

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: P837278

Luminaire Tested: HCSQ410D010-HM40525830-41SQC

Issue Date: 5/17/2024



Test Information

Test Method: LM-79-2019
Report Number: P837278
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-HM40525830-41SQC
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, SPECULAR CLEAR TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 3000K CCT
Ballast/Driver: -

Summary

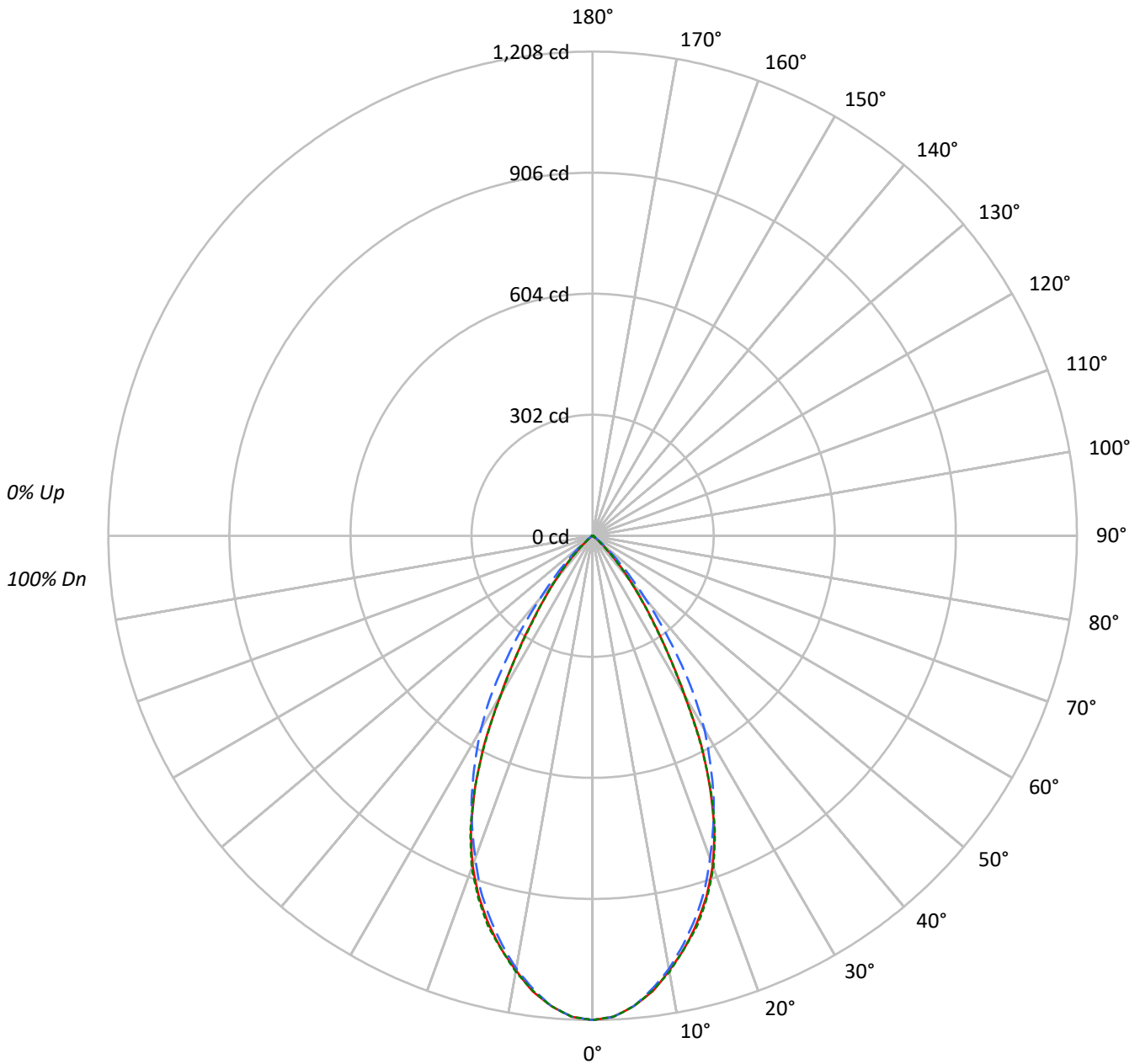
Lumens per Lamp: N/A
Luminaire Lumens: 976.4 lumens
Efficiency: N/A
Efficacy: 98.6 lumens/watt
Spacing Criteria (0/90/45): 0.85 / 0.85 / 0.87
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 9.9
Input Voltage (V): NR
Input Current (Ain): 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									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	71	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°	117045	117045	117045
5°	114536	114584	114584
10°	108335	107853	108630
15°	100523	99139	101065
20°	90237	88206	90794
25°	74107	76255	74374
30°	51233	62307	50841
35°	31541	44018	30796
40°	17793	25735	17667
45°	8124	12892	7795
50°	2065	5169	2140
55°	996	1571	912
60°	659	562	756
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: 12892 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	109.9	11.3
10°-20°	277.6	28.4
20°-30°	317.3	32.5
30°-40°	197.0	20.2
40°-50°	62.1	6.4
50°-60°	8.0	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°	704.8	72.2
0°-40°	901.8	92.4
0°-60°	971.8	99.5
0°-90°	976.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	976.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1208	1208	1208	1208	1208	
5°	1178	1177	1178	1177	1178	110
15°	1002	995	988	995	1008	279
25°	693	703	713	703	696	311
35°	267	308	372	301	260	171
45°	59	71	94	72	57	50
55°	6	6	9	6	5	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°	1208.2	1208.2	1208.2	1208.2	1208.2
2.5°	1200.9	1201.8	1200.9	1202.8	1200.9
5°	1177.8	1176.8	1178.3	1177.3	1178.3
7.5°	1146.4	1140.5	1140.0	1144.0	1144.5
10°	1101.3	1099.8	1096.4	1099.8	1104.3
12.5°	1055.2	1049.3	1044.4	1051.3	1055.2
15°	1002.3	994.9	988.5	994.9	1007.7
17.5°	943.9	933.6	928.2	935.6	947.8
20°	875.3	864.5	855.6	862.0	880.7
22.5°	792.9	791.9	786.0	789.5	796.3
25°	693.3	703.2	713.4	703.2	695.8
27.5°	584.0	610.5	634.0	603.1	579.6
30°	458.0	498.2	557.0	495.2	454.5
32.5°	354.0	396.2	471.2	390.8	351.1
35°	266.7	307.9	372.2	300.6	260.4
37.5°	196.1	227.0	282.9	225.1	196.1
40°	140.7	160.8	203.5	160.3	139.7
42.5°	97.6	110.8	142.2	109.8	94.6
45°	59.3	71.1	94.1	71.6	56.9
47.5°	31.4	45.1	59.3	43.2	31.4
50°	13.7	24.0	34.3	23.5	14.2
52.5°	7.4	10.3	18.6	10.3	7.4
55°	5.9	5.9	9.3	5.9	5.4
57.5°	4.4	4.4	4.9	4.4	4.4
60°	3.4	3.4	2.9	3.4	3.9
62.5°	2.9	2.9	2.5	2.9	2.9
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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