

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: P837431

Luminaire Tested: HCSQ425D010-HM40525940-41SQMB

Issue Date: 5/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P837431
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2309-165-4)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 5/17/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCSQ425D010-HM40525940-41SQMB
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, MATTE BLACK TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 4000K CCT
Ballast/Driver: -

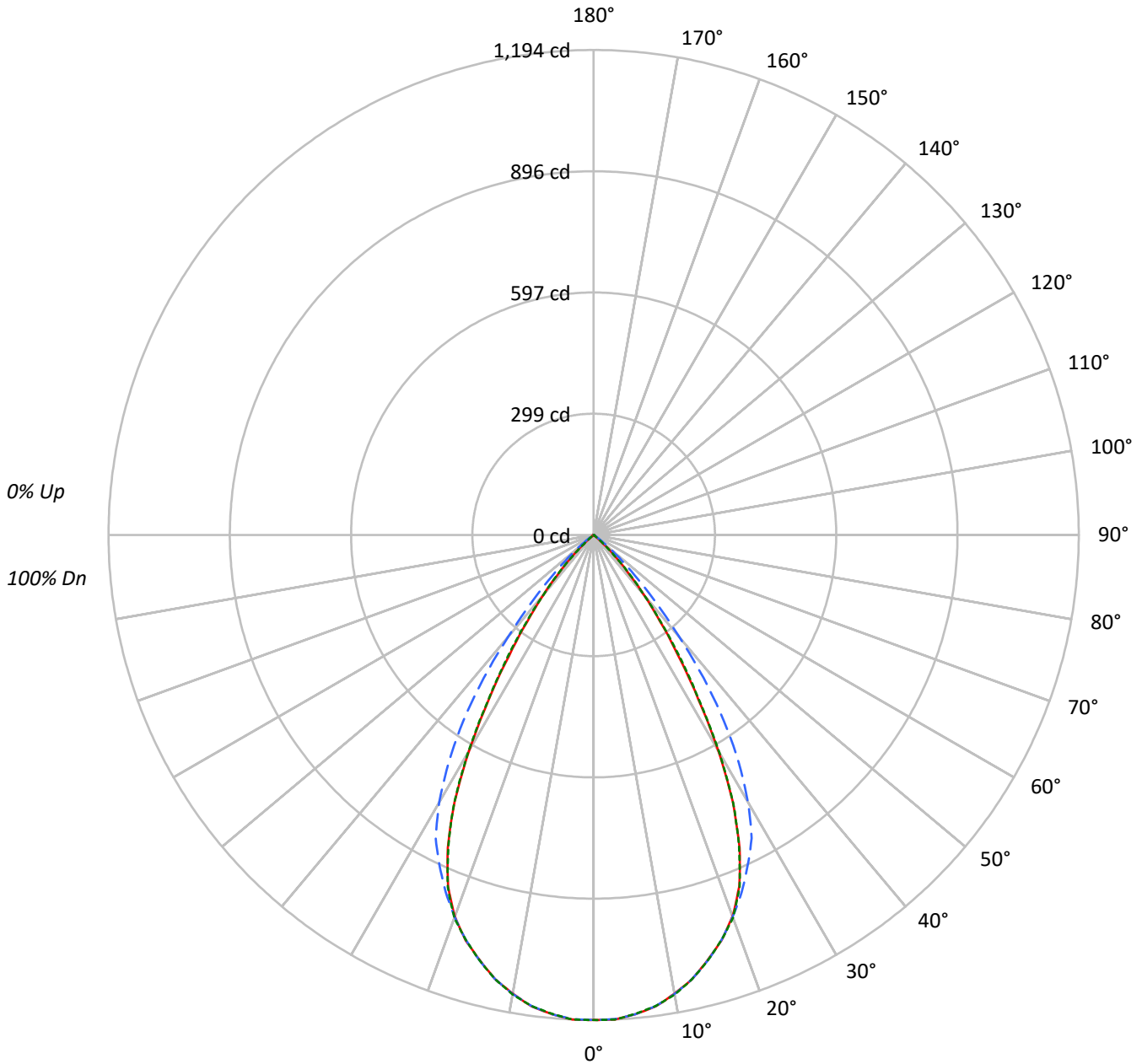
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1193.0 lumens
Efficiency: N/A
Efficacy: 43.1 lumens/watt
Spacing Criteria (0/90/45): 0.96 / 0.96 / 0.99
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 27.7
Input Voltage (V): NR
Input Current (A_{in}): 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	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	113	111	108	106	111	108	106	104	104	103	101	101	99	98	97	96	95	93								
2	108	103	99	95	105	101	97	94	98	95	92	95	92	90	92	90	88	87								
3	102	96	91	87	100	94	90	86	92	88	84	89	86	83	87	84	82	80								
4	97	89	83	79	95	88	83	79	86	81	78	84	80	77	82	79	76	74								
5	92	83	77	73	90	82	77	73	80	76	72	79	75	71	77	74	71	69								
6	87	78	72	67	85	77	71	67	76	70	67	74	70	66	73	69	66	64								
7	82	73	67	63	81	72	66	62	71	66	62	70	65	62	69	65	61	60								
8	78	69	62	58	77	68	62	58	67	62	58	66	61	58	65	61	57	56								
9	74	65	58	54	73	64	58	54	63	58	54	62	57	54	61	57	54	52								
10	71	61	55	51	70	60	55	51	60	54	51	59	54	51	58	54	50	49								

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	115698	115698	115698
5°	115168	115168	115061
10°	112801	112909	113017
15°	108667	108778	108778
20°	103021	103134	103361
25°	90825	95923	90472
30°	68538	85015	69153
35°	42977	66168	44420
40°	24243	41189	24243
45°	10166	20797	10015
50°	829	8018	995
55°	372	1689	372
60°	426	213	426
65°	252	252	252
70°	312	312	312
75°	412	412	412
80°	0	614	614
85°	0	1223	1223

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 20797 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	111.9	9.4
10°-20°	304.5	25.5
20°-30°	395.0	33.1
30°-40°	280.8	23.5
40°-50°	91.1	7.6
50°-60°	6.6	0.6
60°-70°	1.1	0.1
70°-80°	1.1	0.1
80°-90°	0.8	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°	811.5	68.0
0°-40°	1092.3	91.6
0°-60°	1189.9	99.7
0°-90°	1193.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1193.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1194	1194	1194	1194	1194	
5°	1184	1185	1184	1184	1183	112
15°	1084	1087	1085	1087	1085	304
25°	850	872	897	876	846	380
35°	363	430	560	434	376	233
45°	74	105	152	108	73	62
55°	2	2	10	2	2	3
65°	1	1	1	1	1	1
75°	1	1	1	1	1	1
85°	0	0	1	1	1	0
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1194.3	1194.3	1194.3	1194.3	1194.3
2.5°	1194.3	1194.3	1193.2	1193.2	1194.3
5°	1184.3	1185.4	1184.3	1184.3	1183.2
7.5°	1171.0	1171.0	1169.9	1169.9	1169.9
10°	1146.7	1147.8	1147.8	1147.8	1148.9
12.5°	1120.1	1120.1	1120.1	1120.1	1120.1
15°	1083.5	1086.8	1084.6	1086.8	1084.6
17.5°	1047.0	1047.0	1045.8	1048.1	1045.8
20°	999.3	999.3	1000.4	1002.6	1002.6
22.5°	936.2	947.2	951.7	949.5	938.4
25°	849.7	871.9	897.4	876.3	846.4
27.5°	741.2	783.3	842.0	789.9	743.4
30°	612.7	675.8	760.0	678.0	618.2
32.5°	479.7	552.8	664.7	558.4	484.1
35°	363.4	429.9	559.5	434.3	375.6
37.5°	268.1	329.0	444.3	331.3	275.9
40°	191.7	236.0	325.7	240.4	191.7
42.5°	123.0	167.3	229.3	168.4	128.5
45°	74.2	105.2	151.8	107.5	73.1
47.5°	33.2	59.8	94.2	62.0	33.2
50°	5.5	24.4	53.2	25.5	6.6
52.5°	3.3	4.4	25.5	4.4	3.3
55°	2.2	2.2	10.0	2.2	2.2
57.5°	2.2	2.2	2.2	2.2	2.2
60°	2.2	1.1	1.1	1.1	2.2
62.5°	1.1	1.1	1.1	1.1	1.1
65°	1.1	1.1	1.1	1.1	1.1
67.5°	1.1	1.1	1.1	1.1	1.1
70°	1.1	1.1	1.1	1.1	1.1
72.5°	1.1	1.1	1.1	1.1	1.1
75°	1.1	1.1	1.1	1.1	1.1
77.5°	1.1	1.1	1.1	1.1	1.1
80°	0.0	1.1	1.1	1.1	1.1
82.5°	0.0	1.1	1.1	1.1	1.1
85°	0.0	0.0	1.1	1.1	1.1
87.5°	0.0	0.0	1.1	1.1	1.1
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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