

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: P837308

Luminaire Tested: HCSQ410D010-HM40525940-41SQC

Issue Date: 5/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P837308
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-HM40525940-41SQC
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, SPECULAR CLEAR TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 4000K CCT
Ballast/Driver: -

Summary

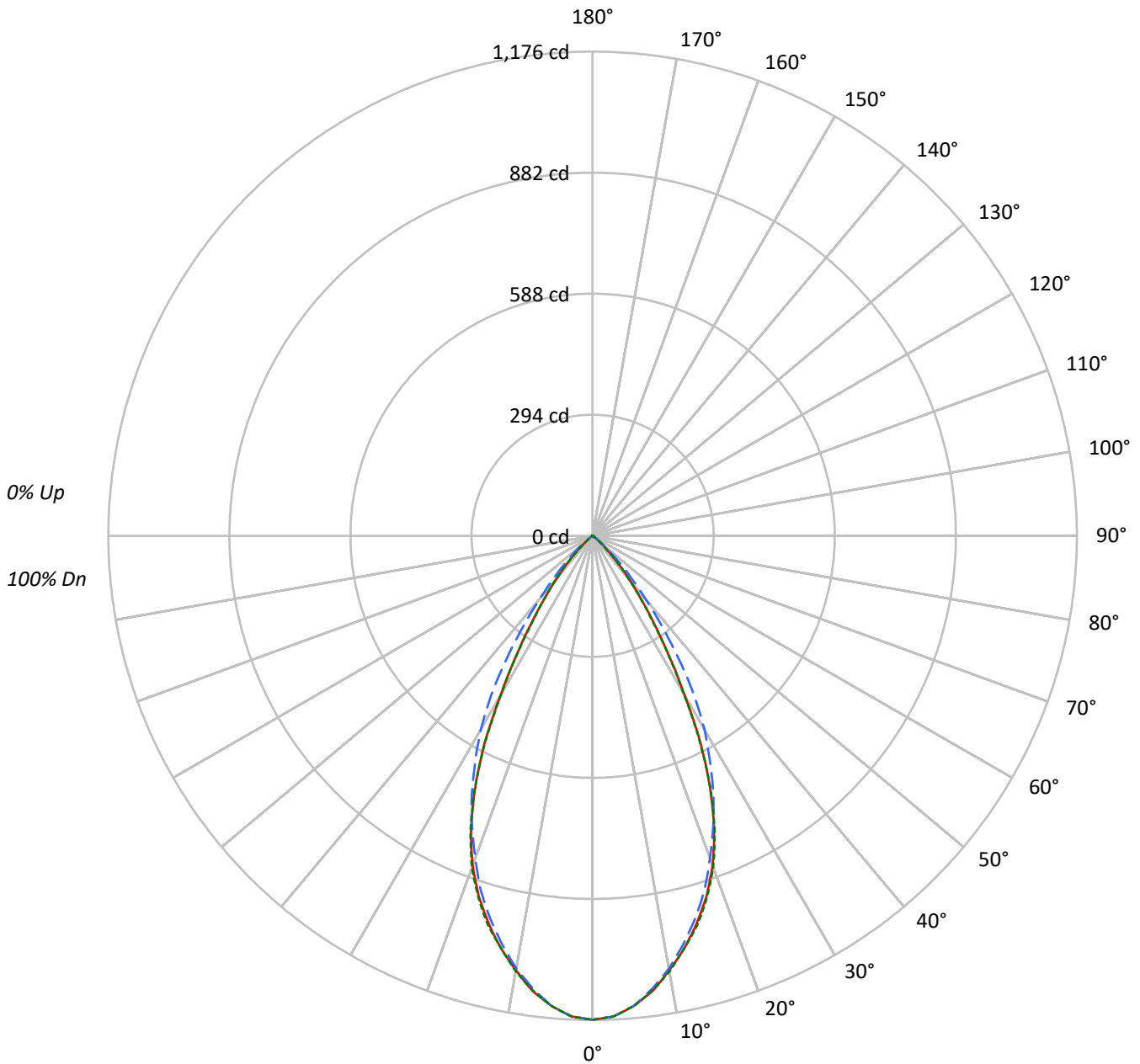
Lumens per Lamp: N/A
Luminaire Lumens: 950.1 lumens
Efficiency: N/A
Efficacy: 96.0 lumens/watt
Spacing Criteria (0/90/45): 0.85 / 0.85 / 0.87
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

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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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	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°	113896	113896	113896
5°	111453	111502	111502
10°	105423	104951	105698
15°	97816	96472	98337
20°	87804	85835	88350
25°	72119	74203	72375
30°	49857	60629	49477
35°	30701	42835	29968
40°	17313	25039	17199
45°	7905	12549	7576
50°	2020	5034	2080
55°	963	1537	878
60°	639	562	736
65°	550	436	550
70°	397	397	538
75°	374	374	524
80°	558	558	558
85°	556	1112	1112

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 12549 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	106.9	11.3
10°-20°	270.1	28.4
20°-30°	308.8	32.5
30°-40°	191.7	20.2
40°-50°	60.4	6.4
50°-60°	7.8	0.8
60°-70°	2.3	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°	685.8	72.2
0°-40°	877.5	92.4
0°-60°	945.7	99.5
0°-90°	950.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	950.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1176	1176	1176	1176	1176	
5°	1146	1145	1147	1146	1147	107
15°	975	968	962	968	980	272
25°	675	684	694	684	677	303
35°	260	300	362	292	253	167
45°	58	69	92	70	55	49
55°	6	6	9	6	5	6
65°	2	2	2	2	2	2
75°	1	1	1	1	1	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°	1175.7	1175.7	1175.7	1175.7	1175.7
2.5°	1168.5	1169.5	1168.5	1170.4	1168.5
5°	1146.1	1145.1	1146.6	1145.6	1146.6
7.5°	1115.6	1109.8	1109.4	1113.2	1113.7
10°	1071.7	1070.2	1066.9	1070.2	1074.5
12.5°	1026.8	1021.1	1016.3	1023.0	1026.8
15°	975.3	968.1	961.9	968.1	980.5
17.5°	918.5	908.5	903.2	910.4	922.3
20°	851.7	841.2	832.6	838.8	857.0
22.5°	771.5	770.6	764.9	768.2	774.9
25°	674.7	684.2	694.2	684.2	677.1
27.5°	568.3	594.0	616.9	586.9	564.0
30°	445.7	484.8	542.0	481.9	442.3
32.5°	344.5	385.5	458.5	380.3	341.6
35°	259.6	299.6	362.2	292.5	253.4
37.5°	190.9	220.9	275.3	219.0	190.9
40°	136.9	156.5	198.0	156.0	136.0
42.5°	95.0	107.8	138.4	106.9	92.1
45°	57.7	69.2	91.6	69.7	55.3
47.5°	30.5	43.9	57.7	42.0	30.5
50°	13.4	23.4	33.4	22.9	13.8
52.5°	7.2	10.0	18.1	10.0	7.2
55°	5.7	5.7	9.1	5.7	5.2
57.5°	4.3	4.3	4.8	4.3	4.3
60°	3.3	3.3	2.9	3.3	3.8
62.5°	2.9	2.9	2.4	2.9	2.9
65°	2.4	2.4	1.9	2.4	2.4
67.5°	1.9	1.9	1.9	1.9	1.9
70°	1.4	1.4	1.4	1.9	1.9
72.5°	1.4	1.4	1.4	1.4	1.4
75°	1.0	1.0	1.0	1.0	1.4
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





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

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