

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: P837374

Luminaire Tested: HCSQ420D010-HM40525927-41SQH

Issue Date: 5/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P837374
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: HCSQ420D010-HM40525927-41SQH
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, HAZE TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 2700K CCT
Ballast/Driver: -

Summary

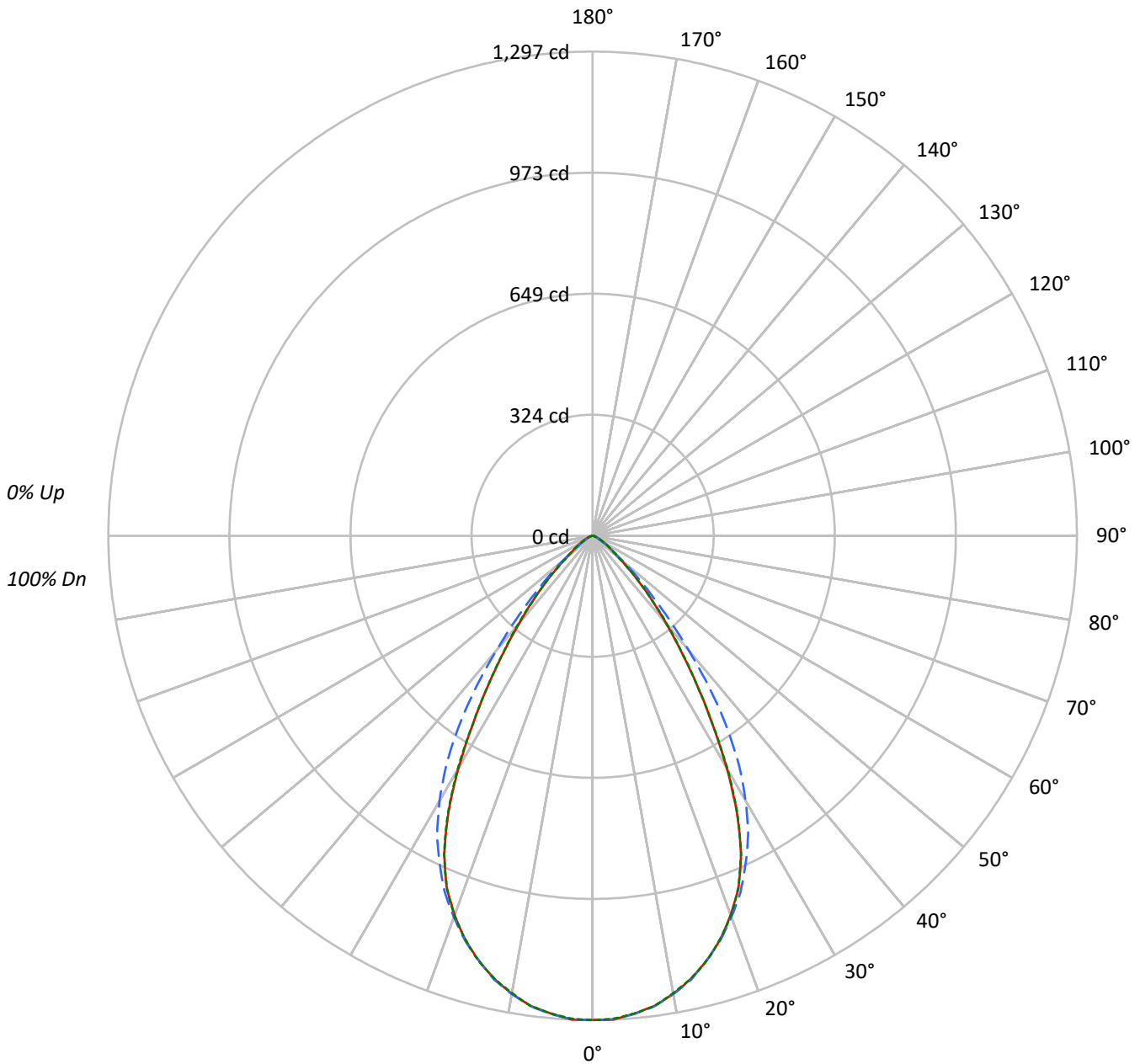
Lumens per Lamp: N/A
Luminaire Lumens: 1458.2 lumens
Efficiency: N/A
Efficacy: 72.9 lumens/watt
Spacing Criteria (0/90/45): 0.98 / 0.98 / 1.01
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 20
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				100				
1	113	110	107	105	110	108	105	103	104	102	100	100	98	97	96	95	94	92				92				
2	107	101	97	93	104	100	95	92	96	93	90	93	90	88	90	88	86	85				85				
3	101	93	88	84	98	92	87	83	89	85	82	87	83	80	85	82	79	77				77				
4	95	87	80	76	93	85	80	75	83	78	74	81	77	74	79	76	73	71				71				
5	89	80	74	69	88	79	73	69	77	72	68	76	71	68	74	70	67	65				65				
6	84	75	68	63	83	74	68	63	72	67	63	71	66	62	69	65	62	60				60				
7	80	70	63	59	78	69	63	58	68	62	58	66	61	58	65	61	57	56				56				
8	75	65	59	54	74	65	58	54	63	58	54	62	57	54	61	57	53	52				52				
9	72	61	55	50	70	61	54	50	60	54	50	59	54	50	58	53	50	48				48				
10	68	57	51	47	67	57	51	47	56	51	47	55	50	47	55	50	46	45				45				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	125667	125667	125667
5°	124902	125058	124902
10°	122559	122638	122323
15°	118205	118125	118285
20°	111433	112010	111680
25°	100552	103630	100552
30°	80306	91693	80932
35°	57334	74198	57429
40°	38710	50458	39317
45°	24592	29853	24702
50°	14001	15945	13519
55°	9205	7719	9070
60°	6374	4495	6200
65°	4401	3301	4401
70°	3172	2493	3172
75°	2096	2096	2096
80°	1339	1785	1785
85°	1778	1778	1778

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 29853 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	121.5	8.3
10°-20°	330.4	22.7
20°-30°	432.7	29.7
30°-40°	340.1	23.3
40°-50°	158.8	10.9
50°-60°	49.2	3.4
60°-70°	17.5	1.2
70°-80°	6.2	0.4
80°-90°	1.7	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°	884.6	60.7
0°-40°	1224.7	84.0
0°-60°	1432.7	98.3
0°-90°	1458.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1458.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1297	1297	1297	1297	1297	
5°	1284	1285	1286	1288	1284	121
15°	1179	1179	1178	1179	1179	330
25°	941	954	970	954	941	423
35°	485	529	627	535	486	306
45°	180	201	218	197	180	143
55°	54	51	46	50	54	51
65°	19	18	14	17	19	20
75°	6	6	6	6	6	6
85°	2	2	2	2	2	1
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1297.2	1297.2	1297.2	1297.2	1297.2
2.5°	1297.2	1295.6	1296.4	1294.8	1294.8
5°	1284.4	1285.2	1286.0	1287.6	1284.4
7.5°	1270.0	1271.6	1270.8	1270.8	1270.8
10°	1245.9	1246.7	1246.7	1246.7	1243.5
12.5°	1215.5	1217.1	1217.9	1215.5	1215.5
15°	1178.6	1178.6	1177.8	1178.6	1179.4
17.5°	1134.6	1137.0	1137.0	1134.6	1133.8
20°	1080.9	1084.9	1086.5	1083.3	1083.3
22.5°	1020.8	1024.8	1034.4	1026.4	1020.0
25°	940.7	953.5	969.5	954.3	940.7
27.5°	837.3	865.3	902.2	870.2	839.7
30°	717.9	763.6	819.7	766.0	723.5
32.5°	596.1	647.4	729.9	651.4	596.1
35°	484.8	528.8	627.4	535.2	485.6
37.5°	385.4	427.9	514.4	432.7	391.0
40°	306.1	340.5	399.0	339.7	310.9
42.5°	238.8	263.6	302.1	262.8	238.0
45°	179.5	201.1	217.9	197.1	180.3
47.5°	132.2	146.6	156.2	144.2	129.0
50°	92.9	103.4	105.8	101.0	89.7
52.5°	69.7	69.7	70.5	68.9	68.1
55°	54.5	51.3	45.7	50.5	53.7
57.5°	42.5	39.3	32.0	37.7	41.7
60°	32.9	29.6	23.2	28.8	32.0
62.5°	25.6	22.4	18.4	22.4	24.8
65°	19.2	17.6	14.4	16.8	19.2
67.5°	14.4	12.8	11.2	12.8	14.4
70°	11.2	10.4	8.8	9.6	11.2
72.5°	8.0	7.2	7.2	7.2	8.0
75°	5.6	5.6	5.6	5.6	5.6
77.5°	4.0	4.0	4.0	4.0	4.0
80°	2.4	2.4	3.2	3.2	3.2
82.5°	1.6	1.6	2.4	2.4	2.4
85°	1.6	1.6	1.6	1.6	1.6
87.5°	0.8	0.8	0.8	1.6	1.6
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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