

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: P837536

Luminaire Tested: HCSQ440D010-HM43040927-41SQMB

Issue Date: 5/17/2024



Test Information

Test Method: LM-79-2019
Report Number: P837536
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: HCSQ440D010-HM43040927-41SQMB
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, MATTE BLACK TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 2700K CCT
Ballast/Driver: -

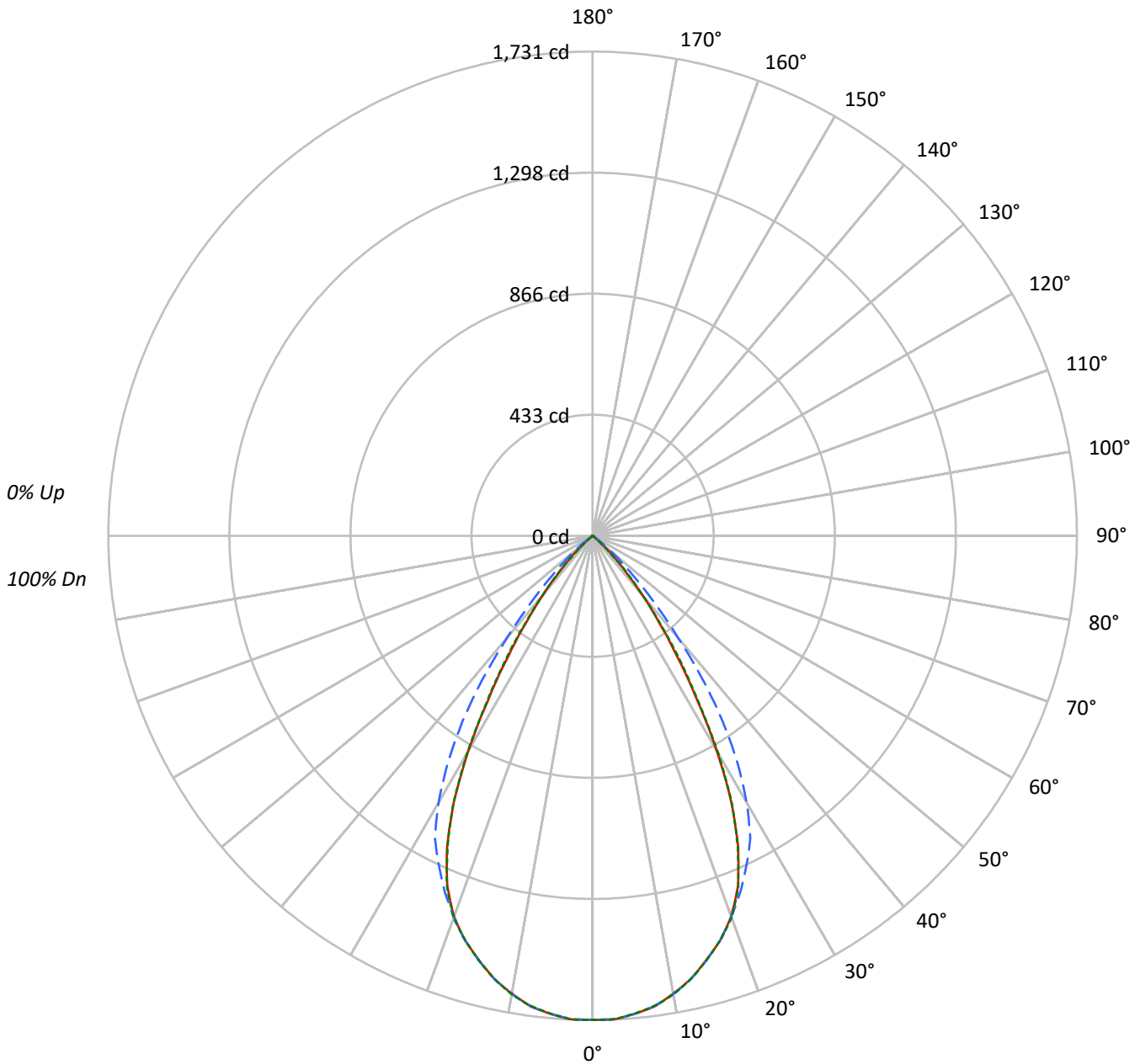
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1729.0 lumens
Efficiency: N/A
Efficacy: 42.2 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): 41
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	100	100	100	100	100		
	1	113	111	108	106	111	108	106	104	104	103	101	101	99	98	97	96	95	93	93	93	93	93	93		
	2	108	103	99	95	105	101	97	94	98	95	92	95	92	90	92	90	88	87	87	87	87	87	87		
	3	102	96	91	87	100	94	90	86	92	88	84	89	86	83	87	84	82	80	80	80	80	80	80		
	4	97	89	83	79	95	88	83	79	86	81	78	84	80	77	82	79	76	74	74	74	74	74	74		
	5	92	83	77	73	90	82	77	73	80	76	72	79	75	71	77	74	71	69	69	69	69	69	69		
	6	87	78	72	67	85	77	71	67	76	70	67	74	70	66	73	69	66	64	64	64	64	64	64		
	7	82	73	67	63	81	72	66	62	71	66	62	70	65	62	69	65	61	60	60	60	60	60	60		
	8	78	69	62	58	77	68	62	58	67	62	58	66	61	58	65	61	57	56	56	56	56	56	56		
	9	74	65	58	54	73	64	58	54	63	58	54	62	57	54	61	57	54	52	52	52	52	52	52		
	10	71	61	55	51	70	60	55	51	60	54	51	59	54	51	58	54	50	49	49	49	49	49	49		

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	167682	167682	167682
5°	166912	166912	166757
10°	163471	163638	163796
15°	157490	157650	157650
20°	149309	149474	149804
25°	131635	139021	131122
30°	99322	123216	100228
35°	62289	95900	64371
40°	35131	59703	35131
45°	14741	30141	14522
50°	1206	11620	1447
55°	540	2449	540
60°	620	310	620
65°	367	367	367
70°	453	453	453
75°	599	599	599
80°	0	893	893
85°	0	1778	1778

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 30141 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	162.2	9.4
10°-20°	441.3	25.5
20°-30°	572.5	33.1
30°-40°	407.0	23.5
40°-50°	132.0	7.6
50°-60°	9.5	0.6
60°-70°	1.6	0.1
70°-80°	1.7	0.1
80°-90°	1.1	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°	1176.0	68.0
0°-40°	1583.1	91.6
0°-60°	1724.6	99.7
0°-90°	1729.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1729.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1731	1731	1731	1731	1731	
5°	1716	1718	1716	1716	1715	162
15°	1570	1575	1572	1575	1572	441
25°	1232	1264	1301	1270	1227	551
35°	527	623	811	629	544	337
45°	108	152	220	156	106	90
55°	3	3	14	3	3	4
65°	2	2	2	2	2	2
75°	2	2	2	2	2	1
85°	0	0	2	2	2	0
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1730.9	1730.9	1730.9	1730.9	1730.9
2.5°	1730.9	1730.9	1729.3	1729.3	1730.9
5°	1716.4	1718.0	1716.4	1716.4	1714.8
7.5°	1697.2	1697.2	1695.6	1695.6	1695.6
10°	1661.8	1663.5	1663.5	1663.5	1665.1
12.5°	1623.3	1623.3	1623.3	1623.3	1623.3
15°	1570.3	1575.1	1571.9	1575.1	1571.9
17.5°	1517.3	1517.3	1515.7	1518.9	1515.7
20°	1448.3	1448.3	1449.9	1453.1	1453.1
22.5°	1356.8	1372.8	1379.3	1376.0	1360.0
25°	1231.5	1263.6	1300.6	1270.1	1226.7
27.5°	1074.2	1135.2	1220.3	1144.8	1077.4
30°	887.9	979.4	1101.5	982.7	896.0
32.5°	695.2	801.2	963.4	809.2	701.7
35°	526.7	623.0	810.9	629.4	544.3
37.5°	388.6	476.9	643.9	480.1	399.8
40°	277.8	342.0	472.1	348.4	277.8
42.5°	178.2	242.5	332.4	244.1	186.3
45°	107.6	152.5	220.0	155.7	106.0
47.5°	48.2	86.7	136.5	89.9	48.2
50°	8.0	35.3	77.1	36.9	9.6
52.5°	4.8	6.4	36.9	6.4	4.8
55°	3.2	3.2	14.5	3.2	3.2
57.5°	3.2	3.2	3.2	3.2	3.2
60°	3.2	1.6	1.6	1.6	3.2
62.5°	1.6	1.6	1.6	1.6	1.6
65°	1.6	1.6	1.6	1.6	1.6
67.5°	1.6	1.6	1.6	1.6	1.6
70°	1.6	1.6	1.6	1.6	1.6
72.5°	1.6	1.6	1.6	1.6	1.6
75°	1.6	1.6	1.6	1.6	1.6
77.5°	1.6	1.6	1.6	1.6	1.6
80°	0.0	1.6	1.6	1.6	1.6
82.5°	0.0	1.6	1.6	1.6	1.6
85°	0.0	0.0	1.6	1.6	1.6
87.5°	0.0	0.0	1.6	1.6	1.6
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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