

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: P837456

Luminaire Tested: HCSQ430D010-HM43040927-41SQMB

Issue Date: 5/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P837456
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-HM43040927-41SQMB
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, MATTE BLACK TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 2700K CCT
Ballast/Driver: -

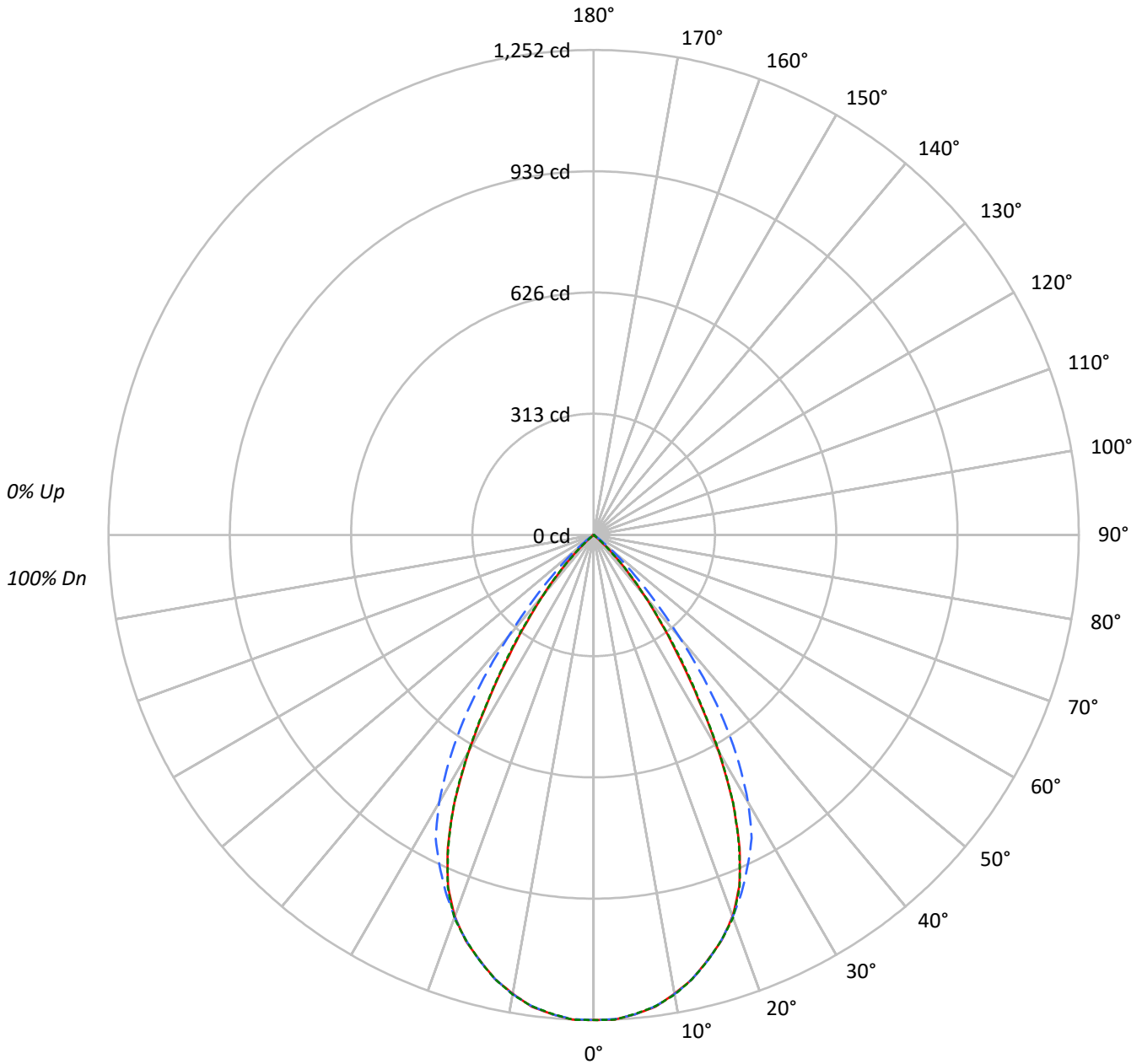
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1251.1 lumens
Efficiency: N/A
Efficacy: 44.4 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 (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					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°	121327	121327	121327
5°	120769	120769	120652
10°	118280	118398	118506
15°	113953	114073	114073
20°	108031	108155	108392
25°	95250	100584	94876
30°	71860	89154	72520
35°	45070	69385	46572
40°	25419	43199	25419
45°	10659	21811	10508
50°	874	8410	1055
55°	388	1773	388
60°	446	233	446
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: 21811 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	117.4	9.4
10°-20°	319.3	25.5
20°-30°	414.2	33.1
30°-40°	294.5	23.5
40°-50°	95.5	7.6
50°-60°	6.9	0.6
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°	850.9	68.0
0°-40°	1145.4	91.6
0°-60°	1247.8	99.7
0°-90°	1251.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1251.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1252	1252	1252	1252	1252	
5°	1242	1243	1242	1242	1241	117
15°	1136	1140	1137	1140	1137	319
25°	891	914	941	919	888	399
35°	381	451	587	455	394	244
45°	78	110	159	113	77	65
55°	2	2	10	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°	1252.4	1252.4	1252.4	1252.4	1252.4
2.5°	1252.4	1252.4	1251.2	1251.2	1252.4
5°	1241.9	1243.1	1241.9	1241.9	1240.7
7.5°	1228.0	1228.0	1226.8	1226.8	1226.8
10°	1202.4	1203.6	1203.6	1203.6	1204.7
12.5°	1174.5	1174.5	1174.5	1174.5	1174.5
15°	1136.2	1139.7	1137.4	1139.7	1137.4
17.5°	1097.9	1097.9	1096.7	1099.0	1096.7
20°	1047.9	1047.9	1049.1	1051.4	1051.4
22.5°	981.7	993.3	997.9	995.6	984.0
25°	891.1	914.3	941.0	918.9	887.6
27.5°	777.2	821.4	882.9	828.3	779.5
30°	642.4	708.7	797.0	711.0	648.3
32.5°	503.0	579.7	697.0	585.5	507.7
35°	381.1	450.8	586.7	455.4	393.8
37.5°	281.1	345.0	465.9	347.4	289.3
40°	201.0	247.5	341.6	252.1	201.0
42.5°	129.0	175.4	240.5	176.6	134.8
45°	77.8	110.4	159.2	112.7	76.7
47.5°	34.9	62.7	98.7	65.1	34.9
50°	5.8	25.6	55.8	26.7	7.0
52.5°	3.5	4.6	26.7	4.6	3.5
55°	2.3	2.3	10.5	2.3	2.3
57.5°	2.3	2.3	2.3	2.3	2.3
60°	2.3	1.2	1.2	1.2	2.3
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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