

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: P837399

Luminaire Tested: HCSQ425D010-HM40525830-41SQH

Issue Date: 5/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P837399
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-HM40525830-41SQH
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, HAZE TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 3000K CCT
Ballast/Driver: -

Summary

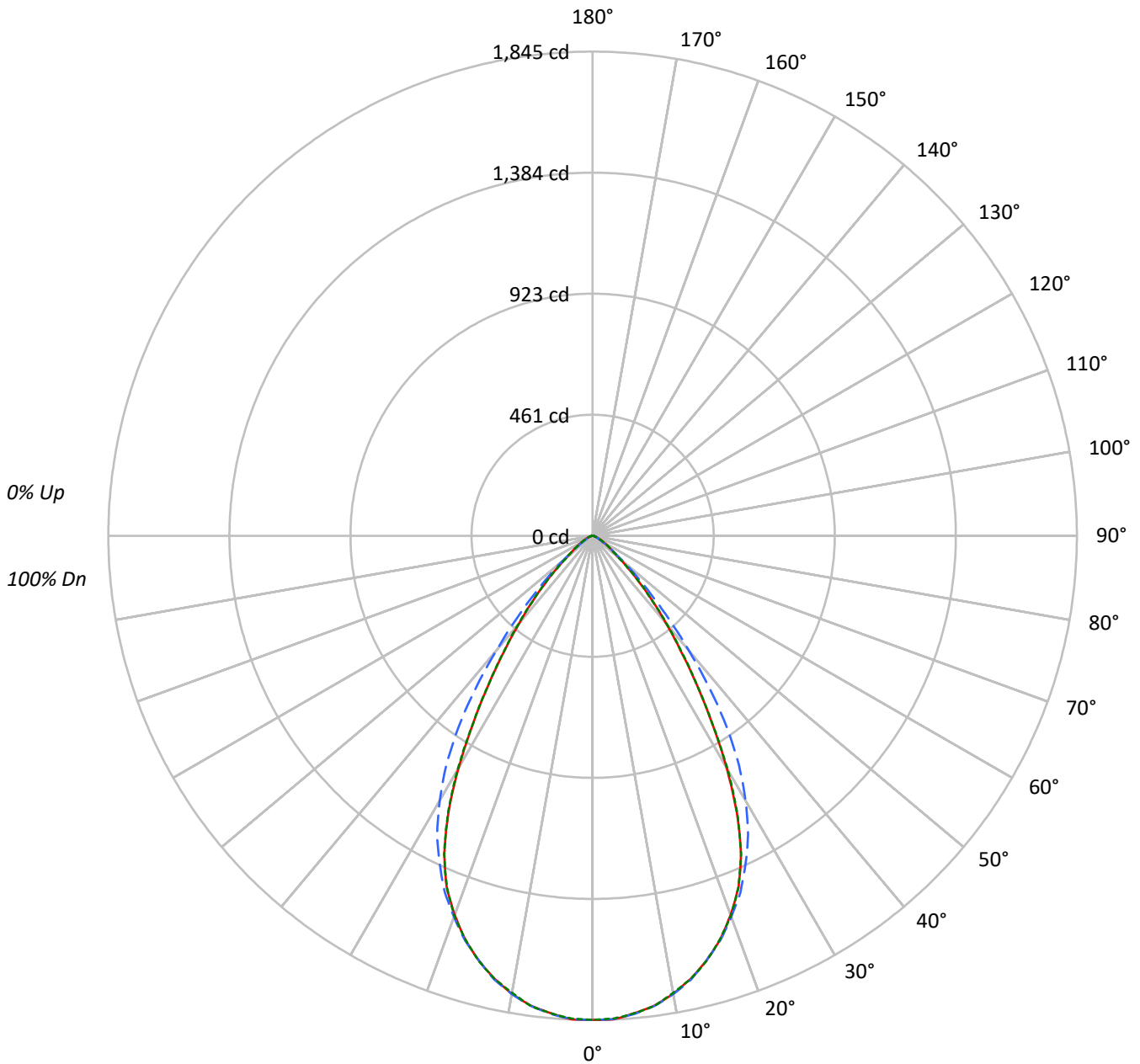
Lumens per Lamp: N/A
Luminaire Lumens: 2073.7 lumens
Efficiency: N/A
Efficacy: 74.9 lumens/watt
Spacing Criteria (0/90/45): 0.98 / 0.98 / 1.01
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

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				
RW	70	50	30	10	70	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°	178716	178716	178716
5°	177629	177843	177629
10°	174302	174410	173957
15°	168101	167990	168221
20°	158464	159288	158825
25°	142987	147370	142987
30°	114211	130398	115095
35°	81531	105514	81661
40°	55049	71767	55909
45°	34963	42457	35127
50°	19924	22667	19231
55°	13090	10961	12887
60°	9048	6394	8835
65°	6258	4699	6258
70°	4532	3541	4532
75°	2994	2994	2994
80°	1897	2566	2566
85°	2556	2556	2556

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 42457 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	172.8	8.3
10°-20°	469.9	22.7
20°-30°	615.3	29.7
30°-40°	483.6	23.3
40°-50°	225.9	10.9
50°-60°	70.0	3.4
60°-70°	25.0	1.2
70°-80°	8.8	0.4
80°-90°	2.4	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°	1258.0	60.7
0°-40°	1741.6	84.0
0°-60°	2037.5	98.3
0°-90°	2073.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2073.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1845	1845	1845	1845	1845	
5°	1827	1828	1829	1831	1827	173
15°	1676	1676	1675	1676	1677	470
25°	1338	1356	1379	1357	1338	602
35°	689	752	892	761	690	435
45°	255	286	310	280	256	203
55°	78	73	65	72	76	73
65°	27	25	20	24	27	29
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°	1844.8	1844.8	1844.8	1844.8	1844.8
2.5°	1844.8	1842.5	1843.6	1841.4	1841.4
5°	1826.6	1827.7	1828.8	1831.1	1826.6
7.5°	1806.0	1808.3	1807.2	1807.2	1807.2
10°	1771.9	1773.0	1773.0	1773.0	1768.4
12.5°	1728.6	1730.8	1732.0	1728.6	1728.6
15°	1676.1	1676.1	1675.0	1676.1	1677.3
17.5°	1613.5	1616.9	1616.9	1613.5	1612.3
20°	1537.1	1542.8	1545.1	1540.6	1540.6
22.5°	1451.7	1457.4	1471.0	1459.7	1450.5
25°	1337.7	1356.0	1378.7	1357.1	1337.7
27.5°	1190.7	1230.6	1283.0	1237.5	1194.2
30°	1021.0	1085.9	1165.7	1089.3	1028.9
32.5°	847.8	920.7	1038.1	926.4	847.8
35°	689.4	752.0	892.2	761.2	690.5
37.5°	548.1	608.5	731.5	615.3	556.1
40°	435.3	484.3	567.5	483.1	442.1
42.5°	339.6	374.9	429.6	373.7	338.4
45°	255.2	286.0	309.9	280.3	256.4
47.5°	188.0	208.5	222.2	205.1	183.5
50°	132.2	147.0	150.4	143.6	127.6
52.5°	99.1	99.1	100.3	98.0	96.9
55°	77.5	72.9	64.9	71.8	76.3
57.5°	60.4	55.8	45.6	53.6	59.3
60°	46.7	42.2	33.0	41.0	45.6
62.5°	36.5	31.9	26.2	31.9	35.3
65°	27.3	25.1	20.5	23.9	27.3
67.5°	20.5	18.2	16.0	18.2	20.5
70°	16.0	14.8	12.5	13.7	16.0
72.5°	11.4	10.3	10.3	10.3	11.4
75°	8.0	8.0	8.0	8.0	8.0
77.5°	5.7	5.7	5.7	5.7	5.7
80°	3.4	3.4	4.6	4.6	4.6
82.5°	2.3	2.3	3.4	3.4	3.4
85°	2.3	2.3	2.3	2.3	2.3
87.5°	1.1	1.1	1.1	2.3	2.3
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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