

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: P837454

Luminaire Tested: HCSQ430D010-HM43040927-41SQH

Issue Date: 5/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P837454
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2309-165-2)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 5/17/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCSQ430D010-HM43040927-41SQH
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, HAZE TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 2700K CCT
Ballast/Driver: -

Summary

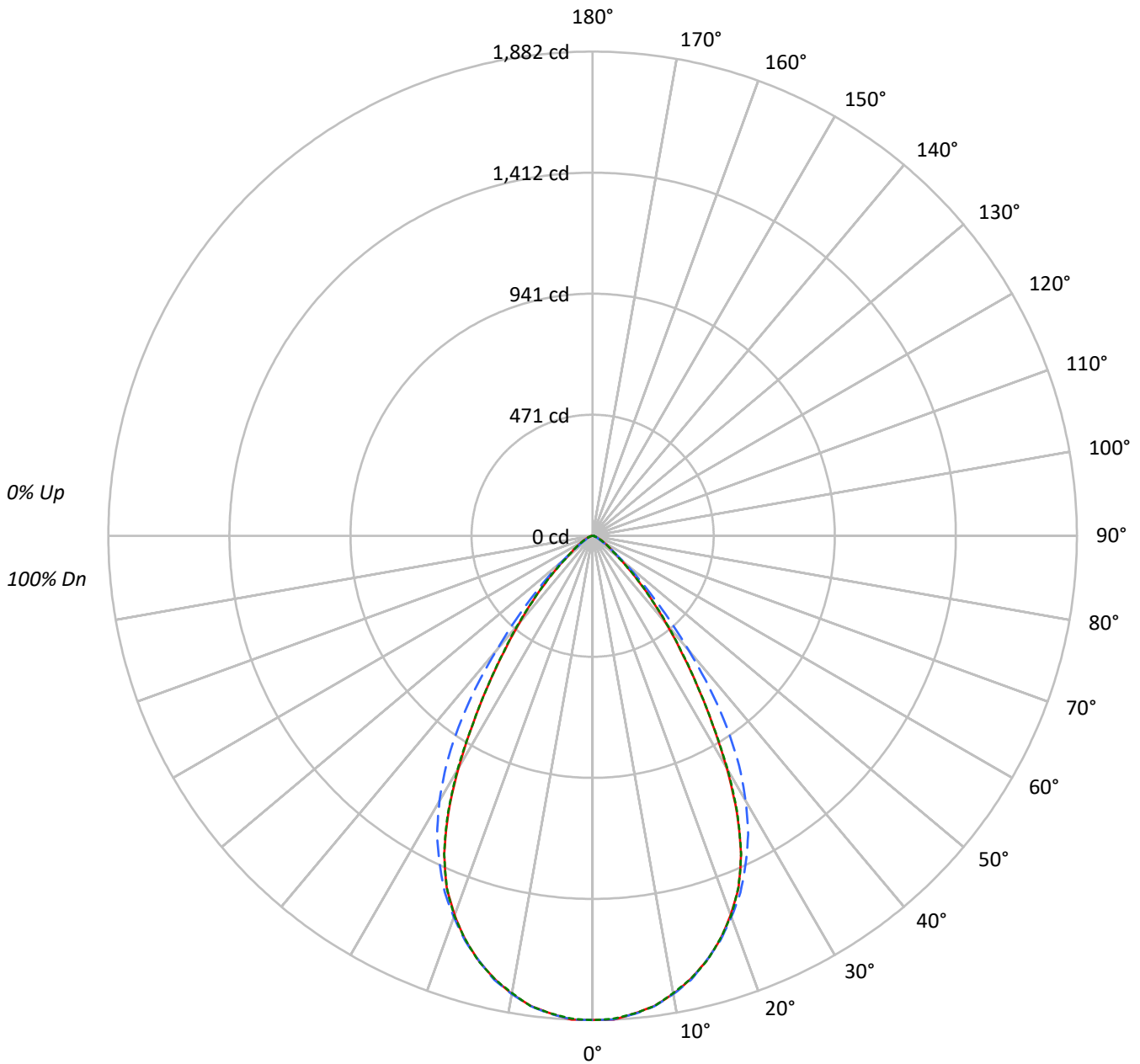
Lumens per Lamp: N/A
Luminaire Lumens: 2116.0 lumens
Efficiency: N/A
Efficacy: 75.0 lumens/watt
Spacing Criteria (0/90/45): 0.98 / 0.98 / 1.01
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 28.2
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	0					
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100								
1	113	110	107	105	110	108	105	103	104	102	100	100	98	97	96	95	94	92								
2	107	101	97	93	104	100	95	92	96	93	90	93	90	88	90	88	86	85								
3	101	93	88	84	98	92	87	83	89	85	82	87	83	80	85	82	79	77								
4	95	87	80	76	93	85	80	75	83	78	74	81	77	74	79	76	73	71								
5	89	80	74	69	88	79	73	69	77	72	68	76	71	68	74	70	67	65								
6	84	75	68	63	83	74	68	63	72	67	63	71	66	62	69	65	62	60								
7	80	70	63	59	78	69	63	58	68	62	58	66	61	58	65	61	57	56								
8	75	65	59	54	74	65	58	54	63	58	54	62	57	54	61	57	53	52								
9	72	61	55	50	70	61	54	50	60	54	50	59	54	50	58	53	50	48								
10	68	57	51	47	67	57	51	47	56	51	47	55	50	47	55	50	46	45								

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	182358	182358	182358
5°	181246	181470	181246
10°	177853	177971	177508
15°	171531	171420	171651
20°	161701	162536	162062
25°	145905	150384	145905
30°	116538	133049	117444
35°	83186	107667	83328
40°	56174	73221	57047
45°	35675	43334	35840
50°	20331	23134	19623
55°	13360	11198	13157
60°	9242	6529	9009
65°	6395	4791	6395
70°	4617	3626	4617
75°	3032	3032	3032
80°	1953	2622	2622
85°	2556	2556	2556

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 43334 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	176.4	8.3
10°-20°	479.5	22.7
20°-30°	627.8	29.7
30°-40°	493.5	23.3
40°-50°	230.5	10.9
50°-60°	71.4	3.4
60°-70°	25.5	1.2
70°-80°	9.0	0.4
80°-90°	2.5	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°	1283.7	60.7
0°-40°	1777.2	84.0
0°-60°	2079.1	98.3
0°-90°	2116.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2116.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1882	1882	1882	1882	1882	
5°	1864	1865	1866	1868	1864	176
15°	1710	1710	1709	1710	1712	479
25°	1365	1384	1407	1385	1365	614
35°	703	767	910	777	705	443
45°	260	292	316	286	262	207
55°	79	74	66	73	78	74
65°	28	26	21	24	28	29
75°	8	8	8	8	8	9
85°	2	2	2	2	2	2
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1882.4	1882.4	1882.4	1882.4	1882.4
2.5°	1882.4	1880.1	1881.2	1878.9	1878.9
5°	1863.8	1865.0	1866.1	1868.5	1863.8
7.5°	1842.9	1845.2	1844.0	1844.0	1844.0
10°	1808.0	1809.2	1809.2	1809.2	1804.5
12.5°	1763.8	1766.1	1767.3	1763.8	1763.8
15°	1710.3	1710.3	1709.2	1710.3	1711.5
17.5°	1646.4	1649.9	1649.9	1646.4	1645.2
20°	1568.5	1574.3	1576.6	1572.0	1572.0
22.5°	1481.3	1487.1	1501.0	1489.4	1480.1
25°	1365.0	1383.6	1406.9	1384.8	1365.0
27.5°	1215.0	1255.7	1309.2	1262.7	1218.5
30°	1041.8	1108.1	1189.4	1111.5	1049.9
32.5°	865.0	939.5	1059.2	945.3	865.0
35°	703.4	767.4	910.4	776.7	704.6
37.5°	559.3	620.9	746.5	627.9	567.4
40°	444.2	494.1	579.0	493.0	451.1
42.5°	346.5	382.5	438.3	381.4	345.3
45°	260.4	291.8	316.3	286.0	261.6
47.5°	191.8	212.8	226.7	209.3	187.2
50°	134.9	150.0	153.5	146.5	130.2
52.5°	101.2	101.2	102.3	100.0	98.8
55°	79.1	74.4	66.3	73.2	77.9
57.5°	61.6	57.0	46.5	54.6	60.5
60°	47.7	43.0	33.7	41.9	46.5
62.5°	37.2	32.6	26.7	32.6	36.0
65°	27.9	25.6	20.9	24.4	27.9
67.5°	20.9	18.6	16.3	18.6	20.9
70°	16.3	15.1	12.8	14.0	16.3
72.5°	11.6	10.5	10.5	10.5	11.6
75°	8.1	8.1	8.1	8.1	8.1
77.5°	5.8	5.8	5.8	5.8	5.8
80°	3.5	3.5	4.7	4.7	4.7
82.5°	2.3	2.3	3.5	3.5	3.5
85°	2.3	2.3	2.3	2.3	2.3
87.5°	1.2	1.2	1.2	2.3	2.3
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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