

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: P837518

Luminaire Tested: HCSQ440D010-HM43040830-41SQC

Issue Date: 5/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P837518
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: HCSQ440D010-HM43040830-41SQC
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, SPECULAR CLEAR TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 3000K CCT
Ballast/Driver: -

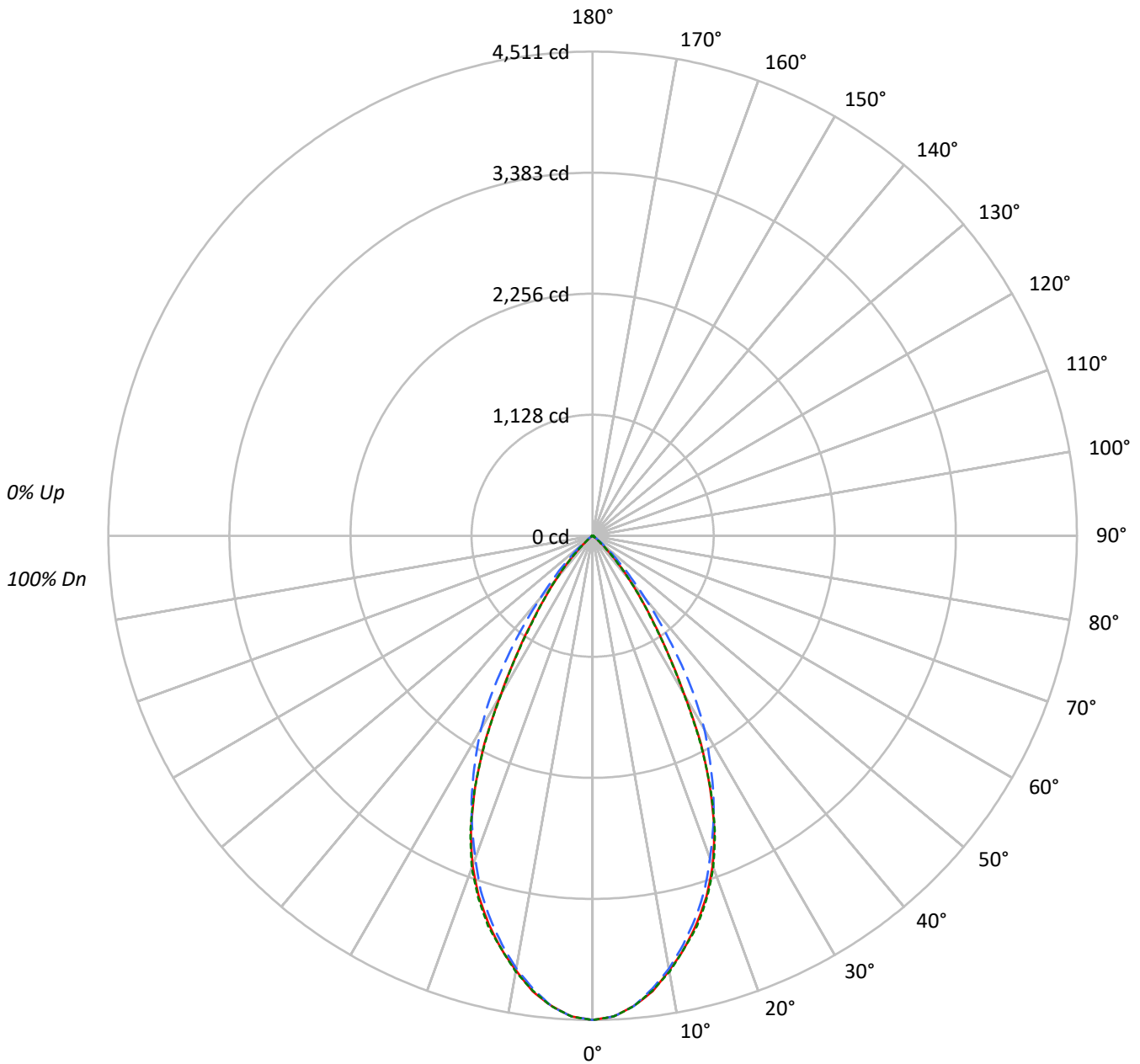
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3645.3 lumens
Efficiency: N/A
Efficacy: 88.9 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): 41
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								
1	114	111	108	106	111	109	106	104	105	103	101	101	99	98	97	96	95	94								
2	108	103	99	96	106	101	98	95	98	95	93	95	93	91	93	91	89	87								
3	103	96	91	87	101	95	90	87	92	89	85	90	87	84	88	85	83	81								
4	98	90	85	80	96	89	84	80	87	82	79	85	81	78	83	80	77	76								
5	93	84	79	74	91	83	78	74	82	77	73	80	76	73	78	75	72	71								
6	88	79	73	69	87	79	73	69	77	72	68	76	71	68	74	70	68	66								
7	84	75	69	65	82	74	68	64	73	68	64	71	67	64	70	66	63	62								
8	80	70	64	60	79	70	64	60	69	64	60	68	63	60	67	63	60	58								
9	76	67	61	57	75	66	60	57	65	60	56	64	60	56	63	59	56	55								
10	73	63	57	53	72	63	57	53	62	57	53	61	56	53	60	56	53	52								

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	436995	436995	436995
5°	427627	427802	427802
10°	404477	402677	405559
15°	375296	370151	377312
20°	336886	329340	338969
25°	276696	284723	277679
30°	191273	232640	189841
35°	117778	164327	114964
40°	66443	96073	65988
45°	30346	48156	29099
50°	7731	19306	8003
55°	3716	5878	3395
60°	2480	2131	2829
65°	2109	1673	2109
70°	1558	1558	2068
75°	1385	1385	2059
80°	2064	2064	2064
85°	2001	4113	4113

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 48156 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	410.3	11.3
10°-20°	1036.3	28.4
20°-30°	1184.7	32.5
30°-40°	735.4	20.2
40°-50°	231.7	6.4
50°-60°	30.0	0.8
60°-70°	8.9	0.2
70°-80°	4.8	0.1
80°-90°	3.2	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°	2631.3	72.2
0°-40°	3366.7	92.4
0°-60°	3628.5	99.5
0°-90°	3645.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3645.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4511	4511	4511	4511	4511	
5°	4397	4394	4399	4396	4399	411
15°	3742	3714	3691	3714	3762	1043
25°	2589	2625	2664	2625	2598	1161
35°	996	1150	1390	1122	972	640
45°	222	266	352	267	212	187
55°	22	22	35	22	20	22
65°	9	9	7	9	9	9
75°	4	4	4	4	6	5
85°	2	4	4	4	4	2
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4510.9	4510.9	4510.9	4510.9	4510.9
2.5°	4483.4	4487.1	4483.4	4490.7	4483.4
5°	4397.4	4393.7	4399.2	4395.5	4399.2
7.5°	4280.2	4258.2	4256.4	4271.1	4272.9
10°	4111.8	4106.3	4093.5	4106.3	4122.8
12.5°	3939.7	3917.7	3899.4	3925.0	3939.7
15°	3742.0	3714.5	3690.7	3714.5	3762.1
17.5°	3524.1	3485.7	3465.5	3493.0	3538.8
20°	3267.8	3227.5	3194.6	3218.4	3288.0
22.5°	2960.3	2956.6	2934.6	2947.4	2973.1
25°	2588.6	2625.2	2663.7	2625.2	2597.8
27.5°	2180.4	2279.2	2367.1	2251.8	2163.9
30°	1709.9	1860.0	2079.7	1849.0	1697.1
32.5°	1321.8	1479.2	1759.3	1459.1	1310.8
35°	995.9	1149.7	1389.5	1122.2	972.1
37.5°	732.3	847.6	1056.3	840.3	732.3
40°	525.4	600.5	759.7	598.6	521.8
42.5°	364.3	413.7	530.9	410.1	353.3
45°	221.5	265.5	351.5	267.3	212.4
47.5°	117.2	168.4	221.5	161.1	117.2
50°	51.3	89.7	128.1	87.9	53.1
52.5°	27.5	38.4	69.6	38.4	27.5
55°	22.0	22.0	34.8	22.0	20.1
57.5°	16.5	16.5	18.3	16.5	16.5
60°	12.8	12.8	11.0	12.8	14.6
62.5°	11.0	11.0	9.2	11.0	11.0
65°	9.2	9.2	7.3	9.2	9.2
67.5°	7.3	7.3	7.3	7.3	7.3
70°	5.5	5.5	5.5	7.3	7.3
72.5°	5.5	5.5	5.5	5.5	5.5
75°	3.7	3.7	3.7	3.7	5.5
77.5°	3.7	3.7	3.7	3.7	3.7
80°	3.7	3.7	3.7	3.7	3.7
82.5°	1.8	3.7	3.7	3.7	3.7
85°	1.8	3.7	3.7	3.7	3.7
87.5°	1.8	1.8	3.7	3.7	3.7
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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