

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: P837463

Luminaire Tested: HCSQ430D010-HM43040935-41SQC

Issue Date: 5/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P837463
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: HCSQ430D010-HM43040935-41SQC
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, SPECULAR CLEAR TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 3500K CCT
Ballast/Driver: -

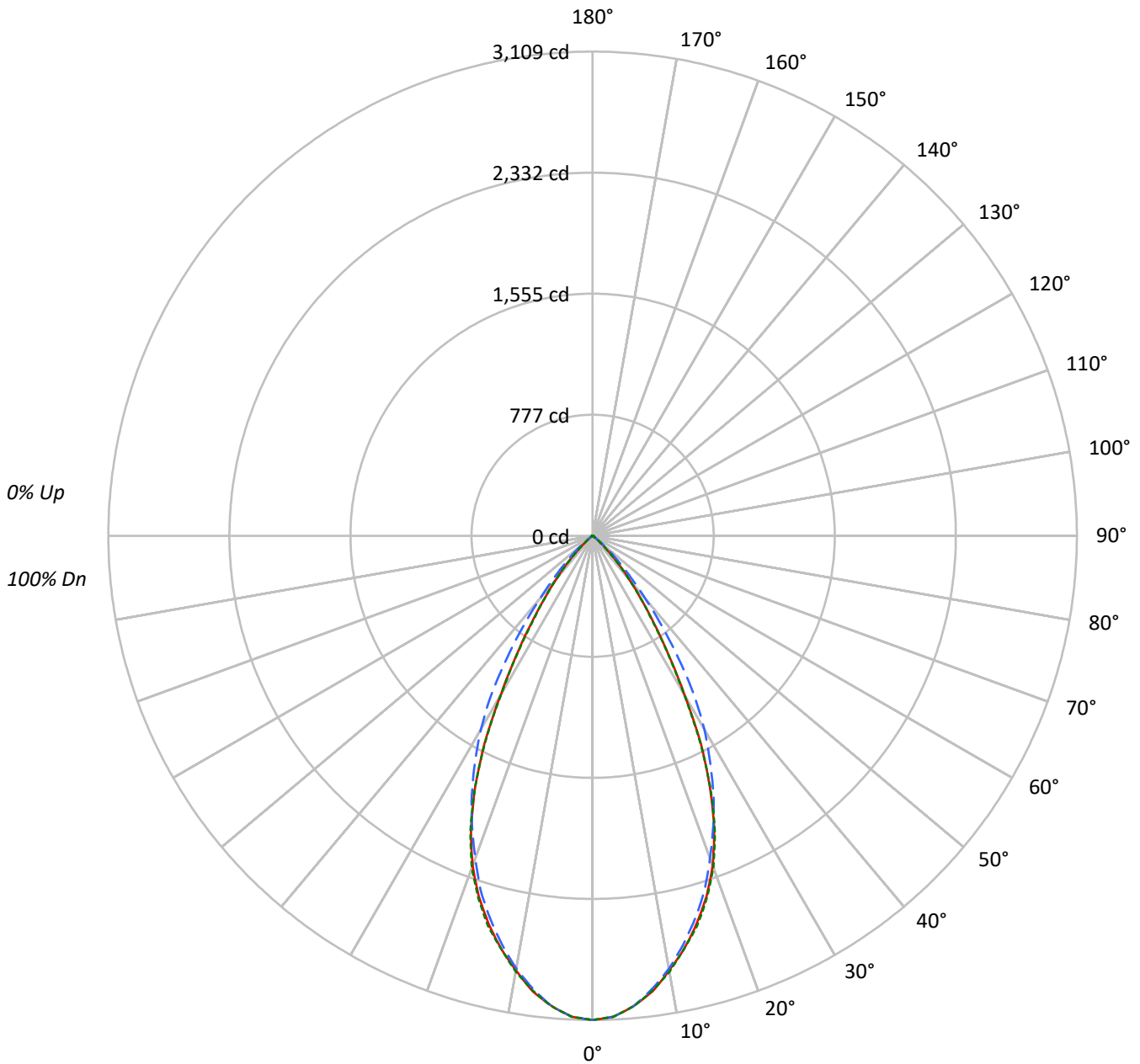
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2512.7 lumens
Efficiency: N/A
Efficacy: 89.1 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): 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									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°	301224	301224	301224
5°	294770	294887	294887
10°	278810	277570	279557
15°	258695	255145	260089
20°	232216	227020	233649
25°	190735	196261	191408
30°	131841	160366	130856
35°	81188	113272	79248
40°	45804	66228	45476
45°	20920	33196	20057
50°	5320	13308	5516
55°	2550	4054	2348
60°	1705	1473	1957
65°	1444	1146	1444
70°	1076	1076	1416
75°	936	936	1422
80°	1395	1395	1395
85°	1445	2779	2779

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 33196 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	282.9	11.3
10°-20°	714.3	28.4
20°-30°	816.6	32.5
30°-40°	506.9	20.2
40°-50°	159.7	6.4
50°-60°	20.7	0.8
60°-70°	6.1	0.2
70°-80°	3.3	0.1
80°-90°	2.2	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°	1813.8	72.2
0°-40°	2320.7	92.4
0°-60°	2501.2	99.5
0°-90°	2512.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2512.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3109	3109	3109	3109	3109	
5°	3031	3029	3032	3030	3032	283
15°	2579	2560	2544	2560	2593	719
25°	1784	1810	1836	1810	1791	801
35°	686	792	958	774	670	441
45°	153	183	242	184	146	129
55°	15	15	24	15	14	15
65°	6	6	5	6	6	6
75°	2	2	2	2	4	3
85°	1	2	2	2	2	1
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3109.4	3109.4	3109.4	3109.4	3109.4
2.5°	3090.5	3093.0	3090.5	3095.5	3090.5
5°	3031.2	3028.6	3032.4	3029.9	3032.4
7.5°	2950.4	2935.2	2934.0	2944.1	2945.3
10°	2834.3	2830.5	2821.7	2830.5	2841.9
12.5°	2715.7	2700.5	2687.9	2705.6	2715.7
15°	2579.4	2560.5	2544.0	2560.5	2593.3
17.5°	2429.2	2402.7	2388.8	2407.8	2439.3
20°	2252.5	2224.8	2202.1	2218.5	2266.4
22.5°	2040.5	2038.0	2022.9	2031.7	2049.4
25°	1784.4	1809.6	1836.1	1809.6	1790.7
27.5°	1503.0	1571.1	1631.7	1552.2	1491.6
30°	1178.6	1282.1	1433.6	1274.5	1169.8
32.5°	911.1	1019.6	1212.7	1005.8	903.5
35°	686.5	792.5	957.8	773.6	670.1
37.5°	504.8	584.3	728.1	579.2	504.8
40°	362.2	413.9	523.7	412.7	359.6
42.5°	251.1	285.2	366.0	282.7	243.6
45°	152.7	183.0	242.3	184.2	146.4
47.5°	80.8	116.1	152.7	111.0	80.8
50°	35.3	61.8	88.3	60.6	36.6
52.5°	18.9	26.5	48.0	26.5	18.9
55°	15.1	15.1	24.0	15.1	13.9
57.5°	11.4	11.4	12.6	11.4	11.4
60°	8.8	8.8	7.6	8.8	10.1
62.5°	7.6	7.6	6.3	7.6	7.6
65°	6.3	6.3	5.0	6.3	6.3
67.5°	5.0	5.0	5.0	5.0	5.0
70°	3.8	3.8	3.8	5.0	5.0
72.5°	3.8	3.8	3.8	3.8	3.8
75°	2.5	2.5	2.5	2.5	3.8
77.5°	2.5	2.5	2.5	2.5	2.5
80°	2.5	2.5	2.5	2.5	2.5
82.5°	1.3	2.5	2.5	2.5	2.5
85°	1.3	2.5	2.5	2.5	2.5
87.5°	1.3	1.3	2.5	2.5	2.5
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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