

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: P837429

Luminaire Tested: HCSQ425D010-HM40525940-41SQH

Issue Date: 5/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P837429
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-HM40525940-41SQH
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, HAZE TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 4000K CCT
Ballast/Driver: -

Summary

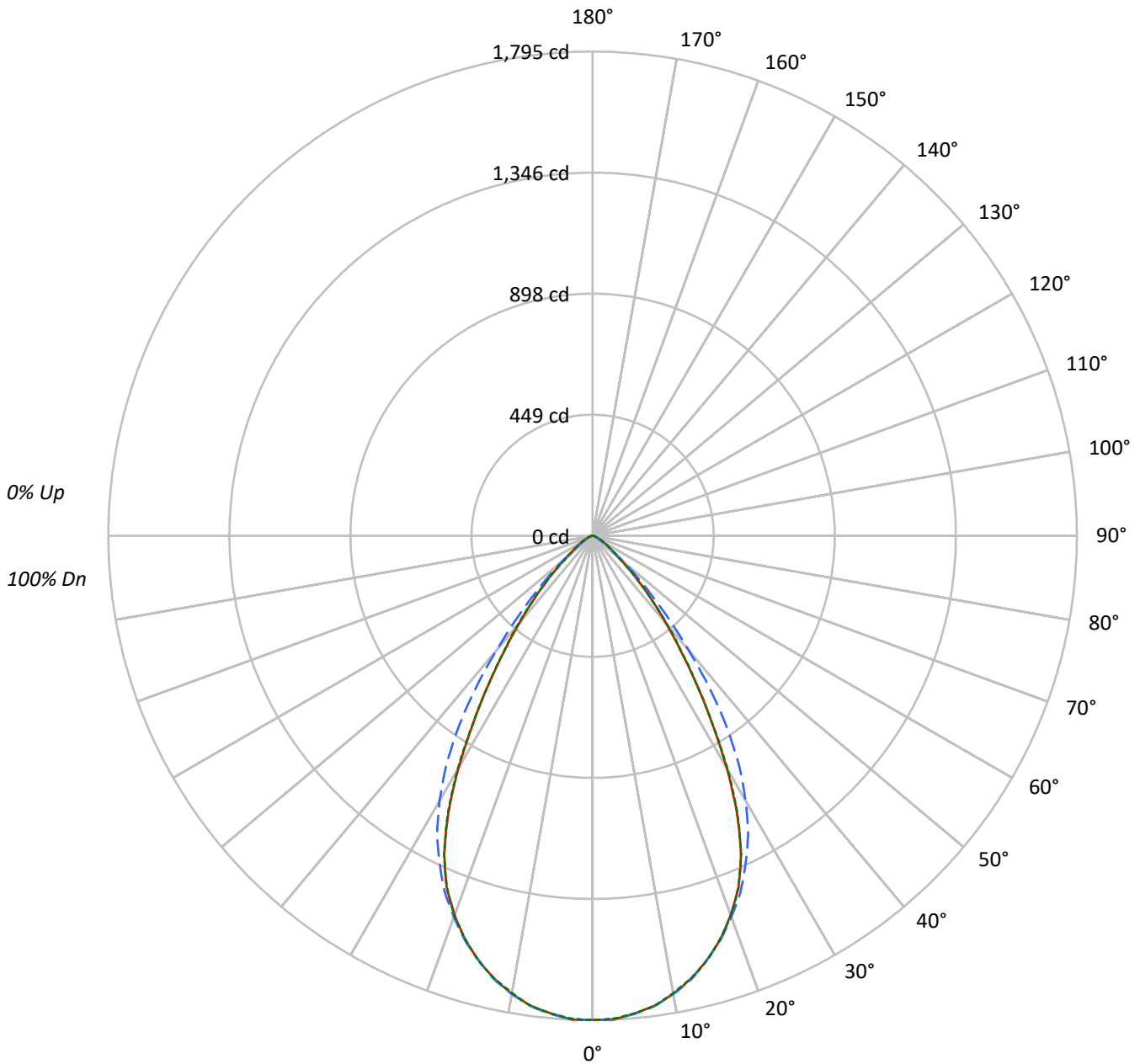
Lumens per Lamp: N/A
Luminaire Lumens: 2017.9 lumens
Efficiency: N/A
Efficacy: 72.8 lumens/watt
Spacing Criteria (0/90/45): 0.98 / 0.98 / 1.01
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

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°	173901	173901	173901
5°	172844	173058	172844
10°	169609	169718	169275
15°	163578	163467	163688
20°	154206	155000	154546
25°	139139	143404	139139
30°	111135	126885	111996
35°	79331	102676	79461
40°	53569	69832	54404
45°	34031	41320	34182
50°	19381	22064	18718
55°	12735	10674	12549
60°	8816	6239	8603
65°	6097	4585	6097
70°	4390	3456	4390
75°	2920	2920	2920
80°	1841	2455	2455
85°	2445	2445	2445

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°

Vertical Angle: 45°

Luminance: 41320 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	168.2	8.3
10°-20°	457.3	22.7
20°-30°	598.7	29.7
30°-40°	470.6	23.3
40°-50°	219.8	10.9
50°-60°	68.1	3.4
60°-70°	24.3	1.2
70°-80°	8.6	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°	1224.2	60.7
0°-40°	1694.7	84.0
0°-60°	1982.7	98.3
0°-90°	2017.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2017.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1795	1795	1795	1795	1795	
5°	1777	1778	1780	1782	1777	168
15°	1631	1631	1630	1631	1632	457
25°	1302	1320	1342	1321	1302	585
35°	671	732	868	741	672	423
45°	248	278	302	273	250	198
55°	75	71	63	70	74	71
65°	27	24	20	23	27	28
75°	8	8	8	8	8	9
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°	1795.1	1795.1	1795.1	1795.1	1795.1
2.5°	1795.1	1792.9	1794.0	1791.8	1791.8
5°	1777.4	1778.5	1779.6	1781.8	1777.4
7.5°	1757.4	1759.7	1758.5	1758.5	1758.5
10°	1724.2	1725.3	1725.3	1725.3	1720.8
12.5°	1682.0	1684.3	1685.4	1682.0	1682.0
15°	1631.0	1631.0	1629.9	1631.0	1632.1
17.5°	1570.0	1573.4	1573.4	1570.0	1568.9
20°	1495.8	1501.3	1503.5	1499.1	1499.1
22.5°	1412.6	1418.1	1431.4	1420.4	1411.5
25°	1301.7	1319.5	1341.6	1320.6	1301.7
27.5°	1158.7	1197.5	1248.5	1204.1	1162.0
30°	993.5	1056.7	1134.3	1060.0	1001.2
32.5°	824.9	895.9	1010.1	901.4	824.9
35°	670.8	731.8	868.2	740.7	671.9
37.5°	533.3	592.1	711.8	598.7	541.1
40°	423.6	471.2	552.2	470.1	430.2
42.5°	330.4	364.8	418.0	363.7	329.3
45°	248.4	278.3	301.6	272.8	249.5
47.5°	183.0	202.9	216.2	199.6	178.5
50°	128.6	143.0	146.4	139.7	124.2
52.5°	96.5	96.5	97.6	95.4	94.2
55°	75.4	71.0	63.2	69.9	74.3
57.5°	58.8	54.3	44.4	52.1	57.7
60°	45.5	41.0	32.2	39.9	44.4
62.5°	35.5	31.0	25.5	31.0	34.4
65°	26.6	24.4	20.0	23.3	26.6
67.5°	20.0	17.7	15.5	17.7	20.0
70°	15.5	14.4	12.2	13.3	15.5
72.5°	11.1	10.0	10.0	10.0	11.1
75°	7.8	7.8	7.8	7.8	7.8
77.5°	5.5	5.5	5.5	5.5	5.5
80°	3.3	3.3	4.4	4.4	4.4
82.5°	2.2	2.2	3.3	3.3	3.3
85°	2.2	2.2	2.2	2.2	2.2
87.5°	1.1	1.1	1.1	2.2	2.2
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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