

Signify Classified - Internal
Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



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: P837330

Luminaire Tested: HCSQ415D010-HM40525840-41SQLWW

Issue Date: 5/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P837330
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2309-165-5)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 5/17/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCSQ415D010-HM40525840-41SQLWW
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, LENSED WALLWASH TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 4000K CCT
Ballast/Driver: -

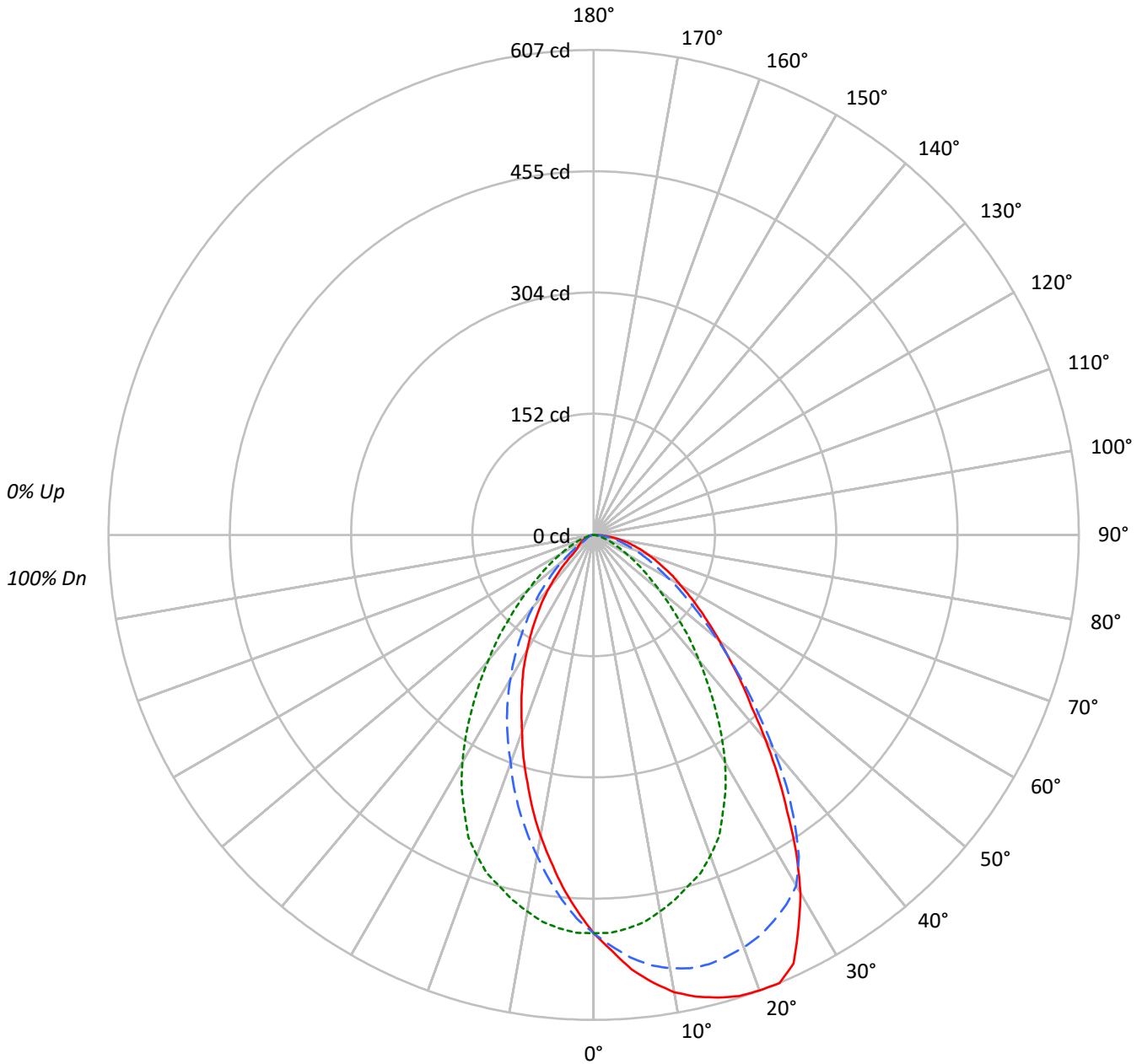
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 806.2 lumens
Efficiency: N/A
Efficacy: 57.6 lumens/watt
Spacing Criteria (0/90/45): 1.07 / 1.04 / 1.12
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										
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	111	107	104	101	109	105	102	99	101	99	96	97	95	93	94	92	91	89								
2	103	97	91	87	101	95	90	86	92	87	84	88	85	82	86	83	80	78								
3	96	87	81	76	94	86	80	75	83	78	74	81	76	72	78	74	71	69								
4	89	79	72	67	87	78	71	66	76	70	65	74	69	64	72	67	64	62								
5	83	72	65	59	81	71	64	59	69	63	58	68	62	58	66	61	57	55								
6	78	66	59	53	76	66	58	53	64	57	53	62	57	52	61	56	52	50								
7	73	61	54	48	71	60	53	48	59	53	48	58	52	48	56	51	47	45								
8	68	57	49	44	67	56	49	44	55	48	44	54	48	43	52	47	43	42								
9	64	53	45	40	63	52	45	40	51	45	40	50	44	40	49	44	40	38								
10	61	49	42	37	60	48	42	37	48	41	37	47	41	37	46	41	37	35								

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	48283	48283	48283	48283	48283
5°	53077	51637	48059	44548	43041
10°	57173	54182	47080	40125	37626
15°	60126	55803	45663	35875	32124
20°	62536	56629	44021	31268	26969
25°	63258	56983	40886	27428	22671
30°	57889	56703	36780	23334	18580
35°	49919	51752	31352	19147	14712
40°	42289	44262	25925	15112	11002
45°	35840	36717	20728	11234	7069
50°	30896	30157	16096	7566	4265
55°	27226	24845	12296	4172	3817
60°	24238	20828	9184	2325	3429
65°	22212	17834	6808	2109	3072
70°	20620	15409	5013	2011	3002
75°	19314	13512	3444	1834	2658
80°	18522	11827	2343	1953	2343
85°	18118	10226	1556	1556	1556

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 22.5°

Vertical Angle: 45°

Luminance: 37292 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	46.7	5.8
10°-20°	128.7	16.0
20°-30°	179.9	22.3
30°-40°	175.9	21.8
40°-50°	127.6	15.8
50°-60°	76.9	9.5
60°-70°	43.2	5.4
70°-80°	21.4	2.7
80°-90°	5.8	0.7
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°	355.3	44.1
0°-40°	531.2	65.9
0°-60°	735.7	91.3
0°-90°	806.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	806.2	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	498	498	498	498	498	
5°	546	531	494	458	443	53
15°	600	556	455	358	320	170
25°	592	533	382	257	212	267
35°	422	438	265	162	124	264
45°	262	268	151	82	52	203
55°	161	147	73	25	23	145
65°	97	78	30	9	13	97
75°	52	36	9	5	7	56
85°	16	9	1	1	1	18
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	498.4	498.4	498.4	498.4	498.4	498.4	498.4	498.4	498.4
2.5°	521.1	519.6	515.4	506.9	498.4	488.5	480.8	475.1	470.9
5°	545.8	543.0	531.0	513.3	494.2	475.1	458.1	448.2	442.6
7.5°	564.9	559.9	543.0	518.2	488.5	459.6	433.4	417.8	411.5
10°	581.2	572.7	550.8	517.5	478.6	440.5	407.9	389.6	382.5
12.5°	591.8	582.6	555.7	516.8	468.0	421.4	383.2	359.2	352.1
15°	599.5	588.2	556.4	511.2	455.3	401.6	357.7	329.5	320.3
17.5°	605.2	589.6	553.6	504.8	444.0	381.1	331.6	301.2	292.0
20°	606.6	589.6	549.3	495.6	427.0	360.6	303.3	272.9	261.6
22.5°	607.3	587.5	543.0	484.3	409.4	337.2	280.0	248.2	236.1
25°	591.8	580.5	533.1	465.2	382.5	311.8	256.6	222.0	212.1
27.5°	555.0	554.3	521.8	439.8	357.7	284.2	232.6	199.4	190.2
30°	517.5	518.2	506.9	411.5	328.8	258.1	208.6	176.0	166.1
32.5°	471.6	478.6	477.9	379.7	297.6	233.3	185.2	154.8	144.9
35°	422.1	434.8	437.6	343.6	265.1	205.0	161.9	134.3	124.4
37.5°	377.5	390.3	396.6	311.8	234.7	180.3	140.0	115.9	106.1
40°	334.4	345.0	350.0	275.0	205.0	154.8	119.5	96.9	87.0
42.5°	292.7	308.3	306.8	243.9	178.9	134.3	101.1	78.5	68.6
45°	261.6	272.2	268.0	211.4	151.3	113.1	82.0	60.8	51.6
47.5°	230.5	238.3	231.9	183.8	128.0	93.3	66.5	44.5	34.6
50°	205.0	208.6	200.1	156.2	106.8	76.4	50.2	29.7	28.3
52.5°	181.0	183.1	171.1	132.9	88.4	61.5	36.8	23.3	24.7
55°	161.2	160.5	147.1	112.4	72.8	47.4	24.7	21.2	22.6
57.5°	142.1	140.0	126.6	93.3	59.4	36.8	14.8	18.4	19.8
60°	125.1	123.0	107.5	77.1	47.4	27.6	12.0	16.3	17.7
62.5°	111.7	106.8	91.2	63.6	38.2	19.8	10.6	14.1	15.6
65°	96.9	92.6	77.8	51.6	29.7	14.1	9.2	12.0	13.4
67.5°	84.8	79.9	65.8	42.4	24.0	9.9	8.5	10.6	12.0
70°	72.8	68.6	54.4	33.9	17.7	6.4	7.1	9.2	10.6
72.5°	62.9	58.0	45.2	26.9	13.4	4.9	6.4	7.8	8.5
75°	51.6	47.4	36.1	20.5	9.2	4.2	4.9	6.4	7.1
77.5°	43.1	38.9	28.3	15.6	6.4	3.5	4.2	5.7	5.7
80°	33.2	29.7	21.2	10.6	4.2	2.1	3.5	4.2	4.2
82.5°	24.0	21.2	14.8	7.1	2.1	2.1	2.1	2.8	2.8
85°	16.3	14.1	9.2	4.2	1.4	1.4	1.4	1.4	1.4
87.5°	9.2	7.1	4.2	1.4	0.0	0.0	0.0	0.0	0.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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Scaled Data Report



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Scaled Data Report





— 0°-180° - - 45°-225° - - - - 90°-270°

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