

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: P837419

Luminaire Tested: HCSQ425D010-HM40525930-41SQH

Issue Date: 5/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P837419
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2309-165-2)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 5/17/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCSQ425D010-HM40525930-41SQH
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, HAZE TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 3000K CCT
Ballast/Driver: -

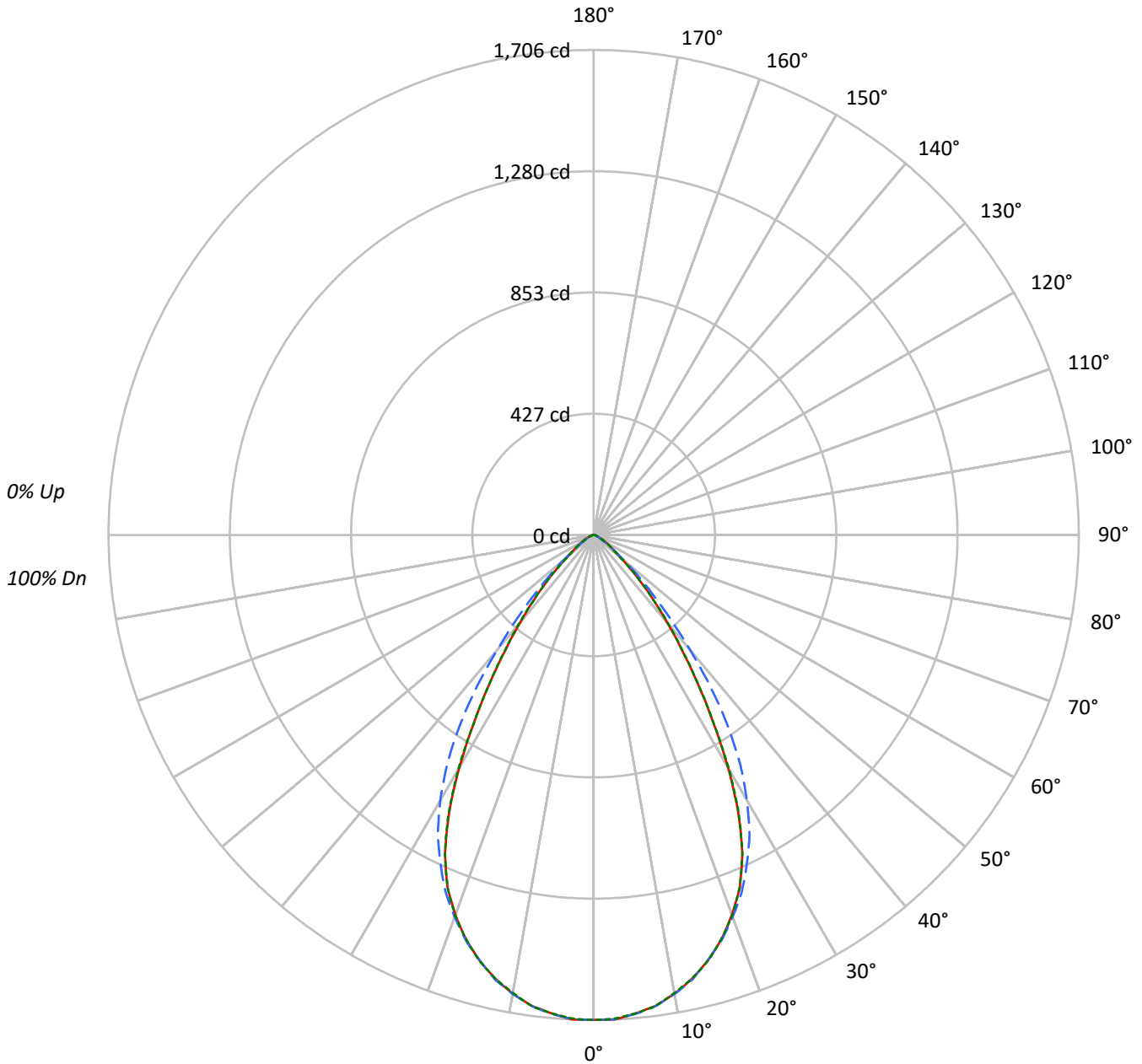
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1918.1 lumens
Efficiency: N/A
Efficacy: 69.2 lumens/watt
Spacing Criteria (0/90/45): 0.98 / 0.98 / 1.01
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 27.7
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	0					
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100								
1	113	110	107	105	110	108	105	103	104	102	100	100	98	97	96	95	94	92								
2	107	101	97	93	104	100	95	92	96	93	90	93	90	88	90	88	86	85								
3	101	93	88	84	98	92	87	83	89	85	82	87	83	80	85	82	79	77								
4	95	87	80	76	93	85	80	75	83	78	74	81	77	74	79	76	73	71								
5	89	80	74	69	88	79	73	69	77	72	68	76	71	68	74	70	67	65								
6	84	75	68	63	83	74	68	63	72	67	63	71	66	62	69	65	62	60								
7	80	70	63	59	78	69	63	58	68	62	58	66	61	58	65	61	57	56								
8	75	65	59	54	74	65	58	54	63	58	54	62	57	54	61	57	53	52								
9	72	61	55	50	70	61	54	50	60	54	50	59	54	50	58	53	50	48								
10	68	57	51	47	67	57	51	47	56	51	47	55	50	47	55	50	46	45								

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	165308	165308	165308
5°	164296	164500	164296
10°	161218	161327	160904
15°	155494	155384	155594
20°	146577	147340	146897
25°	132255	136317	132255
30°	105631	120610	106459
35°	75405	97591	75535
40°	50914	66380	51710
45°	32346	39279	32483
50°	18432	20964	17784
55°	12110	10151	11924
60°	8370	5929	8176
65°	5799	4355	5799
70°	4192	3286	4192
75°	2770	2770	2770
80°	1785	2343	2343
85°	2334	2334	2334

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 39279 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	159.9	8.3
10°-20°	434.7	22.7
20°-30°	569.1	29.7
30°-40°	447.3	23.3
40°-50°	208.9	10.9
50°-60°	64.7	3.4
60°-70°	23.1	1.2
70°-80°	8.1	0.4
80°-90°	2.3	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°	1163.6	60.7
0°-40°	1610.9	84.0
0°-60°	1884.6	98.3
0°-90°	1918.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1918.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1706	1706	1706	1706	1706	
5°	1690	1690	1692	1694	1690	160
15°	1550	1550	1549	1550	1551	434
25°	1237	1254	1275	1255	1237	556
35°	638	696	825	704	639	402
45°	236	264	287	259	237	188
55°	72	68	60	66	71	67
65°	25	23	19	22	25	26
75°	7	7	7	7	7	8
85°	2	2	2	2	2	2
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1706.4	1706.4	1706.4	1706.4	1706.4
2.5°	1706.4	1704.2	1705.3	1703.2	1703.2
5°	1689.5	1690.5	1691.6	1693.7	1689.5
7.5°	1670.5	1672.6	1671.6	1671.6	1671.6
10°	1638.9	1640.0	1640.0	1640.0	1635.7
12.5°	1598.9	1601.0	1602.0	1598.9	1598.9
15°	1550.4	1550.4	1549.3	1550.4	1551.4
17.5°	1492.4	1495.6	1495.6	1492.4	1491.3
20°	1421.8	1427.1	1429.2	1424.9	1424.9
22.5°	1342.7	1348.0	1360.7	1350.1	1341.7
25°	1237.3	1254.2	1275.3	1255.3	1237.3
27.5°	1101.4	1138.3	1186.8	1144.6	1104.5
30°	944.3	1004.4	1078.2	1007.6	951.7
32.5°	784.1	851.6	960.2	856.9	784.1
35°	637.6	695.6	825.2	704.0	638.7
37.5°	507.0	562.8	676.6	569.1	514.3
40°	402.6	447.9	524.9	446.9	408.9
42.5°	314.1	346.8	397.3	345.7	313.0
45°	236.1	264.5	286.7	259.3	237.1
47.5°	173.9	192.9	205.5	189.7	169.7
50°	122.3	136.0	139.1	132.8	118.0
52.5°	91.7	91.7	92.7	90.6	89.6
55°	71.7	67.5	60.1	66.4	70.6
57.5°	55.9	51.6	42.2	49.5	54.8
60°	43.2	39.0	30.6	37.9	42.2
62.5°	33.7	29.5	24.2	29.5	32.7
65°	25.3	23.2	19.0	22.1	25.3
67.5°	19.0	16.9	14.8	16.9	19.0
70°	14.8	13.7	11.6	12.6	14.8
72.5°	10.5	9.5	9.5	9.5	10.5
75°	7.4	7.4	7.4	7.4	7.4
77.5°	5.3	5.3	5.3	5.3	5.3
80°	3.2	3.2	4.2	4.2	4.2
82.5°	2.1	2.1	3.2	3.2	3.2
85°	2.1	2.1	2.1	2.1	2.1
87.5°	1.1	1.1	1.1	2.1	2.1
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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