

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: P837677

Luminaire Tested: HCSQ460D010-HM44560827-41SQMW

Issue Date: 5/17/2024



Test Information

Test Method: LM-79-2019
Report Number: P837677
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2309-165-3)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 5/17/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCSQ460D010-HM44560827-41SQMW
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, MATTE WHITE TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 2700K CCT
Ballast/Driver: -

Summary

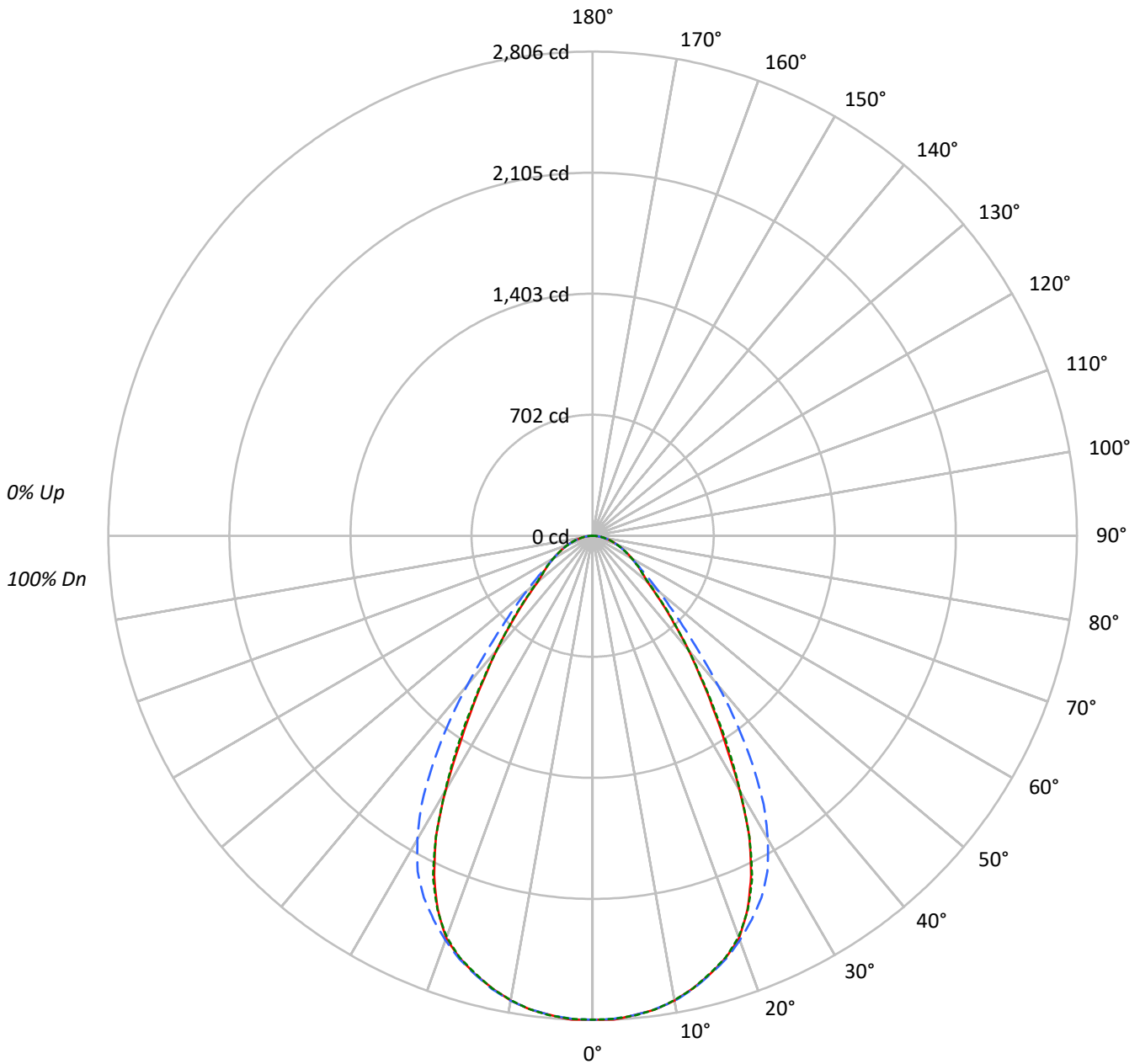
Lumens per Lamp: N/A
Luminaire Lumens: 4069.5 lumens
Efficiency: N/A
Efficacy: 72.7 lumens/watt
Spacing Criteria (0/90/45): 1.03 / 1.03 / 1.07
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 56
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	0					
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100								
1	111	108	105	102	109	106	103	100	101	99	97	98	96	94	94	93	91	89								
2	104	98	92	88	102	96	91	87	92	88	85	89	86	83	86	84	81	79								
3	97	89	82	77	95	87	81	76	84	79	75	82	78	74	79	76	73	71								
4	91	81	74	69	89	80	73	68	77	72	67	75	70	66	73	69	66	64								
5	85	74	67	62	83	73	66	61	71	65	61	70	64	60	68	63	60	58								
6	79	69	61	56	78	68	61	56	66	60	55	64	59	55	63	58	54	53								
7	75	63	56	51	73	63	56	51	61	55	50	60	54	50	59	54	50	48								
8	70	59	52	47	69	58	51	47	57	51	46	56	50	46	55	50	46	44								
9	66	55	48	43	65	54	48	43	53	47	43	52	47	43	51	46	43	41								
10	63	51	45	40	62	51	44	40	50	44	40	49	44	40	48	43	40	38								

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	271658	271658	271658
5°	271208	271208	271422
10°	268992	269199	268776
15°	263760	263981	263319
20°	255845	257196	254948
25°	232198	247333	233833
30°	190602	227158	191329
35°	143264	190687	145333
40°	109111	142181	108833
45°	81489	100902	82982
50°	62063	75205	63374
55°	55939	58878	55939
60°	51073	50666	50666
65°	46441	46441	46441
70°	43195	42572	42572
75°	39975	39152	39975
80°	36486	35258	36486
85°	31456	31456	31456

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 100902 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	264.5	6.5
10°-20°	740.4	18.2
20°-30°	1018.2	25.0
30°-40°	866.8	21.3
40°-50°	523.6	12.9
50°-60°	308.6	7.6
60°-70°	202.4	5.0
70°-80°	112.2	2.8
80°-90°	32.8	0.8
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°	2023.1	49.7
0°-40°	2889.9	71.0
0°-60°	3722.0	91.5
0°-90°	4069.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4069.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2804	2804	2804	2804	2804	
5°	2789	2791	2789	2787	2791	265
15°	2630	2636	2632	2630	2626	740
25°	2172	2240	2314	2244	2188	982
35°	1211	1334	1612	1370	1229	767
45°	595	658	736	665	606	468
55°	331	338	349	338	331	298
65°	203	205	203	203	203	203
75°	107	107	105	105	107	113
85°	28	28	28	28	28	33
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2804.2	2804.2	2804.2	2804.2	2804.2
2.5°	2806.4	2799.8	2802.0	2799.8	2802.0
5°	2788.9	2791.1	2788.9	2786.8	2791.1
7.5°	2769.3	2767.1	2767.1	2765.0	2769.3
10°	2734.5	2730.1	2736.6	2732.3	2732.3
12.5°	2686.5	2693.1	2690.9	2690.9	2686.5
15°	2629.9	2636.4	2632.1	2629.9	2625.5
17.5°	2564.5	2568.9	2571.0	2562.3	2562.3
20°	2481.7	2490.4	2494.8	2479.5	2473.0
22.5°	2344.4	2383.7	2407.6	2381.5	2348.8
25°	2172.3	2239.9	2313.9	2244.2	2187.6
27.5°	1965.3	2061.2	2194.1	2076.4	1965.3
30°	1703.9	1845.5	2030.7	1860.7	1710.4
32.5°	1433.7	1584.0	1843.3	1610.2	1464.2
35°	1211.4	1333.5	1612.4	1370.5	1228.9
37.5°	1019.7	1124.3	1370.5	1148.3	1030.6
40°	862.8	945.6	1124.3	956.5	860.6
42.5°	712.5	790.9	910.8	801.8	721.2
45°	594.8	658.0	736.5	664.6	605.7
47.5°	494.6	546.9	603.5	546.9	501.1
50°	411.8	453.2	499.0	453.2	420.5
52.5°	368.2	381.3	411.8	383.5	368.2
55°	331.2	337.7	348.6	337.7	331.2
57.5°	296.3	300.7	298.5	298.5	296.3
60°	263.6	265.8	261.5	263.6	261.5
62.5°	233.1	233.1	228.8	233.1	231.0
65°	202.6	204.8	202.6	202.6	202.6
67.5°	176.5	176.5	174.3	176.5	176.5
70°	152.5	152.5	150.3	152.5	150.3
72.5°	128.6	128.6	126.4	126.4	126.4
75°	106.8	106.8	104.6	104.6	106.8
77.5°	85.0	85.0	82.8	85.0	85.0
80°	65.4	65.4	63.2	65.4	65.4
82.5°	45.8	45.8	45.8	47.9	47.9
85°	28.3	28.3	28.3	28.3	28.3
87.5°	13.1	13.1	13.1	13.1	15.3
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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