

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: P837309

Luminaire Tested: HCSQ410D010-HM40525940-41SQH

Issue Date: 5/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P837309
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2309-165-2)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 5/17/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCSQ410D010-HM40525940-41SQH
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, HAZE TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 4000K CCT
Ballast/Driver: -

Summary

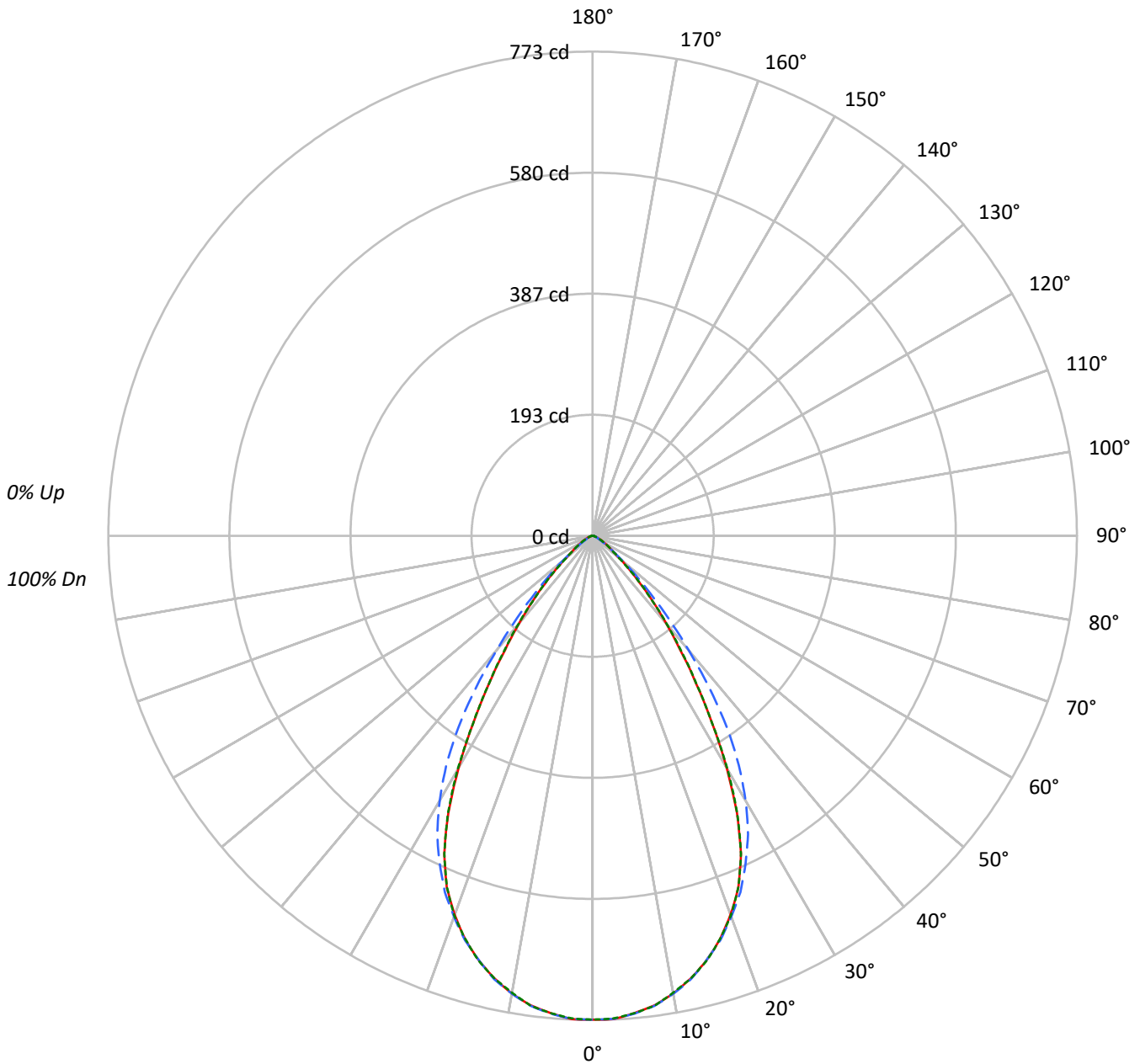
Lumens per Lamp: N/A
Luminaire Lumens: 868.5 lumens
Efficiency: N/A
Efficacy: 87.7 lumens/watt
Spacing Criteria (0/90/45): 0.98 / 0.98 / 1.01
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

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				
RC	80					70					50					30				
RW	70	50	30	10	70	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	113	110	107	105	110	108	105	103	104	102	100	100	98	97	96	95	94	92		
2	107	101	97	93	104	100	95	92	96	93	90	93	90	88	90	88	86	85		
3	101	93	88	84	98	92	87	83	89	85	82	87	83	80	85	82	79	77		
4	95	87	80	76	93	85	80	75	83	78	74	81	77	74	79	76	73	71		
5	89	80	74	69	88	79	73	69	77	72	68	76	71	68	74	70	67	65		
6	84	75	68	63	83	74	68	63	72	67	63	71	66	62	69	65	62	60		
7	80	70	63	59	78	69	63	58	68	62	58	66	61	58	65	61	57	56		
8	75	65	59	54	74	65	58	54	63	58	54	62	57	54	61	57	53	52		
9	72	61	55	50	70	61	54	50	60	54	50	59	54	50	58	53	50	48		
10	68	57	51	47	67	57	51	47	56	51	47	55	50	47	55	50	46	45		

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	74846	74846	74846
5°	74393	74480	74393
10°	73000	73040	72853
15°	70406	70355	70456
20°	66371	66711	66515
25°	59880	61718	59880
30°	47832	54611	48201
35°	34143	44195	34202
40°	23054	30060	23421
45°	14646	17783	14714
50°	8349	9495	8048
55°	5489	4594	5405
60°	3798	2674	3701
65°	2636	1971	2636
70°	1898	1473	1898
75°	1235	1235	1235
80°	781	1060	1060
85°	1112	1112	1112

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 17783 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	72.4	8.3
10°-20°	196.8	22.7
20°-30°	257.7	29.7
30°-40°	202.5	23.3
40°-50°	94.6	10.9
50°-60°	29.3	3.4
60°-70°	10.5	1.2
70°-80°	3.7	0.4
80°-90°	1.0	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°	526.9	60.7
0°-40°	729.4	84.0
0°-60°	853.3	98.3
0°-90°	868.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	868.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	773	773	773	773	773	
5°	765	765	766	767	765	72
15°	702	702	702	702	702	197
25°	560	568	577	568	560	252
35°	289	315	374	319	289	182
45°	107	120	130	117	107	85
55°	32	30	27	30	32	30
65°	12	10	9	10	12	12
75°	3	3	3	3	3	4
85°	1	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°	772.6	772.6	772.6	772.6	772.6
2.5°	772.6	771.7	772.1	771.2	771.2
5°	765.0	765.4	765.9	766.9	765.0
7.5°	756.4	757.3	756.9	756.9	756.9
10°	742.1	742.5	742.5	742.5	740.6
12.5°	723.9	724.9	725.4	723.9	723.9
15°	702.0	702.0	701.5	702.0	702.5
17.5°	675.7	677.2	677.2	675.7	675.3
20°	643.8	646.1	647.1	645.2	645.2
22.5°	608.0	610.4	616.1	611.3	607.5
25°	560.2	567.9	577.4	568.4	560.2
27.5°	498.7	515.4	537.3	518.3	500.1
30°	427.6	454.8	488.2	456.2	430.9
32.5°	355.0	385.6	434.7	388.0	355.0
35°	288.7	315.0	373.7	318.8	289.2
37.5°	229.5	254.8	306.4	257.7	232.9
40°	182.3	202.8	237.7	202.3	185.2
42.5°	142.2	157.0	179.9	156.5	141.7
45°	106.9	119.8	129.8	117.4	107.4
47.5°	78.7	87.3	93.1	85.9	76.8
50°	55.4	61.6	63.0	60.1	53.4
52.5°	41.5	41.5	42.0	41.0	40.6
55°	32.5	30.5	27.2	30.1	32.0
57.5°	25.3	23.4	19.1	22.4	24.8
60°	19.6	17.7	13.8	17.2	19.1
62.5°	15.3	13.4	11.0	13.4	14.8
65°	11.5	10.5	8.6	10.0	11.5
67.5°	8.6	7.6	6.7	7.6	8.6
70°	6.7	6.2	5.2	5.7	6.7
72.5°	4.8	4.3	4.3	4.3	4.8
75°	3.3	3.3	3.3	3.3	3.3
77.5°	2.4	2.4	2.4	2.4	2.4
80°	1.4	1.4	1.9	1.9	1.9
82.5°	1.0	1.0	1.4	1.4	1.4
85°	1.0	1.0	1.0	1.0	1.0
87.5°	0.5	0.5	0.5	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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