

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: P837457

Luminaire Tested: HCSQ430D010-HM43040927-41SQMW

Issue Date: 5/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P837457
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: HCSQ430D010-HM43040927-41SQMW
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, MATTE WHITE TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 2700K CCT
Ballast/Driver: -

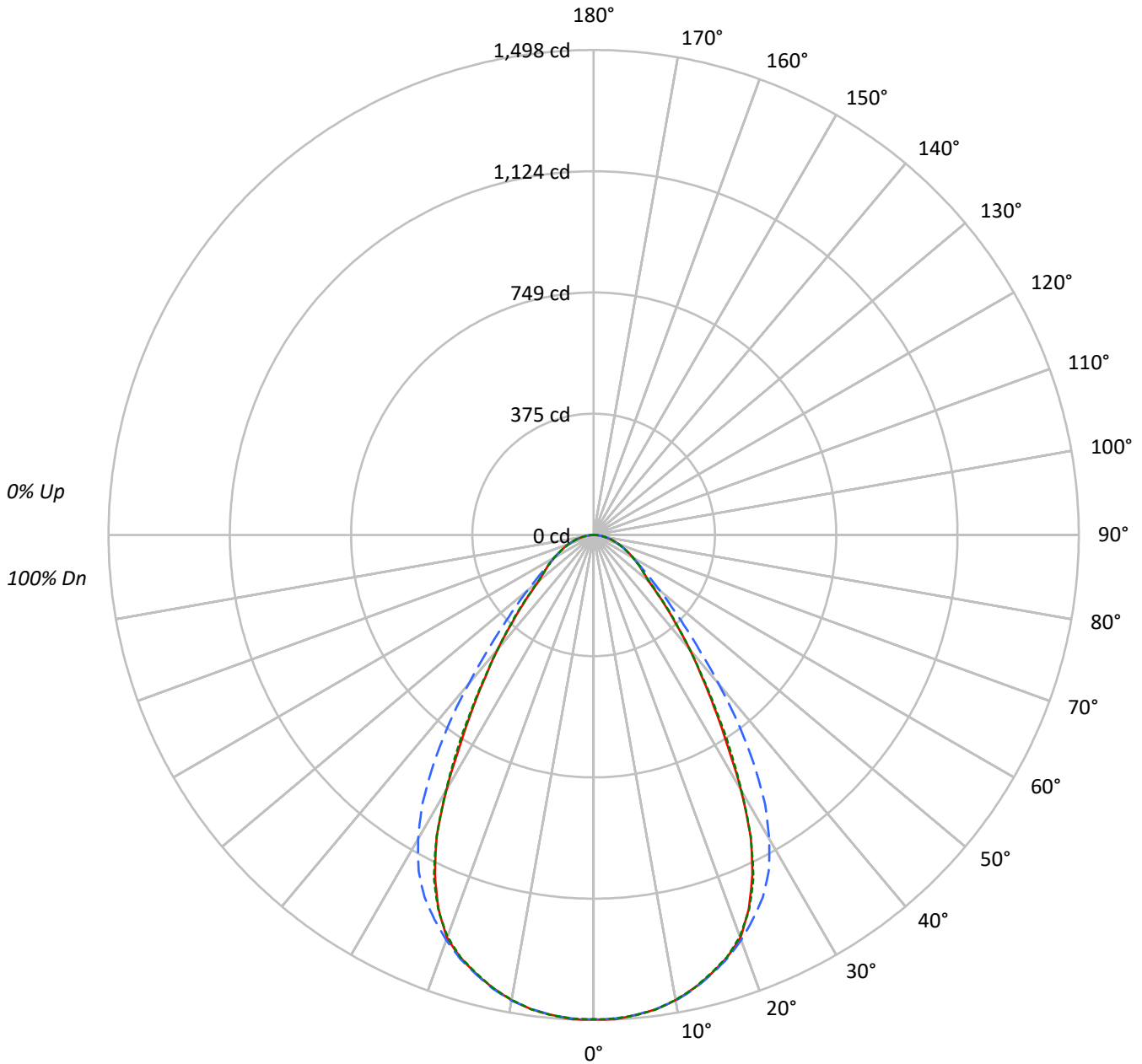
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2171.8 lumens
Efficiency: N/A
Efficacy: 77.0 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): 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									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°	144974	144974	144974
5°	144740	144740	144857
10°	143551	143669	143443
15°	140761	140881	140530
20°	136536	137258	136062
25°	123918	131999	124794
30°	101716	121225	102108
35°	76457	101765	77557
40°	58236	75877	58084
45°	43485	53842	44293
50°	33126	40134	33820
55°	29844	31432	29844
60°	27261	27028	27028
65°	24779	24779	24779
70°	23056	22716	22716
75°	21335	20886	21335
80°	19470	18801	19470
85°	16784	16784	16784

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 53842 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	141.1	6.5
10°-20°	395.1	18.2
20°-30°	543.4	25.0
30°-40°	462.6	21.3
40°-50°	279.4	12.9
50°-60°	164.7	7.6
60°-70°	108.0	5.0
70°-80°	59.9	2.8
80°-90°	17.5	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°	1079.7	49.7
0°-40°	1542.3	71.0
0°-60°	1986.4	91.5
0°-90°	2171.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2171.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1496	1496	1496	1496	1496	
5°	1488	1490	1488	1487	1490	141
15°	1404	1407	1405	1404	1401	395
25°	1159	1195	1235	1198	1168	524
35°	646	712	860	731	656	409
45°	317	351	393	355	323	250
55°	177	180	186	180	177	159
65°	108	109	108	108	108	108
75°	57	57	56	56	57	60
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°	1496.5	1496.5	1496.5	1496.5	1496.5
2.5°	1497.7	1494.2	1495.4	1494.2	1495.4
5°	1488.4	1489.6	1488.4	1487.2	1489.6
7.5°	1477.9	1476.8	1476.8	1475.6	1477.9
10°	1459.3	1457.0	1460.5	1458.2	1458.2
12.5°	1433.8	1437.2	1436.1	1436.1	1433.8
15°	1403.5	1407.0	1404.7	1403.5	1401.2
17.5°	1368.6	1371.0	1372.1	1367.5	1367.5
20°	1324.4	1329.1	1331.4	1323.3	1319.8
22.5°	1251.2	1272.1	1284.9	1271.0	1253.5
25°	1159.3	1195.4	1234.9	1197.7	1167.5
27.5°	1048.9	1100.0	1171.0	1108.2	1048.9
30°	909.3	984.9	1083.7	993.0	912.8
32.5°	765.1	845.4	983.7	859.3	781.4
35°	646.5	711.6	860.5	731.4	655.8
37.5°	544.2	600.0	731.4	612.8	550.0
40°	460.5	504.7	600.0	510.5	459.3
42.5°	380.2	422.1	486.1	427.9	384.9
45°	317.4	351.2	393.0	354.7	323.3
47.5°	264.0	291.9	322.1	291.9	267.4
50°	219.8	241.9	266.3	241.9	224.4
52.5°	196.5	203.5	219.8	204.7	196.5
55°	176.7	180.2	186.1	180.2	176.7
57.5°	158.1	160.5	159.3	159.3	158.1
60°	140.7	141.9	139.5	140.7	139.5
62.5°	124.4	124.4	122.1	124.4	123.3
65°	108.1	109.3	108.1	108.1	108.1
67.5°	94.2	94.2	93.0	94.2	94.2
70°	81.4	81.4	80.2	81.4	80.2
72.5°	68.6	68.6	67.4	67.4	67.4
75°	57.0	57.0	55.8	55.8	57.0
77.5°	45.3	45.3	44.2	45.3	45.3
80°	34.9	34.9	33.7	34.9	34.9
82.5°	24.4	24.4	24.4	25.6	25.6
85°	15.1	15.1	15.1	15.1	15.1
87.5°	7.0	7.0	7.0	7.0	8.1
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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