

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: P837498

Luminaire Tested: HCSQ435D010-HM43040930-41SQC

Issue Date: 5/17/2024



Test Information

Test Method: LM-79-2019
Report Number: P837498
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: HCSQ435D010-HM43040930-41SQC
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, SPECULAR CLEAR TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 3000K CCT
Ballast/Driver: -

Summary

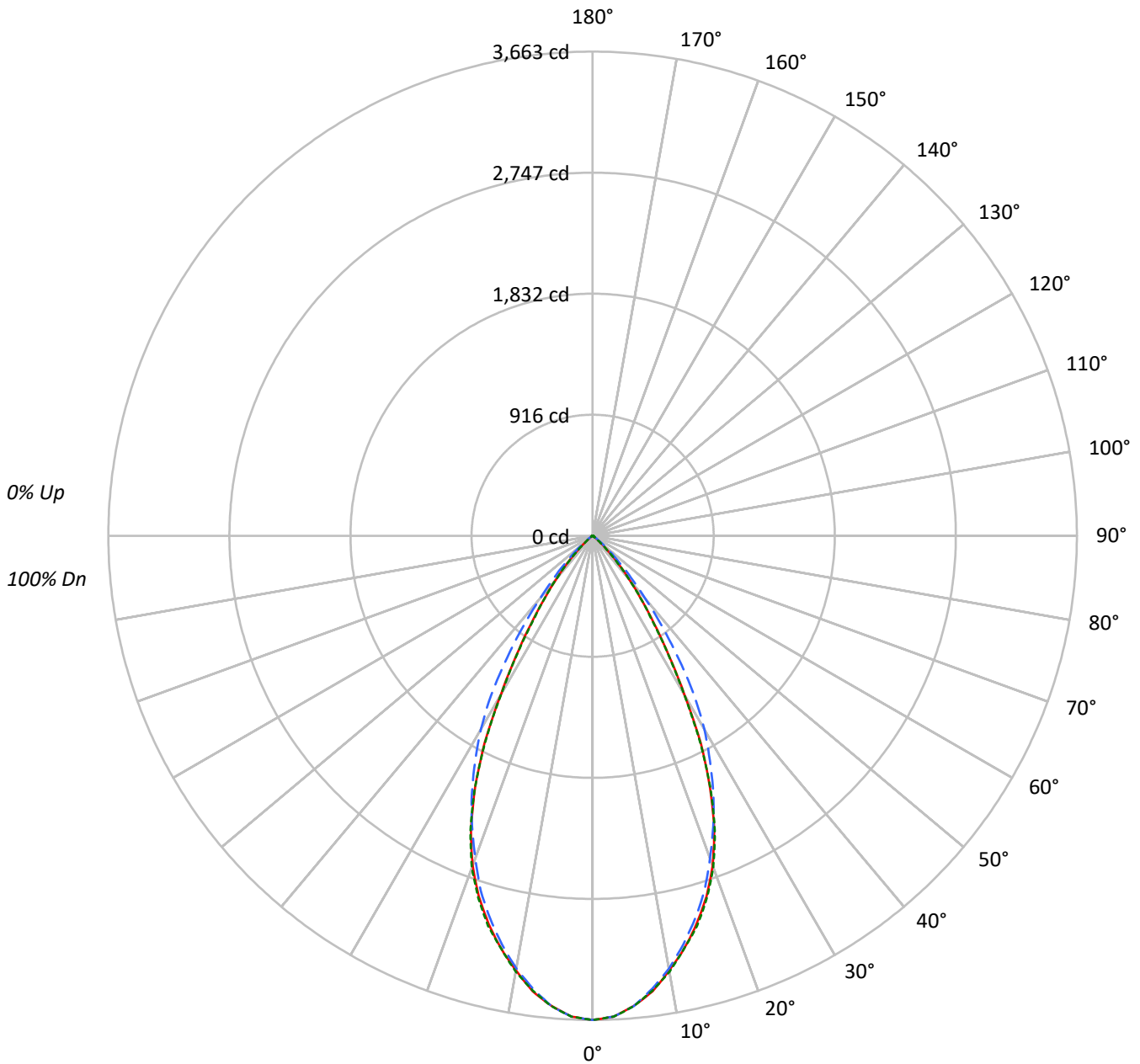
Lumens per Lamp: N/A
Luminaire Lumens: 2960.3 lumens
Efficiency: N/A
Efficacy: 87.1 lumens/watt
Spacing Criteria (0/90/45): 0.85 / 0.85 / 0.87
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 34
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									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	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°	354874	354874	354874
5°	347264	347409	347409
10°	328467	327001	329342
15°	304770	300598	306405
20°	273577	267453	275268
25°	224705	231214	225496
30°	155332	188924	154168
35°	95651	133448	93357
40°	53961	78027	53582
45°	24647	39101	23633
50°	6270	15689	6496
55°	3006	4763	2770
60°	2015	1724	2306
65°	1696	1352	1696
70°	1275	1275	1671
75°	1123	1123	1684
80°	1674	1674	1674
85°	1667	3335	3335

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 39101 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	333.2	11.3
10°-20°	841.6	28.4
20°-30°	962.1	32.5
30°-40°	597.2	20.2
40°-50°	188.2	6.4
50°-60°	24.4	0.8
60°-70°	7.2	0.2
70°-80°	3.9	0.1
80°-90°	2.6	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°	2136.9	72.2
0°-40°	2734.1	92.4
0°-60°	2946.6	99.5
0°-90°	2960.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2960.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3663	3663	3663	3663	3663	
5°	3571	3568	3572	3570	3572	334
15°	3039	3016	2997	3016	3055	847
25°	2102	2132	2163	2132	2110	943
35°	809	934	1128	911	789	520
45°	180	216	285	217	172	152
55°	18	18	28	18	16	18
65°	7	7	6	7	7	7
75°	3	3	3	3	4	4
85°	2	3	3	3	3	2
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3663.2	3663.2	3663.2	3663.2	3663.2
2.5°	3640.9	3643.9	3640.9	3646.8	3640.9
5°	3571.0	3568.0	3572.5	3569.5	3572.5
7.5°	3475.9	3458.0	3456.5	3468.4	3469.9
10°	3339.1	3334.6	3324.2	3334.6	3348.0
12.5°	3199.4	3181.5	3166.6	3187.5	3199.4
15°	3038.8	3016.5	2997.2	3016.5	3055.1
17.5°	2861.9	2830.7	2814.3	2836.6	2873.8
20°	2653.7	2621.0	2594.3	2613.6	2670.1
22.5°	2404.0	2401.0	2383.2	2393.6	2414.4
25°	2102.2	2131.9	2163.1	2131.9	2109.6
27.5°	1770.6	1850.9	1922.3	1828.6	1757.3
30°	1388.6	1510.5	1688.9	1501.6	1378.2
32.5°	1073.4	1201.2	1428.7	1184.9	1064.5
35°	808.8	933.6	1128.4	911.3	789.4
37.5°	594.7	688.3	857.8	682.4	594.7
40°	426.7	487.6	617.0	486.1	423.7
42.5°	295.9	336.0	431.1	333.0	286.9
45°	179.9	215.6	285.4	217.1	172.5
47.5°	95.1	136.8	179.9	130.8	95.1
50°	41.6	72.8	104.1	71.4	43.1
52.5°	22.3	31.2	56.5	31.2	22.3
55°	17.8	17.8	28.2	17.8	16.4
57.5°	13.4	13.4	14.9	13.4	13.4
60°	10.4	10.4	8.9	10.4	11.9
62.5°	8.9	8.9	7.4	8.9	8.9
65°	7.4	7.4	5.9	7.4	7.4
67.5°	5.9	5.9	5.9	5.9	5.9
70°	4.5	4.5	4.5	5.9	5.9
72.5°	4.5	4.5	4.5	4.5	4.5
75°	3.0	3.0	3.0	3.0	4.5
77.5°	3.0	3.0	3.0	3.0	3.0
80°	3.0	3.0	3.0	3.0	3.0
82.5°	1.5	3.0	3.0	3.0	3.0
85°	1.5	3.0	3.0	3.0	3.0
87.5°	1.5	1.5	3.0	3.0	3.0
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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