

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: P837335

Luminaire Tested: HCSQ415D010-HM40525927-41SQLWW

Issue Date: 5/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P837335
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-HM40525927-41SQLWW
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, LENSED WALLWASH TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 2700K CCT
Ballast/Driver: -

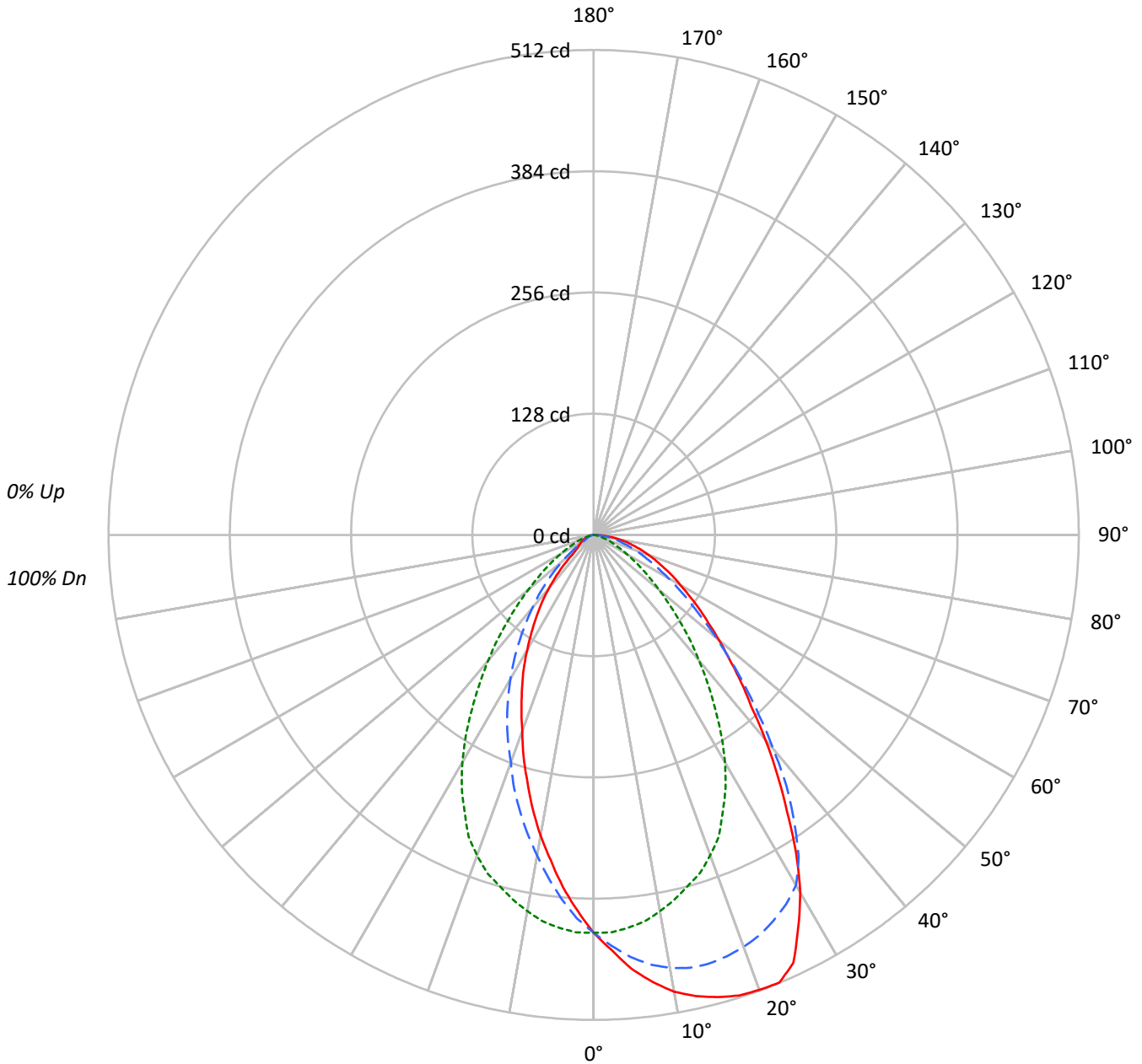
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 679.3 lumens
Efficiency: N/A
Efficacy: 48.5 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°	40688	40688	40688	40688	40688
5°	44723	43508	40493	37537	36263
10°	48172	45653	39673	33810	31705
15°	50668	47017	38472	30228	27069
20°	52691	47722	37093	26350	22722
25°	53295	48015	34451	23110	19101
30°	48783	47776	30986	19654	15661
35°	42054	43615	26420	16131	12394
40°	35637	37294	21853	12735	9270
45°	30195	30935	17468	9467	5960
50°	26043	25410	13564	6375	3587
55°	22936	20926	10370	3530	3226
60°	20421	17534	7731	1957	2887
65°	18705	15014	5731	1765	2590
70°	17391	13001	4220	1699	2521
75°	16282	11379	2882	1572	2246
80°	15621	9986	2008	1674	2008
85°	15228	8559	1334	1334	1334

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 22.5°
 Vertical Angle: 45°
 Luminance: 31428 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	39.4	5.8
10°-20°	108.4	16.0
20°-30°	151.6	22.3
30°-40°	148.2	21.8
40°-50°	107.5	15.8
50°-60°	64.8	9.5
60°-70°	36.4	5.4
70°-80°	18.1	2.7
80°-90°	4.9	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°	299.4	44.1
0°-40°	447.6	65.9
0°-60°	619.9	91.3
0°-90°	679.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	679.3	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	420	420	420	420	420	
5°	460	447	416	386	373	45
15°	505	469	384	301	270	143
25°	499	449	322	216	179	225
35°	356	369	223	136	105	223
45°	220	226	128	69	44	171
55°	136	124	61	21	19	122
65°	82	66	25	8	11	82
75°	44	30	8	4	6	47
85°	14	8	1	1	1	15
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°	420.0	420.0	420.0	420.0	420.0	420.0	420.0	420.0	420.0
2.5°	439.0	437.9	434.3	427.1	420.0	411.6	405.1	400.3	396.8
5°	459.9	457.5	447.4	432.5	416.4	400.3	386.0	377.7	372.9
7.5°	476.0	471.8	457.5	436.7	411.6	387.2	365.2	352.1	346.7
10°	489.7	482.5	464.1	436.1	403.3	371.1	343.7	328.2	322.3
12.5°	498.6	490.9	468.2	435.5	394.4	355.1	322.9	302.6	296.7
15°	505.2	495.6	468.8	430.7	383.6	338.4	301.4	277.6	269.9
17.5°	509.9	496.8	466.5	425.3	374.1	321.1	279.4	253.8	246.0
20°	511.1	496.8	462.9	417.6	359.8	303.8	255.6	229.9	220.4
22.5°	511.7	495.0	457.5	408.1	344.9	284.2	235.9	209.1	199.0
25°	498.6	489.1	449.2	392.0	322.3	262.7	216.2	187.1	178.7
27.5°	467.6	467.0	439.6	370.5	301.4	239.5	196.0	168.0	160.2
30°	436.1	436.7	427.1	346.7	277.0	217.4	175.7	148.3	140.0
32.5°	397.3	403.3	402.7	319.9	250.8	196.6	156.1	130.5	122.1
35°	355.6	366.4	368.8	289.5	223.4	172.8	136.4	113.2	104.8
37.5°	318.1	328.8	334.2	262.7	197.8	151.9	118.0	97.7	89.4
40°	281.8	290.7	294.9	231.7	172.8	130.5	100.7	81.6	73.3
42.5°	246.6	259.7	258.5	205.5	150.7	113.2	85.2	66.1	57.8
45°	220.4	229.4	225.8	178.1	127.5	95.3	69.1	51.2	43.5
47.5°	194.2	200.8	195.4	154.9	107.8	78.6	56.0	37.5	29.2
50°	172.8	175.7	168.6	131.7	90.0	64.3	42.3	25.0	23.8
52.5°	152.5	154.3	144.2	112.0	74.5	51.8	31.0	19.7	20.9
55°	135.8	135.2	123.9	94.7	61.4	39.9	20.9	17.9	19.1
57.5°	119.7	118.0	106.6	78.6	50.0	31.0	12.5	15.5	16.7
60°	105.4	103.7	90.5	64.9	39.9	23.2	10.1	13.7	14.9
62.5°	94.1	90.0	76.8	53.6	32.2	16.7	8.9	11.9	13.1
65°	81.6	78.0	65.5	43.5	25.0	11.9	7.7	10.1	11.3
67.5°	71.5	67.3	55.4	35.7	20.3	8.3	7.1	8.9	10.1
70°	61.4	57.8	45.9	28.6	14.9	5.4	6.0	7.7	8.9
72.5°	53.0	48.8	38.1	22.6	11.3	4.2	5.4	6.6	7.1
75°	43.5	39.9	30.4	17.3	7.7	3.6	4.2	5.4	6.0
77.5°	36.3	32.8	23.8	13.1	5.4	3.0	3.6	4.8	4.8
80°	28.0	25.0	17.9	8.9	3.6	1.8	3.0	3.6	3.6
82.5°	20.3	17.9	12.5	6.0	1.8	1.8	1.8	2.4	2.4
85°	13.7	11.9	7.7	3.6	1.2	1.2	1.2	1.2	1.2
87.5°	7.7	6.0	3.6	1.2	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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— 0°-180° - - 45°-225° - - - - 90°-270°

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