

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: P837283

Luminaire Tested: HCSQ410D010-HM40525835-41SQC

Issue Date: 5/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P837283
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2309-165-1)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 5/17/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCSQ410D010-HM40525835-41SQC
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, SPECULAR CLEAR TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 3500K CCT
Ballast/Driver: -

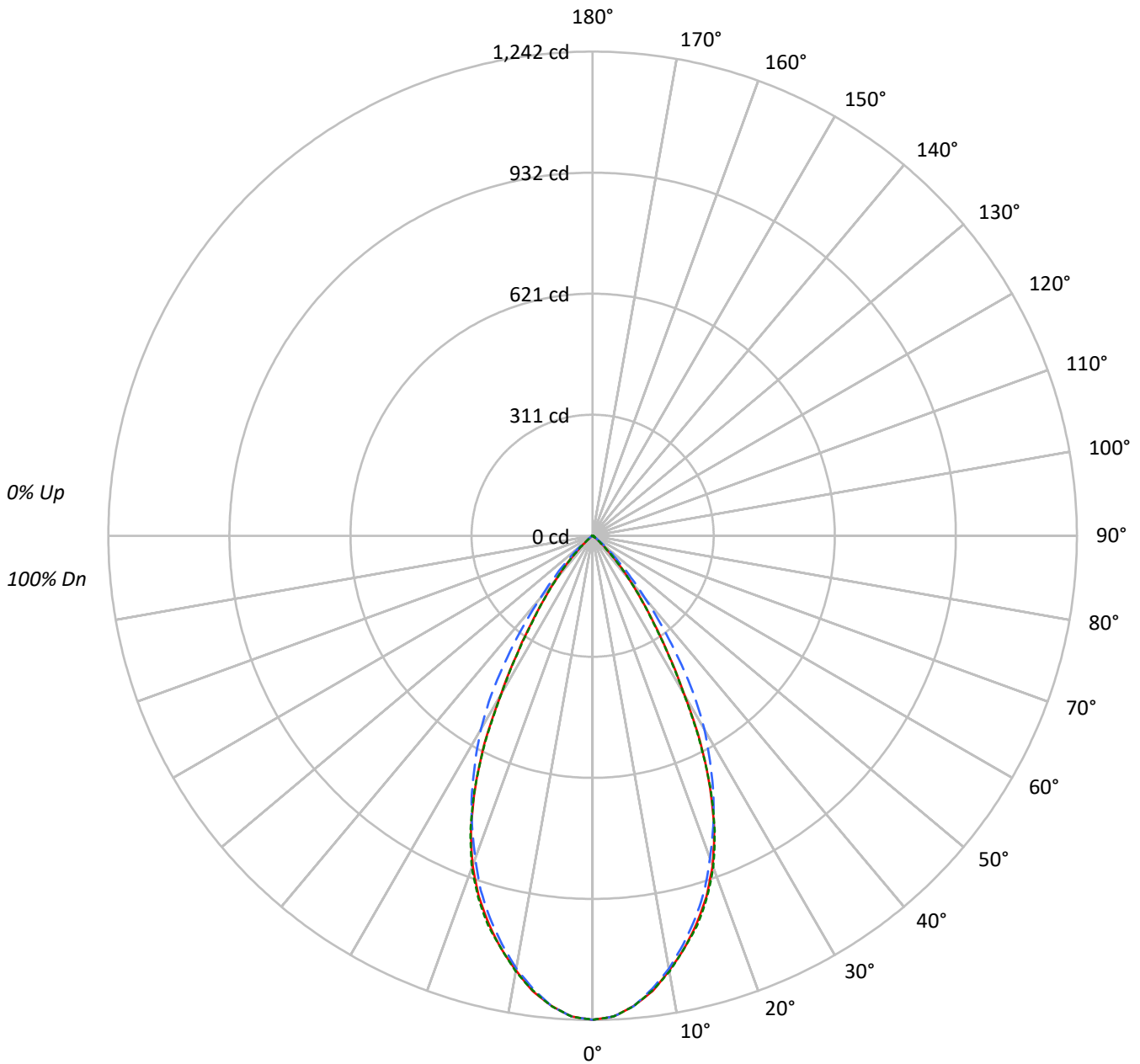
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1003.4 lumens
Efficiency: N/A
Efficacy: 101.4 lumens/watt
Spacing Criteria (0/90/45): 0.85 / 0.85 / 0.87
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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CATALOG NUMBER: HCSQ410D010-HM40525835-41SQC

Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20									
RC	80									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	114	111	108	106	111	109	106	104	105	103	101	101	99	98	97	96	95	94																			
2	108	103	99	96	106	101	98	95	98	95	93	95	93	91	93	91	89	87																			
3	103	96	91	87	101	95	90	87	92	89	85	90	87	84	88	85	83	81																			
4	98	90	85	80	96	89	84	80	87	82	79	85	81	78	83	80	77	76																			
5	93	84	79	74	91	83	78	74	82	77	73	80	76	73	78	75	72	71																			
6	88	79	73	69	87	79	73	69	77	72	68	76	71	68	74	70	68	66																			
7	84	75	69	65	82	74	68	64	73	68	64	72	67	64	70	66	63	62																			
8	80	70	64	60	79	70	64	60	69	64	60	68	63	60	67	63	60	58																			
9	76	67	61	57	75	66	60	57	65	60	56	64	60	56	63	59	56	55																			
10	73	63	57	53	72	63	57	53	62	57	53	61	56	53	60	56	53	52																			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	120290	120290	120290
5°	117716	117764	117764
10°	111345	110843	111640
15°	103312	101887	103863
20°	92732	90660	93309
25°	76170	78372	76437
30°	52653	64041	52262
35°	32416	45236	31647
40°	18286	26443	18160
45°	8357	13262	8015
50°	2125	5320	2200
55°	1013	1621	929
60°	678	581	775
65°	573	458	573
70°	425	425	566
75°	374	374	561
80°	558	558	558
85°	556	1112	1112

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 13262 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	113.0	11.3
10°-20°	285.3	28.4
20°-30°	326.1	32.5
30°-40°	202.4	20.2
40°-50°	63.8	6.4
50°-60°	8.2	0.8
60°-70°	2.4	0.2
70°-80°	1.3	0.1
80°-90°	0.9	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°	724.3	72.2
0°-40°	926.8	92.4
0°-60°	998.8	99.5
0°-90°	1003.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1003.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1242	1242	1242	1242	1242	
5°	1210	1210	1211	1210	1211	113
15°	1030	1022	1016	1022	1036	287
25°	713	723	733	723	715	320
35°	274	316	382	309	268	176
45°	61	73	97	74	58	51
55°	6	6	10	6	6	6
65°	2	2	2	2	2	2
75°	1	1	1	1	2	1
85°	0	1	1	1	1	1
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1241.7	1241.7	1241.7	1241.7	1241.7
2.5°	1234.2	1235.2	1234.2	1236.2	1234.2
5°	1210.5	1209.5	1211.0	1210.0	1211.0
7.5°	1178.2	1172.2	1171.7	1175.7	1176.2
10°	1131.9	1130.3	1126.8	1130.3	1134.9
12.5°	1084.5	1078.4	1073.4	1080.5	1084.5
15°	1030.1	1022.5	1015.9	1022.5	1035.6
17.5°	970.1	959.5	954.0	961.5	974.1
20°	899.5	888.4	879.4	885.9	905.1
22.5°	814.9	813.9	807.8	811.3	818.4
25°	712.6	722.7	733.2	722.7	715.1
27.5°	600.2	627.4	651.6	619.8	595.7
30°	470.7	512.0	572.5	509.0	467.2
32.5°	363.8	407.2	484.3	401.6	360.8
35°	274.1	316.5	382.5	308.9	267.6
37.5°	201.6	233.3	290.8	231.3	201.6
40°	144.6	165.3	209.1	164.8	143.6
42.5°	100.3	113.9	146.1	112.9	97.3
45°	61.0	73.1	96.8	73.6	58.5
47.5°	32.3	46.4	61.0	44.3	32.3
50°	14.1	24.7	35.3	24.2	14.6
52.5°	7.6	10.6	19.1	10.6	7.6
55°	6.0	6.0	9.6	6.0	5.5
57.5°	4.5	4.5	5.0	4.5	4.5
60°	3.5	3.5	3.0	3.5	4.0
62.5°	3.0	3.0	2.5	3.0	3.0
65°	2.5	2.5	2.0	2.5	2.5
67.5°	2.0	2.0	2.0	2.0	2.0
70°	1.5	1.5	1.5	2.0	2.0
72.5°	1.5	1.5	1.5	1.5	1.5
75°	1.0	1.0	1.0	1.0	1.5
77.5°	1.0	1.0	1.0	1.0	1.0
80°	1.0	1.0	1.0	1.0	1.0
82.5°	0.5	1.0	1.0	1.0	1.0
85°	0.5	1.0	1.0	1.0	1.0
87.5°	0.5	0.5	1.0	1.0	1.0
90°	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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