

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: P837404

Luminaire Tested: HCSQ425D010-HM40525835-41SQH

Issue Date: 5/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P837404
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-HM40525835-41SQH
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, HAZE TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 3500K CCT
Ballast/Driver: -

Summary

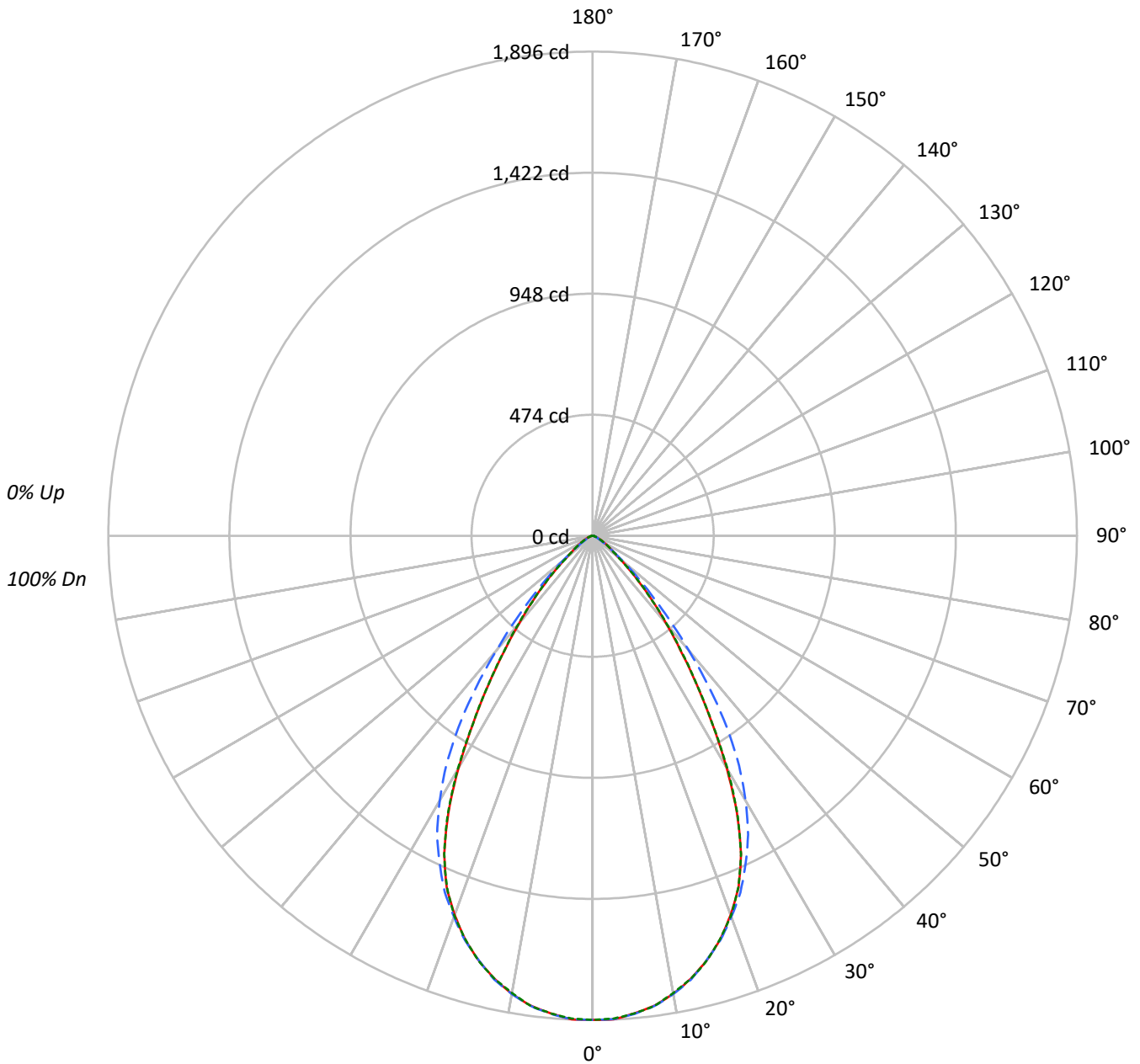
Lumens per Lamp: N/A
Luminaire Lumens: 2131.2 lumens
Efficiency: N/A
Efficacy: 76.9 lumens/watt
Spacing Criteria (0/90/45): 0.98 / 0.98 / 1.01
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

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					10					0
RW	70	50	30	10	70	50	30	10	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	102	100	100	100	100	100		
	1	113	110	107	105	110	108	105	103	104	102	100	100	98	97	96	95	94	94	92	92	92	92	92		
	2	107	101	97	93	104	100	95	92	96	93	90	93	90	88	90	88	86	86	85	85	85	85	85		
	3	101	93	88	84	98	92	87	83	89	85	82	87	83	80	85	82	79	79	77	77	77	77	77		
	4	95	87	80	76	93	85	80	75	83	78	74	81	77	74	79	76	73	73	71	71	71	71	71		
	5	89	80	74	69	88	79	73	69	77	72	68	76	71	68	74	70	67	67	65	65	65	65	65		
	6	84	75	68	63	83	74	68	63	72	67	63	71	66	62	69	65	62	62	60	60	60	60	60		
	7	80	70	63	59	78	69	63	58	68	62	58	66	61	58	65	61	57	57	56	56	56	56	56		
	8	75	65	59	54	74	65	58	54	63	58	54	62	57	54	61	57	53	53	52	52	52	52	52		
	9	72	61	55	50	70	61	54	50	60	54	50	59	54	50	58	53	50	50	48	48	48	48	48		
	10	68	57	51	47	67	57	51	47	56	51	47	55	50	47	55	50	46	46	45	45	45	45	45		

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	183666	183666	183666
5°	182549	182783	182549
10°	179132	179250	178787
15°	172764	172654	172885
20°	162866	163711	163227
25°	146953	151463	146953
30°	117377	134011	118294
35°	83789	108435	83931
40°	56566	73753	57464
45°	35936	43635	36100
50°	20467	23300	19773
55°	13444	11282	13258
60°	9300	6588	9068
65°	6441	4837	6441
70°	4645	3654	4645
75°	3069	3069	3069
80°	1953	2622	2622
85°	2556	2556	2556

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 43635 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	177.6	8.3
10°-20°	483.0	22.7
20°-30°	632.3	29.7
30°-40°	497.0	23.3
40°-50°	232.1	10.9
50°-60°	71.9	3.4
60°-70°	25.7	1.2
70°-80°	9.0	0.4
80°-90°	2.5	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°	1292.9	60.7
0°-40°	1789.9	84.0
0°-60°	2094.0	98.3
0°-90°	2131.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2131.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1896	1896	1896	1896	1896	
5°	1877	1878	1880	1882	1877	178
15°	1723	1723	1722	1723	1724	483
25°	1375	1394	1417	1395	1375	618
35°	708	773	917	782	710	447
45°	262	294	318	288	264	209
55°	80	75	67	74	78	75
65°	28	26	21	25	28	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°	1895.9	1895.9	1895.9	1895.9	1895.9
2.5°	1895.9	1893.6	1894.8	1892.4	1892.4
5°	1877.2	1878.4	1879.6	1881.9	1877.2
7.5°	1856.1	1858.5	1857.3	1857.3	1857.3
10°	1821.0	1822.2	1822.2	1822.2	1817.5
12.5°	1776.5	1778.8	1780.0	1776.5	1776.5
15°	1722.6	1722.6	1721.5	1722.6	1723.8
17.5°	1658.2	1661.7	1661.7	1658.2	1657.1
20°	1579.8	1585.6	1588.0	1583.3	1583.3
22.5°	1491.9	1497.8	1511.8	1500.1	1490.8
25°	1374.8	1393.6	1417.0	1394.7	1374.8
27.5°	1223.8	1264.7	1318.6	1271.8	1227.3
30°	1049.3	1116.0	1198.0	1119.5	1057.5
32.5°	871.3	946.2	1066.8	952.1	871.3
35°	708.5	772.9	916.9	782.3	709.7
37.5°	563.3	625.3	751.8	632.4	571.5
40°	447.3	497.7	583.2	496.5	454.4
42.5°	349.0	385.3	441.5	384.1	347.8
45°	262.3	293.9	318.5	288.1	263.5
47.5°	193.2	214.3	228.4	210.8	188.5
50°	135.8	151.1	154.6	147.6	131.2
52.5°	101.9	101.9	103.1	100.7	99.5
55°	79.6	74.9	66.8	73.8	78.5
57.5°	62.1	57.4	46.8	55.0	60.9
60°	48.0	43.3	34.0	42.2	46.8
62.5°	37.5	32.8	26.9	32.8	36.3
65°	28.1	25.8	21.1	24.6	28.1
67.5°	21.1	18.7	16.4	18.7	21.1
70°	16.4	15.2	12.9	14.1	16.4
72.5°	11.7	10.5	10.5	10.5	11.7
75°	8.2	8.2	8.2	8.2	8.2
77.5°	5.9	5.9	5.9	5.9	5.9
80°	3.5	3.5	4.7	4.7	4.7
82.5°	2.3	2.3	3.5	3.5	3.5
85°	2.3	2.3	2.3	2.3	2.3
87.5°	1.2	1.2	1.2	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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