

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: P837466

Luminaire Tested: HCSQ430D010-HM43040935-41SQMB

Issue Date: 5/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P837466
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: HCSQ430D010-HM43040935-41SQMB
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, MATTE BLACK TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 3500K CCT
Ballast/Driver: -

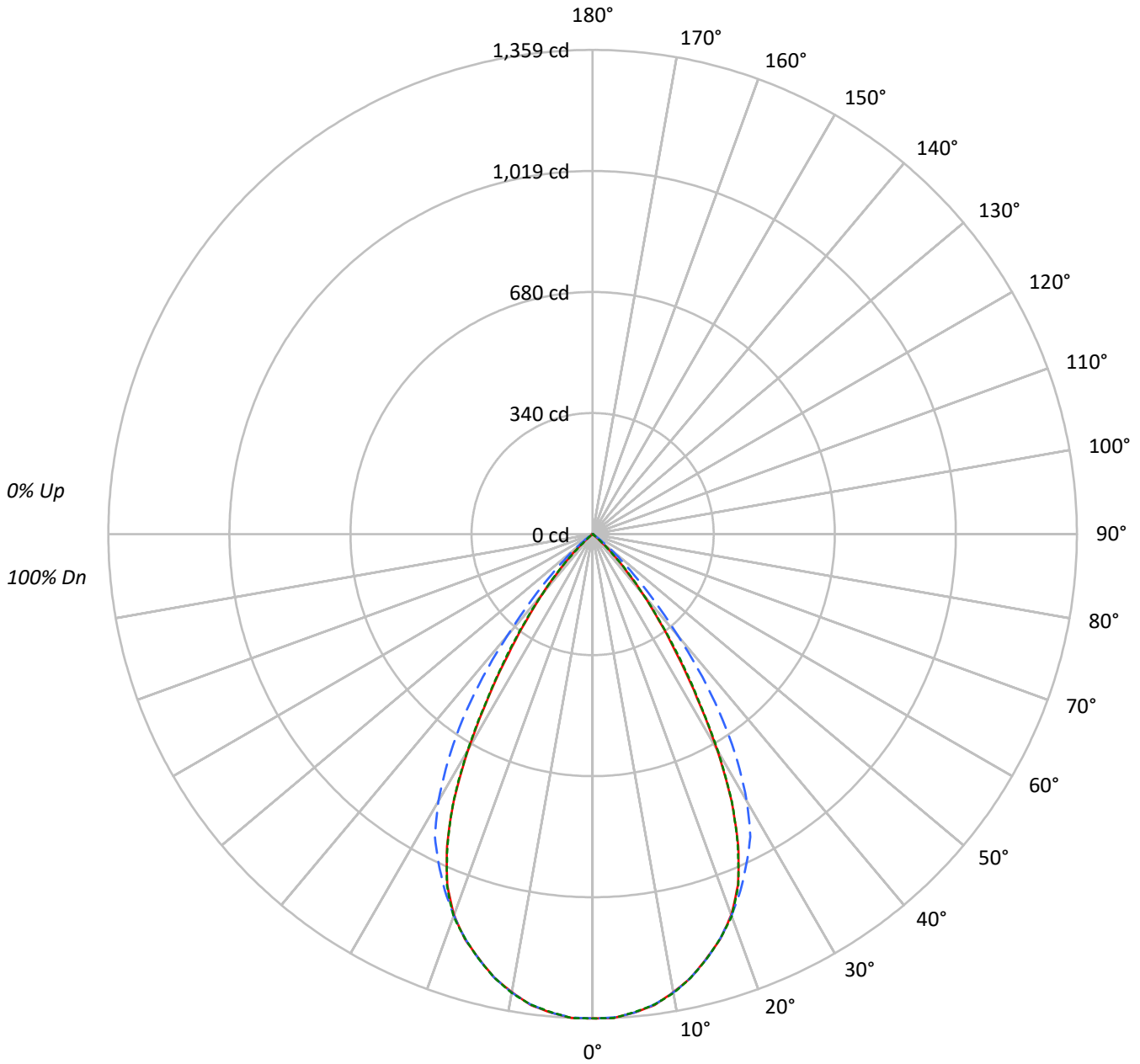
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1358.1 lumens
Efficiency: N/A
Efficacy: 48.2 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): 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	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°	131692	131692	131692
5°	131097	131097	130970
10°	128392	128520	128638
15°	123691	123822	123822
20°	117268	117402	117660
25°	103384	109188	102989
30°	78013	96772	78717
35°	48914	75310	50557
40°	27594	46892	27594
45°	11577	23674	11399
50°	949	9118	1145
55°	422	1909	422
60°	484	252	484
65°	298	298	298
70°	368	368	368
75°	487	487	487
80°	0	725	725
85°	0	1445	1445

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 23674 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	127.4	9.4
10°-20°	346.6	25.5
20°-30°	449.7	33.1
30°-40°	319.7	23.5
40°-50°	103.6	7.6
50°-60°	7.5	0.5
60°-70°	1.3	0.1
70°-80°	1.4	0.1
80°-90°	0.9	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°	923.7	68.0
0°-40°	1243.4	91.6
0°-60°	1354.5	99.7
0°-90°	1358.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1358.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1359	1359	1359	1359	1359	
5°	1348	1349	1348	1348	1347	127
15°	1233	1237	1235	1237	1235	346
25°	967	992	1022	998	964	433
35°	414	489	637	494	428	265
45°	84	120	173	122	83	70
55°	2	2	11	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°	1359.4	1359.4	1359.4	1359.4	1359.4
2.5°	1359.4	1359.4	1358.2	1358.2	1359.4
5°	1348.1	1349.4	1348.1	1348.1	1346.8
7.5°	1333.0	1333.0	1331.7	1331.7	1331.7
10°	1305.2	1306.5	1306.5	1306.5	1307.7
12.5°	1275.0	1275.0	1275.0	1275.0	1275.0
15°	1233.3	1237.1	1234.6	1237.1	1234.6
17.5°	1191.7	1191.7	1190.5	1193.0	1190.5
20°	1137.5	1137.5	1138.8	1141.3	1141.3
22.5°	1065.6	1078.2	1083.3	1080.7	1068.1
25°	967.2	992.5	1021.5	997.5	963.5
27.5°	843.7	891.6	958.4	899.2	846.2
30°	697.4	769.3	865.1	771.8	703.7
32.5°	546.0	629.3	756.6	635.6	551.1
35°	413.6	489.3	636.8	494.3	427.5
37.5°	305.2	374.5	505.7	377.1	314.0
40°	218.2	268.6	370.8	273.7	218.2
42.5°	140.0	190.4	261.0	191.7	146.3
45°	84.5	119.8	172.8	122.3	83.2
47.5°	37.8	68.1	107.2	70.6	37.8
50°	6.3	27.7	60.5	29.0	7.6
52.5°	3.8	5.0	29.0	5.0	3.8
55°	2.5	2.5	11.3	2.5	2.5
57.5°	2.5	2.5	2.5	2.5	2.5
60°	2.5	1.3	1.3	1.3	2.5
62.5°	1.3	1.3	1.3	1.3	1.3
65°	1.3	1.3	1.3	1.3	1.3
67.5°	1.3	1.3	1.3	1.3	1.3
70°	1.3	1.3	1.3	1.3	1.3
72.5°	1.3	1.3	1.3	1.3	1.3
75°	1.3	1.3	1.3	1.3	1.3
77.5°	1.3	1.3	1.3	1.3	1.3
80°	0.0	1.3	1.3	1.3	1.3
82.5°	0.0	1.3	1.3	1.3	1.3
85°	0.0	0.0	1.3	1.3	1.3
87.5°	0.0	0.0	1.3	1.3	1.3
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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