

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: P837402

Luminaire Tested: HCSQ425D010-HM40525830-41SQMW

Issue Date: 5/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P837402
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2309-165-3)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 5/17/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCSQ425D010-HM40525830-41SQMW
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, MATTE WHITE TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 3000K CCT
Ballast/Driver: -

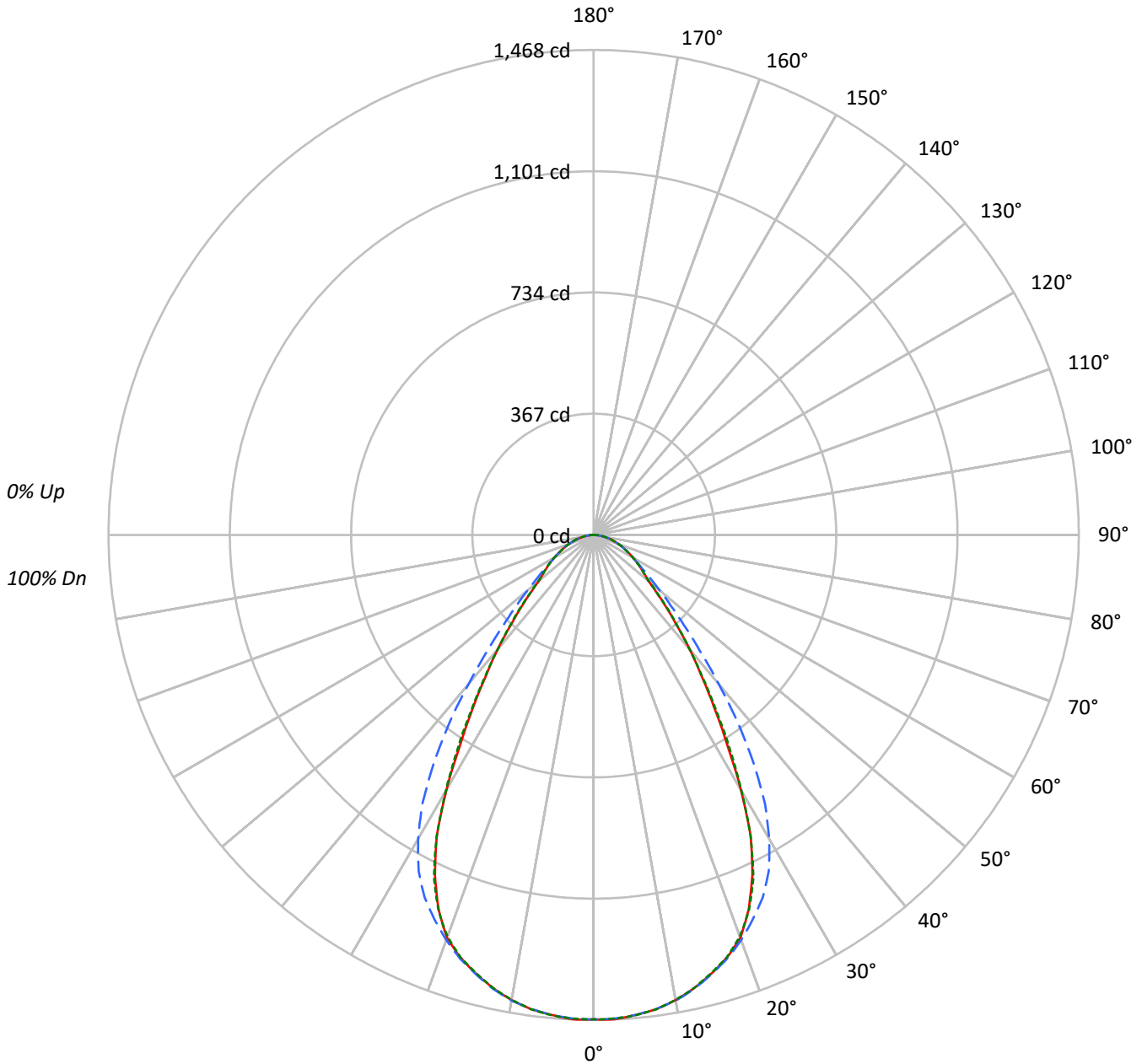
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2128.4 lumens
Efficiency: N/A
Efficacy: 76.8 lumens/watt
Spacing Criteria (0/90/45): 1.03 / 1.03 / 1.07
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									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	111	108	105	102	109	106	103	100	101	99	97	98	96	94	94	93	91	89																			
2	104	98	92	88	102	96	91	87	92	88	85	89	86	83	86	84	81	79																			
3	97	89	82	77	95	87	81	76	84	79	75	82	78	74	79	76	73	71																			
4	91	81	74	69	89	80	73	68	77	72	67	75	70	66	73	69	66	64																			
5	85	74	67	62	83	73	66	61	71	65	61	70	64	60	68	63	60	58																			
6	79	69	61	56	78	68	61	56	66	60	55	64	59	55	63	58	54	53																			
7	75	63	56	51	73	63	56	51	61	55	50	60	54	50	59	54	50	48																			
8	70	59	52	47	69	58	51	47	57	51	46	56	50	46	55	50	46	44																			
9	66	55	48	43	65	54	48	43	53	47	43	52	47	43	51	46	43	41																			
10	63	51	45	40	62	51	44	40	50	44	40	49	44	40	48	43	40	38																			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	142078	142078	142078
5°	141852	141852	141959
10°	140689	140797	140571
15°	137953	138063	137722
20°	133814	134515	133340
25°	121449	129359	122293
30°	99692	118809	100072
35°	74931	99731	76008
40°	57072	74360	56920
45°	42621	52773	43402
50°	32463	39336	33141
55°	29253	30790	29253
60°	26718	26486	26486
65°	24298	24298	24298
70°	22603	22263	22263
75°	20886	20474	20886
80°	19080	18410	19080
85°	16451	16451	16451

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 52773 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	138.3	6.5
10°-20°	387.2	18.2
20°-30°	532.6	25.0
30°-40°	453.4	21.3
40°-50°	273.8	12.9
50°-60°	161.4	7.6
60°-70°	105.9	5.0
70°-80°	58.7	2.8
80°-90°	17.2	0.8
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°	1058.1	49.7
0°-40°	1511.5	71.0
0°-60°	1946.7	91.5
0°-90°	2128.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2128.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1467	1467	1467	1467	1467	
5°	1459	1460	1459	1458	1460	138
15°	1376	1379	1377	1376	1373	387
25°	1136	1172	1210	1174	1144	514
35°	634	697	843	717	643	401
45°	311	344	385	348	317	245
55°	173	177	182	177	173	156
65°	106	107	106	106	106	106
75°	56	56	55	55	56	59
85°	15	15	15	15	15	17
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1466.6	1466.6	1466.6	1466.6	1466.6
2.5°	1467.8	1464.4	1465.5	1464.4	1465.5
5°	1458.7	1459.8	1458.7	1457.5	1459.8
7.5°	1448.4	1447.3	1447.3	1446.1	1448.4
10°	1430.2	1427.9	1431.3	1429.0	1429.0
12.5°	1405.1	1408.5	1407.4	1407.4	1405.1
15°	1375.5	1378.9	1376.6	1375.5	1373.2
17.5°	1341.3	1343.6	1344.7	1340.1	1340.1
20°	1298.0	1302.5	1304.8	1296.8	1293.4
22.5°	1226.2	1246.7	1259.2	1245.6	1228.5
25°	1136.2	1171.5	1210.2	1173.8	1144.1
27.5°	1027.9	1078.0	1147.6	1086.0	1027.9
30°	891.2	965.2	1062.1	973.2	894.6
32.5°	749.8	828.5	964.1	842.1	765.8
35°	633.6	697.4	843.3	716.8	642.7
37.5°	533.3	588.0	716.8	600.6	539.0
40°	451.3	494.6	588.0	500.3	450.1
42.5°	372.6	413.7	476.3	419.4	377.2
45°	311.1	344.2	385.2	347.6	316.8
47.5°	258.7	286.0	315.7	286.0	262.1
50°	215.4	237.0	261.0	237.0	219.9
52.5°	192.6	199.4	215.4	200.6	192.6
55°	173.2	176.6	182.3	176.6	173.2
57.5°	155.0	157.3	156.1	156.1	155.0
60°	137.9	139.0	136.7	137.9	136.7
62.5°	121.9	121.9	119.7	121.9	120.8
65°	106.0	107.1	106.0	106.0	106.0
67.5°	92.3	92.3	91.2	92.3	92.3
70°	79.8	79.8	78.6	79.8	78.6
72.5°	67.2	67.2	66.1	66.1	66.1
75°	55.8	55.8	54.7	54.7	55.8
77.5°	44.4	44.4	43.3	44.4	44.4
80°	34.2	34.2	33.0	34.2	34.2
82.5°	23.9	23.9	23.9	25.1	25.1
85°	14.8	14.8	14.8	14.8	14.8
87.5°	6.8	6.8	6.8	6.8	8.0
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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