

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: P837295

Luminaire Tested: HCSQ410D010-HM40525927-41SQLWW

Issue Date: 5/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P837295
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: HCSQ410D010-HM40525927-41SQLWW
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, LENSED WALLWASH TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 2700K CCT
Ballast/Driver: -

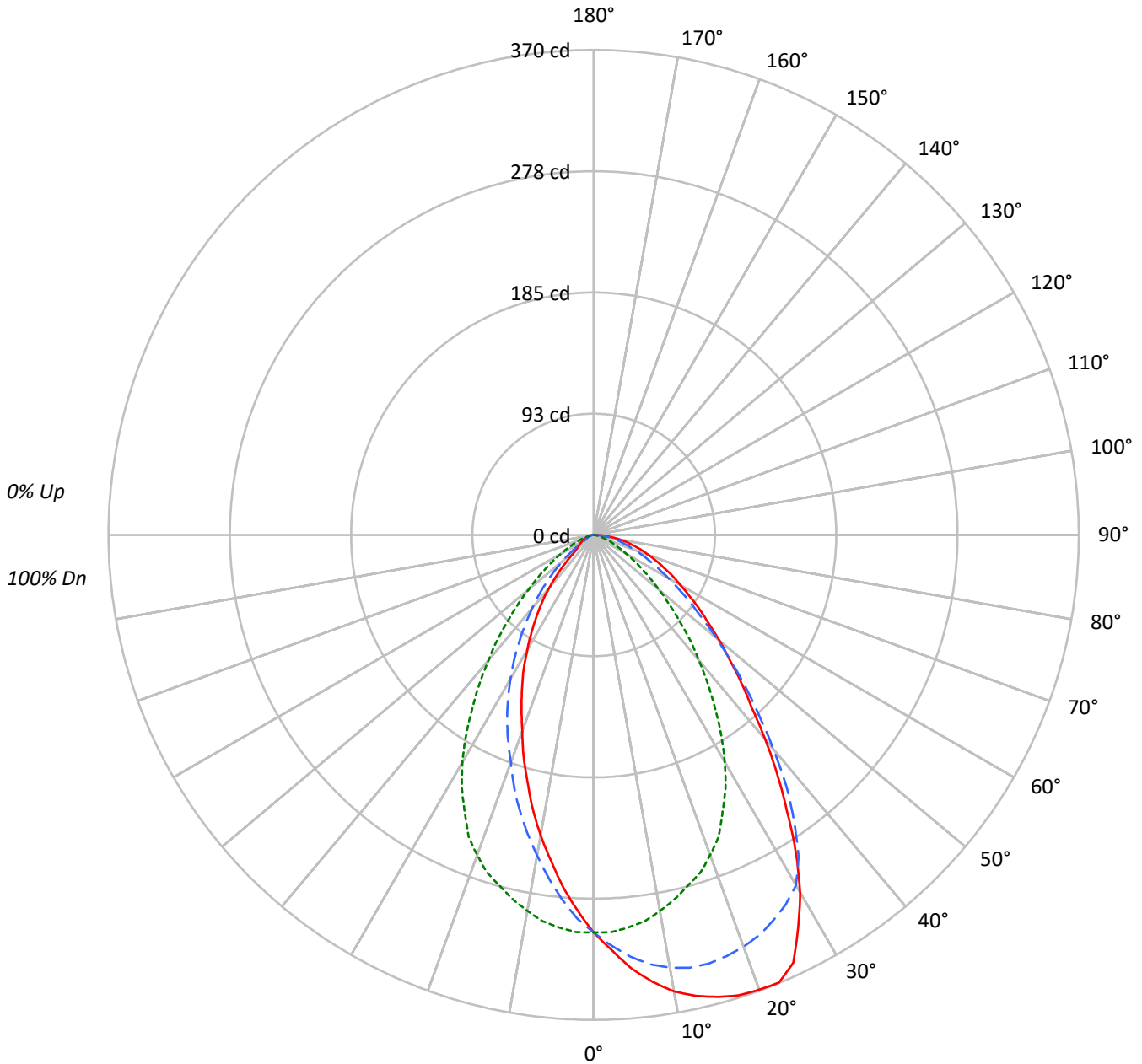
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 490.7 lumens
Efficiency: N/A
Efficacy: 49.6 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): 9.9
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	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°	29382	29382	29382	29382	29382
5°	32305	31420	29242	27112	26188
10°	34793	32974	28655	24425	22901
15°	36597	33959	27791	21834	19547
20°	38062	34464	26794	19031	16412
25°	38491	34675	24884	16696	13800
30°	35225	34509	22384	14195	11309
35°	30382	31493	19076	11649	8953
40°	25735	26936	15782	9194	6690
45°	21811	22345	12618	6836	4302
50°	18809	18357	9796	4597	2592
55°	16569	15116	7482	2550	2331
60°	14764	12671	5580	1414	2093
65°	13501	10842	4149	1284	1880
70°	12548	9375	3059	1218	1841
75°	11753	8197	2096	1123	1609
80°	11269	7197	1450	1227	1450
85°	11004	6225	1000	1000	1000

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 22.5°
 Vertical Angle: 45°
 Luminance: 22688 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	28.4	5.8
10°-20°	78.3	16.0
20°-30°	109.5	22.3
30°-40°	107.0	21.8
40°-50°	77.7	15.8
50°-60°	46.8	9.5
60°-70°	26.3	5.4
70°-80°	13.0	2.7
80°-90°	3.6	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°	216.2	44.1
0°-40°	323.2	65.9
0°-60°	447.7	91.3
0°-90°	490.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	490.7	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	303	303	303	303	303	
5°	332	323	301	279	269	32
15°	365	339	277	218	195	103
25°	360	324	233	156	129	162
35°	257	266	161	98	76	161
45°	159	163	92	50	31	123
55°	98	90	44	15	14	88
65°	59	47	18	6	8	59
75°	31	22	6	3	4	34
85°	10	6	1	1	1	11
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°	303.3	303.3	303.3	303.3	303.3	303.3	303.3	303.3	303.3
2.5°	317.1	316.2	313.7	308.5	303.3	297.3	292.6	289.1	286.5
5°	332.2	330.4	323.1	312.4	300.7	289.1	278.8	272.8	269.3
7.5°	343.8	340.8	330.4	315.4	297.3	279.7	263.7	254.3	250.4
10°	353.7	348.5	335.2	314.9	291.3	268.0	248.3	237.1	232.8
12.5°	360.1	354.5	338.2	314.5	284.8	256.4	233.2	218.6	214.3
15°	364.9	358.0	338.6	311.1	277.1	244.4	217.7	200.5	194.9
17.5°	368.3	358.8	336.9	307.2	270.2	231.9	201.8	183.3	177.7
20°	369.2	358.8	334.3	301.6	259.9	219.4	184.6	166.1	159.2
22.5°	369.6	357.5	330.4	294.7	249.1	205.2	170.4	151.0	143.7
25°	360.1	353.2	324.4	283.1	232.8	189.7	156.2	135.1	129.1
27.5°	337.8	337.3	317.5	267.6	217.7	173.0	141.6	121.3	115.7
30°	314.9	315.4	308.5	250.4	200.1	157.0	126.9	107.1	101.1
32.5°	287.0	291.3	290.9	231.0	181.1	142.0	112.7	94.2	88.2
35°	256.9	264.6	266.3	209.1	161.3	124.8	98.5	81.7	75.7
37.5°	229.8	237.5	241.4	189.7	142.8	109.7	85.2	70.6	64.5
40°	203.5	210.0	213.0	167.4	124.8	94.2	72.7	58.9	52.9
42.5°	178.1	187.6	186.7	148.4	108.9	81.7	61.5	47.8	41.7
45°	159.2	165.6	163.1	128.6	92.1	68.8	49.9	37.0	31.4
47.5°	140.3	145.0	141.1	111.9	77.9	56.8	40.4	27.1	21.1
50°	124.8	126.9	121.8	95.1	65.0	46.5	30.5	18.1	17.2
52.5°	110.1	111.4	104.1	80.9	53.8	37.4	22.4	14.2	15.1
55°	98.1	97.7	89.5	68.4	44.3	28.8	15.1	12.9	13.8
57.5°	86.5	85.2	77.0	56.8	36.1	22.4	9.0	11.2	12.0
60°	76.2	74.9	65.4	46.9	28.8	16.8	7.3	9.9	10.8
62.5°	68.0	65.0	55.5	38.7	23.2	12.0	6.5	8.6	9.5
65°	58.9	56.4	47.3	31.4	18.1	8.6	5.6	7.3	8.2
67.5°	51.6	48.6	40.0	25.8	14.6	6.0	5.2	6.5	7.3
70°	44.3	41.7	33.1	20.7	10.8	3.9	4.3	5.6	6.5
72.5°	38.3	35.3	27.5	16.3	8.2	3.0	3.9	4.7	5.2
75°	31.4	28.8	21.9	12.5	5.6	2.6	3.0	3.9	4.3
77.5°	26.2	23.7	17.2	9.5	3.9	2.2	2.6	3.4	3.4
80°	20.2	18.1	12.9	6.5	2.6	1.3	2.2	2.6	2.6
82.5°	14.6	12.9	9.0	4.3	1.3	1.3	1.3	1.7	1.7
85°	9.9	8.6	5.6	2.6	0.9	0.9	0.9	0.9	0.9
87.5°	5.6	4.3	2.6	0.9	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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