

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: P837461

Luminaire Tested: HCSQ430D010-HM43040930-41SQMB

Issue Date: 5/17/2024



Test Information

Test Method: LM-79-2019
Report Number: P837461
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2309-165-4)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 5/17/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCSQ430D010-HM43040930-41SQMB
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, MATTE BLACK TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 3000K CCT
Ballast/Driver: -

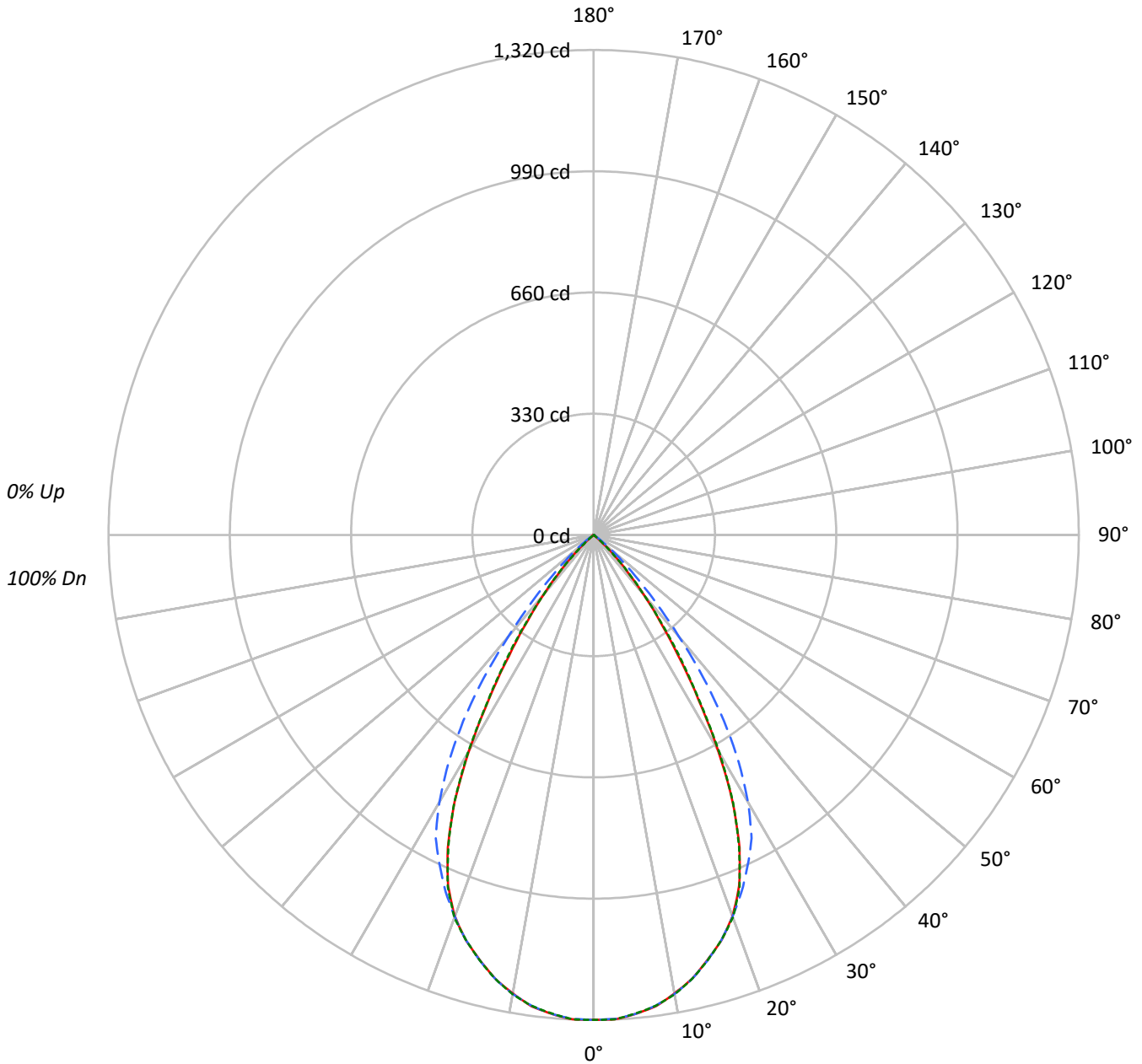
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1318.3 lumens
Efficiency: N/A
Efficacy: 46.7 lumens/watt
Spacing Criteria (0/90/45): 0.96 / 0.96 / 0.99
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 28.2
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					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	113	111	108	106	111	108	106	104	104	103	101	101	99	98	97	96	95	93	93	93	93	93	93		
	2	108	103	99	95	105	101	97	94	98	95	92	95	92	90	92	90	88	87	87	87	87	87	87		
	3	102	96	91	87	100	94	90	86	92	88	84	89	86	83	87	84	82	80	80	80	80	80	80		
	4	97	89	83	79	95	88	83	79	86	81	78	84	80	77	82	79	76	74	74	74	74	74	74		
	5	92	83	77	73	90	82	77	73	80	76	72	79	75	71	77	74	71	69	69	69	69	69	69		
	6	87	78	72	67	85	77	71	67	76	70	67	74	70	66	73	69	66	64	64	64	64	64	64		
	7	82	73	67	63	81	72	66	62	71	66	62	70	65	62	69	65	61	60	60	60	60	60	60		
	8	78	69	62	58	77	68	62	58	67	62	58	66	61	58	65	61	57	56	56	56	56	56	56		
	9	74	65	58	54	73	64	58	54	63	58	54	62	57	54	61	57	54	52	52	52	52	52	52		
	10	71	61	55	51	70	60	55	51	60	54	51	59	54	51	58	54	50	49	49	49	49	49	49		

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	127866	127866	127866
5°	127285	127285	127158
10°	124654	124772	124900
15°	120091	120221	120221
20°	113856	113979	114237
25°	100381	106003	99985
30°	75742	93953	76424
35°	47494	73122	49091
40°	26785	45526	26785
45°	11234	22975	11070
50°	919	8862	1100
55°	405	1858	405
60°	465	233	465
65°	275	275	275
70°	340	340	340
75°	449	449	449
80°	0	669	669
85°	0	1334	1334

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 22975 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	123.7	9.4
10°-20°	336.5	25.5
20°-30°	436.6	33.1
30°-40°	310.4	23.5
40°-50°	100.6	7.6
50°-60°	7.2	0.5
60°-70°	1.2	0.1
70°-80°	1.2	0.1
80°-90°	0.8	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°	896.8	68.0
0°-40°	1207.2	91.6
0°-60°	1315.0	99.7
0°-90°	1318.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1318.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1320	1320	1320	1320	1320	
5°	1309	1310	1309	1309	1308	124
15°	1197	1201	1199	1201	1199	336
25°	939	964	992	968	935	420
35°	402	475	618	480	415	257
45°	82	116	168	119	81	68
55°	2	2	11	2	2	3
65°	1	1	1	1	1	1
75°	1	1	1	1	1	1
85°	0	0	1	1	1	0
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1319.9	1319.9	1319.9	1319.9	1319.9
2.5°	1319.9	1319.9	1318.6	1318.6	1319.9
5°	1308.9	1310.1	1308.9	1308.9	1307.6
7.5°	1294.2	1294.2	1292.9	1292.9	1292.9
10°	1267.2	1268.4	1268.4	1268.4	1269.7
12.5°	1237.8	1237.8	1237.8	1237.8	1237.8
15°	1197.4	1201.1	1198.7	1201.1	1198.7
17.5°	1157.0	1157.0	1155.8	1158.3	1155.8
20°	1104.4	1104.4	1105.6	1108.1	1108.1
22.5°	1034.6	1046.8	1051.7	1049.3	1037.0
25°	939.1	963.6	991.7	968.5	935.4
27.5°	819.1	865.6	930.5	873.0	821.6
30°	677.1	746.9	839.9	749.3	683.2
32.5°	530.2	611.0	734.6	617.1	535.1
35°	401.6	475.1	618.3	480.0	415.1
37.5°	296.3	363.6	491.0	366.1	304.9
40°	211.8	260.8	360.0	265.7	211.8
42.5°	135.9	184.9	253.4	186.1	142.0
45°	82.0	116.3	167.7	118.8	80.8
47.5°	36.7	66.1	104.1	68.6	36.7
50°	6.1	26.9	58.8	28.2	7.3
52.5°	3.7	4.9	28.2	4.9	3.7
55°	2.4	2.4	11.0	2.4	2.4
57.5°	2.4	2.4	2.4	2.4	2.4
60°	2.4	1.2	1.2	1.2	2.4
62.5°	1.2	1.2	1.2	1.2	1.2
65°	1.2	1.2	1.2	1.2	1.2
67.5°	1.2	1.2	1.2	1.2	1.2
70°	1.2	1.2	1.2	1.2	1.2
72.5°	1.2	1.2	1.2	1.2	1.2
75°	1.2	1.2	1.2	1.2	1.2
77.5°	1.2	1.2	1.2	1.2	1.2
80°	0.0	1.2	1.2	1.2	1.2
82.5°	0.0	1.2	1.2	1.2	1.2
85°	0.0	0.0	1.2	1.2	1.2
87.5°	0.0	0.0	1.2	1.2	1.2
90°	0.0	0.0	0.0	0.0	0.0

Signify Classified - Internal
Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report



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Scaled Data Report





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

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