°	1291	1309	1328	1309	1295	579
35°	497	573	693	560	485	319
45°	110	132	175	133	106	93
55°	11	11	17	11	10	11
65°	5	5	4	5	5	5
75°	2	2	2	2	3	2
85°	1	2	2	2	2	1
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2249.2	2249.2	2249.2	2249.2	2249.2
2.5°	2235.5	2237.3	2235.5	2239.1	2235.5
5°	2192.6	2190.8	2193.5	2191.7	2193.5
7.5°	2134.2	2123.2	2122.3	2129.6	2130.5
10°	2050.2	2047.4	2041.1	2047.4	2055.7
12.5°	1964.4	1953.4	1944.3	1957.1	1964.4
15°	1865.8	1852.1	1840.2	1852.1	1875.8
17.5°	1757.2	1738.0	1728.0	1741.7	1764.5
20°	1629.4	1609.3	1592.9	1604.7	1639.4
22.5°	1476.0	1474.2	1463.2	1469.6	1482.4
25°	1290.7	1309.0	1328.1	1309.0	1295.3
27.5°	1087.2	1136.5	1180.3	1122.8	1078.9
30°	852.6	927.4	1037.0	921.9	846.2
32.5°	659.1	737.6	877.2	727.5	653.6
35°	496.6	573.2	692.8	559.6	484.7
37.5°	365.1	422.6	526.7	419.0	365.1
40°	262.0	299.4	378.8	298.5	260.2
42.5°	181.7	206.3	264.7	204.5	176.2
45°	110.5	132.4	175.3	133.3	105.9
47.5°	58.4	84.0	110.5	80.3	58.4
50°	25.6	44.7	63.9	43.8	26.5
52.5°	13.7	19.2	34.7	19.2	13.7
55°	11.0	11.0	17.3	11.0	10.0
57.5°	8.2	8.2	9.1	8.2	8.2
60°	6.4	6.4	5.5	6.4	7.3
62.5°	5.5	5.5	4.6	5.5	5.5
65°	4.6	4.6	3.7	4.6	4.6
67.5°	3.7	3.7	3.7	3.7	3.7
70°	2.7	2.7	2.7	3.7	3.7
72.5°	2.7	2.7	2.7	2.7	2.7
75°	1.8	1.8	1.8	1.8	2.7
77.5°	1.8	1.8	1.8	1.8	1.8
80°	1.8	1.8	1.8	1.8	1.8
82.5°	0.9	1.8	1.8	1.8	1.8
85°	0.9	1.8	1.8	1.8	1.8
87.5°	0.9	0.9	1.8	1.8	1.8
90°	0.0	0.0	0.0	0.0	0.0

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Scaled Data Report





— 0°-180° - - 45°-225° - - - - 90°-270°

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