

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: P837343

Luminaire Tested: HCSQ415D010-HM40525935-41SQC

Issue Date: 5/17/2024



Test Information

Test Method: LM-79-2019
Report Number: P837343
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: HCSQ415D010-HM40525935-41SQC
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, SPECULAR CLEAR TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 3500K CCT
Ballast/Driver: -

Summary

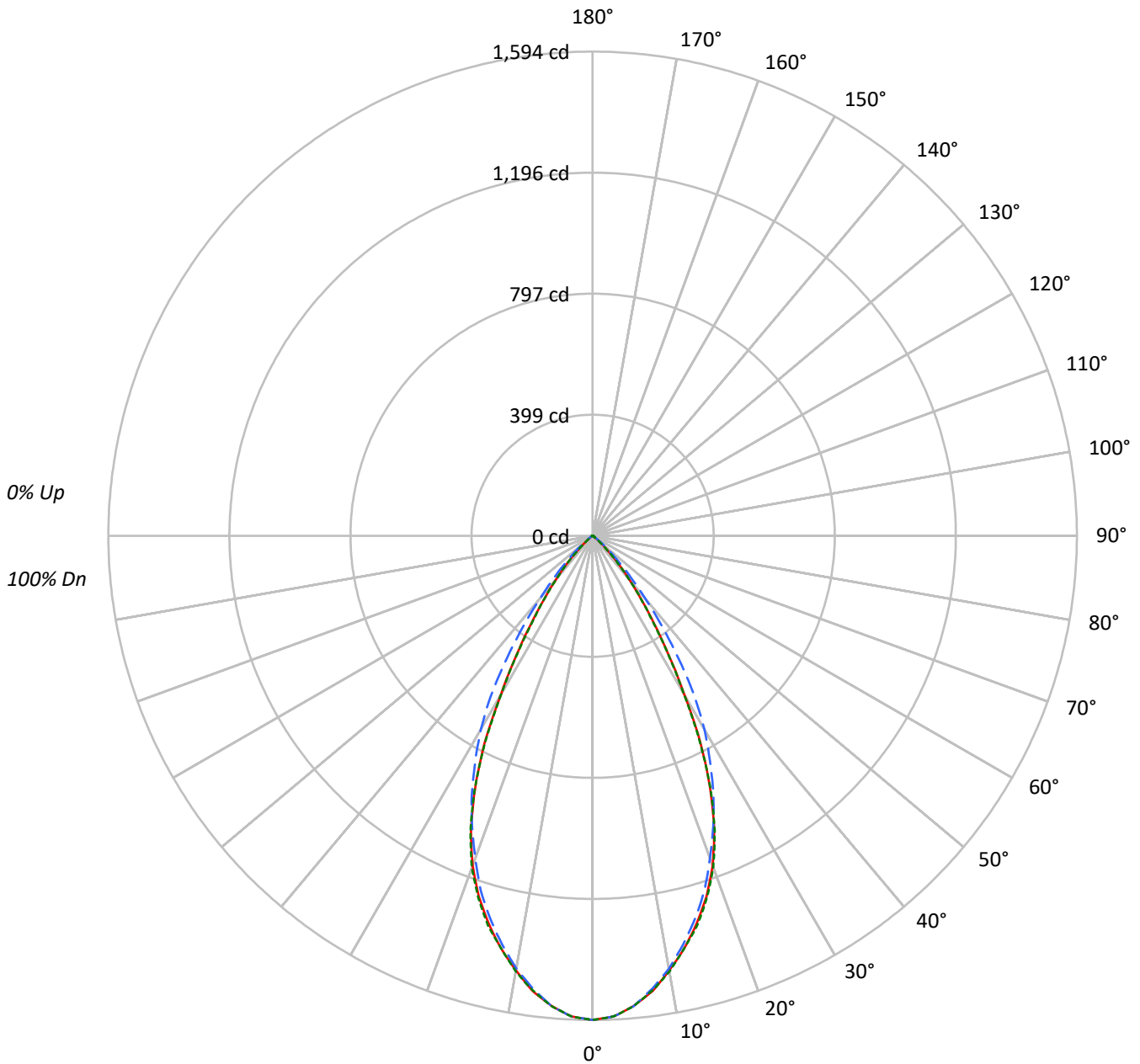
Lumens per Lamp: N/A
Luminaire Lumens: 1287.9 lumens
Efficiency: N/A
Efficacy: 92.0 lumens/watt
Spacing Criteria (0/90/45): 0.85 / 0.85 / 0.87
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 14
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	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	100	100	100	100		
	1	114	111	108	106	111	109	106	104	105	103	101	101	99	98	97	96	95	94	94	94	94	94	94		
	2	108	103	99	96	106	101	98	95	98	95	93	95	93	91	93	91	89	87	87	87	87	87	87		
	3	103	96	91	87	101	95	90	87	92	89	85	90	87	84	88	85	83	81	81	81	81	81	81		
	4	98	90	85	80	96	89	84	80	87	82	79	85	81	78	83	80	77	76	76	76	76	76	76		
	5	93	84	79	74	91	83	78	74	82	77	73	80	76	73	78	75	72	71	71	71	71	71	71		
	6	88	79	73	69	87	79	73	69	77	72	68	76	71	68	74	70	68	66	66	66	66	66	66		
	7	84	75	69	65	82	74	68	64	73	68	64	71	67	64	70	66	63	62	62	62	62	62	62		
	8	80	70	64	60	79	70	64	60	69	64	60	68	63	60	67	63	60	58	58	58	58	58	58		
	9	76	67	61	57	75	66	60	57	65	60	56	64	60	56	63	59	56	55	55	55	55	55	55		
	10	73	63	57	53	72	63	57	53	62	57	53	61	56	53	60	56	53	52	52	52	52	52	52		

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	154390	154390	154390
5°	151081	151149	151149
10°	142902	142263	143286
15°	132597	130782	133309
20°	119020	116361	119763
25°	97762	100594	98104
30°	67576	82196	67073
35°	41617	58055	40623
40°	23471	33942	23307
45°	10727	17016	10275
50°	2728	6827	2833
55°	1317	2077	1199
60°	872	756	1008
65°	734	596	734
70°	538	538	736
75°	487	487	711
80°	725	725	725
85°	667	1445	1445

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 17016 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	145.0	11.3
10°-20°	366.1	28.4
20°-30°	418.6	32.5
30°-40°	259.8	20.2
40°-50°	81.9	6.4
50°-60°	10.6	0.8
60°-70°	3.1	0.2
70°-80°	1.7	0.1
80°-90°	1.1	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°	929.7	72.2
0°-40°	1189.5	92.4
0°-60°	1282.0	99.5
0°-90°	1287.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1287.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1594	1594	1594	1594	1594	
5°	1554	1552	1554	1553	1554	145
15°	1322	1312	1304	1312	1329	369
25°	915	928	941	928	918	410
35°	352	406	491	396	344	226
45°	78	94	124	94	75	66
55°	8	8	12	8	7	8
65°	3	3	3	3	3	3
75°	1	1	1	1	2	2
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°	1593.7	1593.7	1593.7	1593.7	1593.7
2.5°	1584.0	1585.3	1584.0	1586.6	1584.0
5°	1553.6	1552.3	1554.3	1553.0	1554.3
7.5°	1512.2	1504.5	1503.8	1509.0	1509.6
10°	1452.7	1450.8	1446.2	1450.8	1456.6
12.5°	1391.9	1384.2	1377.7	1386.7	1391.9
15°	1322.1	1312.4	1304.0	1312.4	1329.2
17.5°	1245.1	1231.5	1224.4	1234.1	1250.3
20°	1154.5	1140.3	1128.7	1137.1	1161.7
22.5°	1045.9	1044.6	1036.8	1041.4	1050.4
25°	914.6	927.5	941.1	927.5	917.8
27.5°	770.3	805.3	836.3	795.6	764.5
30°	604.1	657.2	734.8	653.3	599.6
32.5°	467.0	522.6	621.6	515.5	463.1
35°	351.9	406.2	490.9	396.5	343.5
37.5°	258.7	299.5	373.2	296.9	258.7
40°	185.6	212.2	268.4	211.5	184.3
42.5°	128.7	146.2	187.6	144.9	124.8
45°	78.3	93.8	124.2	94.4	75.0
47.5°	41.4	59.5	78.3	56.9	41.4
50°	18.1	31.7	45.3	31.0	18.8
52.5°	9.7	13.6	24.6	13.6	9.7
55°	7.8	7.8	12.3	7.8	7.1
57.5°	5.8	5.8	6.5	5.8	5.8
60°	4.5	4.5	3.9	4.5	5.2
62.5°	3.9	3.9	3.2	3.9	3.9
65°	3.2	3.2	2.6	3.2	3.2
67.5°	2.6	2.6	2.6	2.6	2.6
70°	1.9	1.9	1.9	2.6	2.6
72.5°	1.9	1.9	1.9	1.9	1.9
75°	1.3	1.3	1.3	1.3	1.9
77.5°	1.3	1.3	1.3	1.3	1.3
80°	1.3	1.3	1.3	1.3	1.3
82.5°	0.6	1.3	1.3	1.3	1.3
85°	0.6	1.3	1.3	1.3	1.3
87.5°	0.6	0.6	1.3	1.3	1.3
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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