

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: P837316

Luminaire Tested: HCSQ415D010-HM40525827-41SQMB

Issue Date: 5/17/2024



Test Information

Test Method: LM-79-2019
Report Number: P837316
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: HCSQ415D010-HM40525827-41SQMB
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, MATTE BLACK TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 2700K CCT
Ballast/Driver: -

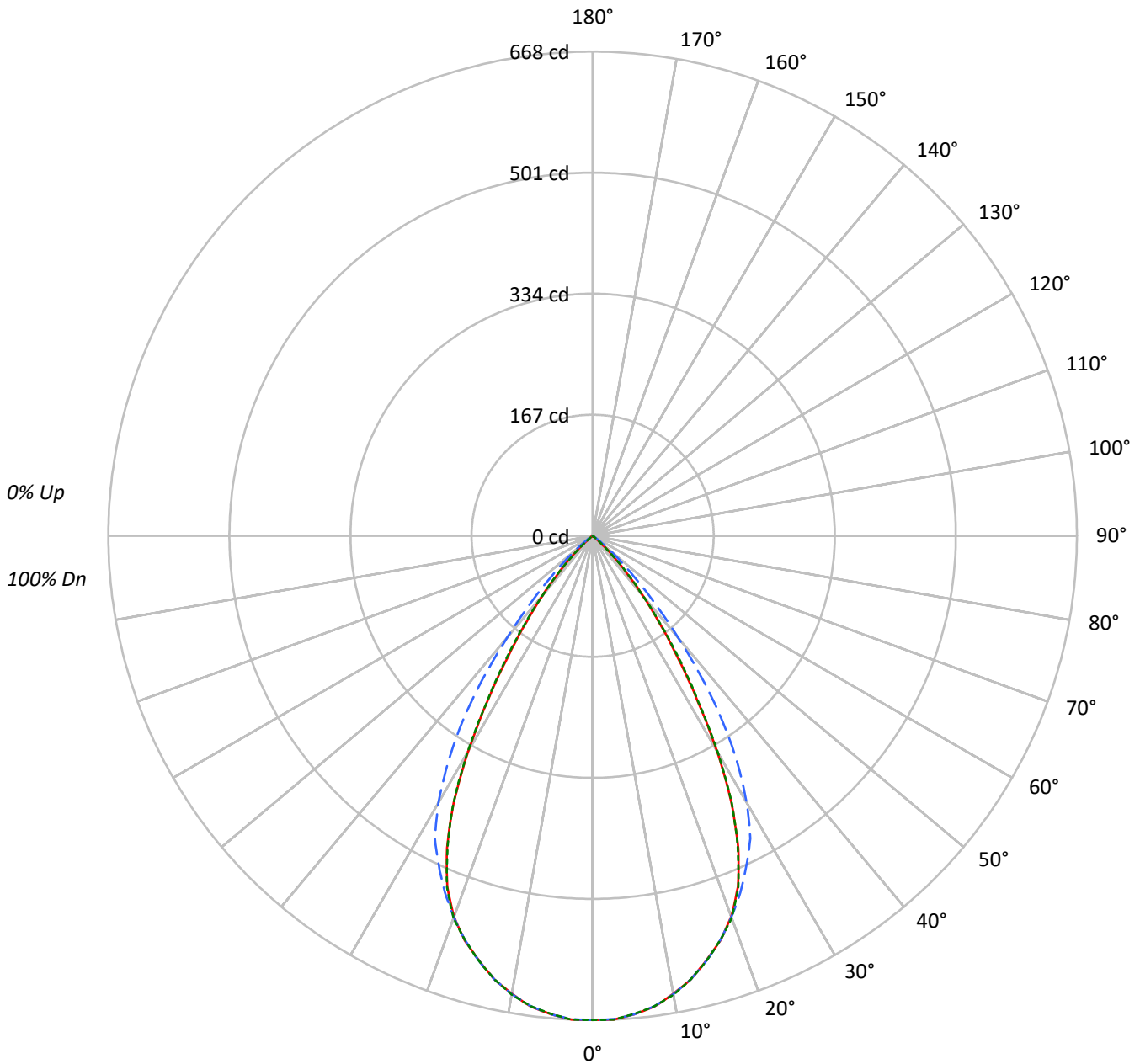
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 667.4 lumens
Efficiency: N/A
Efficacy: 47.7 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): 14
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					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			
1	113	111	108	106	111	108	106	104	104	103	101	101	99	98	97	96	95	93					93			
2	108	103	99	95	105	101	97	94	98	95	92	95	92	90	92	90	88	87					87			
3	102	96	91	87	100	94	90	86	92	88	84	89	86	83	87	84	82	80					80			
4	97	89	83	79	95	88	83	79	86	81	78	84	80	77	82	79	76	74					74			
5	92	83	77	73	90	82	77	73	80	76	72	79	75	71	77	74	71	69					69			
6	87	78	72	67	85	77	71	67	76	70	67	74	70	66	73	69	66	64					64			
7	82	73	67	63	81	72	66	62	71	66	62	70	65	62	69	65	61	60					60			
8	78	69	62	58	77	68	62	58	67	62	58	66	61	58	65	61	57	56					56			
9	74	65	58	54	73	64	58	54	63	58	54	62	57	54	61	57	54	52					52			
10	71	61	55	51	70	60	55	51	60	54	51	59	54	51	58	54	50	49					49			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	64722	64722	64722
5°	64435	64435	64377
10°	63104	63163	63222
15°	60798	60858	60858
20°	57639	57701	57825
25°	50816	53659	50613
30°	38346	47564	38693
35°	24043	37016	24847
40°	13557	23041	13557
45°	5686	11632	5603
50°	467	4491	558
55°	203	946	203
60°	233	116	233
65°	138	138	138
70°	170	170	170
75°	225	225	225
80°	0	335	335
85°	0	667	667

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°

Vertical Angle: 45°

Luminance: 11632 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	62.6	9.4
10°-20°	170.4	25.5
20°-30°	221.0	33.1
30°-40°	157.1	23.5
40°-50°	50.9	7.6
50°-60°	3.7	0.5
60°-70°	0.6	0.1
70°-80°	0.6	0.1
80°-90°	0.4	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°	454.0	68.0
0°-40°	611.1	91.6
0°-60°	665.7	99.8
0°-90°	667.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	667.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	668	668	668	668	668	
5°	663	663	663	663	662	63
15°	606	608	607	608	607	170
25°	475	488	502	490	474	213
35°	203	240	313	243	210	130
45°	42	59	85	60	41	35
55°	1	1	6	1	1	1
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°	668.1	668.1	668.1	668.1	668.1
2.5°	668.1	668.1	667.5	667.5	668.1
5°	662.6	663.2	662.6	662.6	662.0
7.5°	655.1	655.1	654.5	654.5	654.5
10°	641.5	642.1	642.1	642.1	642.7
12.5°	626.6	626.6	626.6	626.6	626.6
15°	606.2	608.0	606.8	608.0	606.8
17.5°	585.7	585.7	585.1	586.3	585.1
20°	559.1	559.1	559.7	560.9	560.9
22.5°	523.7	529.9	532.4	531.2	525.0
25°	475.4	487.8	502.0	490.3	473.5
27.5°	414.6	438.2	471.1	441.9	415.9
30°	342.8	378.1	425.2	379.3	345.9
32.5°	268.4	309.3	371.9	312.4	270.9
35°	203.3	240.5	313.0	243.0	210.1
37.5°	150.0	184.1	248.5	185.3	154.3
40°	107.2	132.0	182.2	134.5	107.2
42.5°	68.8	93.6	128.3	94.2	71.9
45°	41.5	58.9	84.9	60.1	40.9
47.5°	18.6	33.5	52.7	34.7	18.6
50°	3.1	13.6	29.8	14.3	3.7
52.5°	1.9	2.5	14.3	2.5	1.9
55°	1.2	1.2	5.6	1.2	1.2
57.5°	1.2	1.2	1.2	1.2	1.2
60°	1.2	0.6	0.6	0.6	1.2
62.5°	0.6	0.6	0.6	0.6	0.6
65°	0.6	0.6	0.6	0.6	0.6
67.5°	0.6	0.6	0.6	0.6	0.6
70°	0.6	0.6	0.6	0.6	0.6
72.5°	0.6	0.6	0.6	0.6	0.6
75°	0.6	0.6	0.6	0.6	0.6
77.5°	0.6	0.6	0.6	0.6	0.6
80°	0.0	0.6	0.6	0.6	0.6
82.5°	0.0	0.6	0.6	0.6	0.6
85°	0.0	0.0	0.6	0.6	0.6
87.5°	0.0	0.0	0.6	0.6	0.6
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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