

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: P837464

Luminaire Tested: HCSQ430D010-HM43040935-41SQH

Issue Date: 5/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P837464
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: HCSQ430D010-HM43040935-41SQH
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, HAZE TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 3500K CCT
Ballast/Driver: -

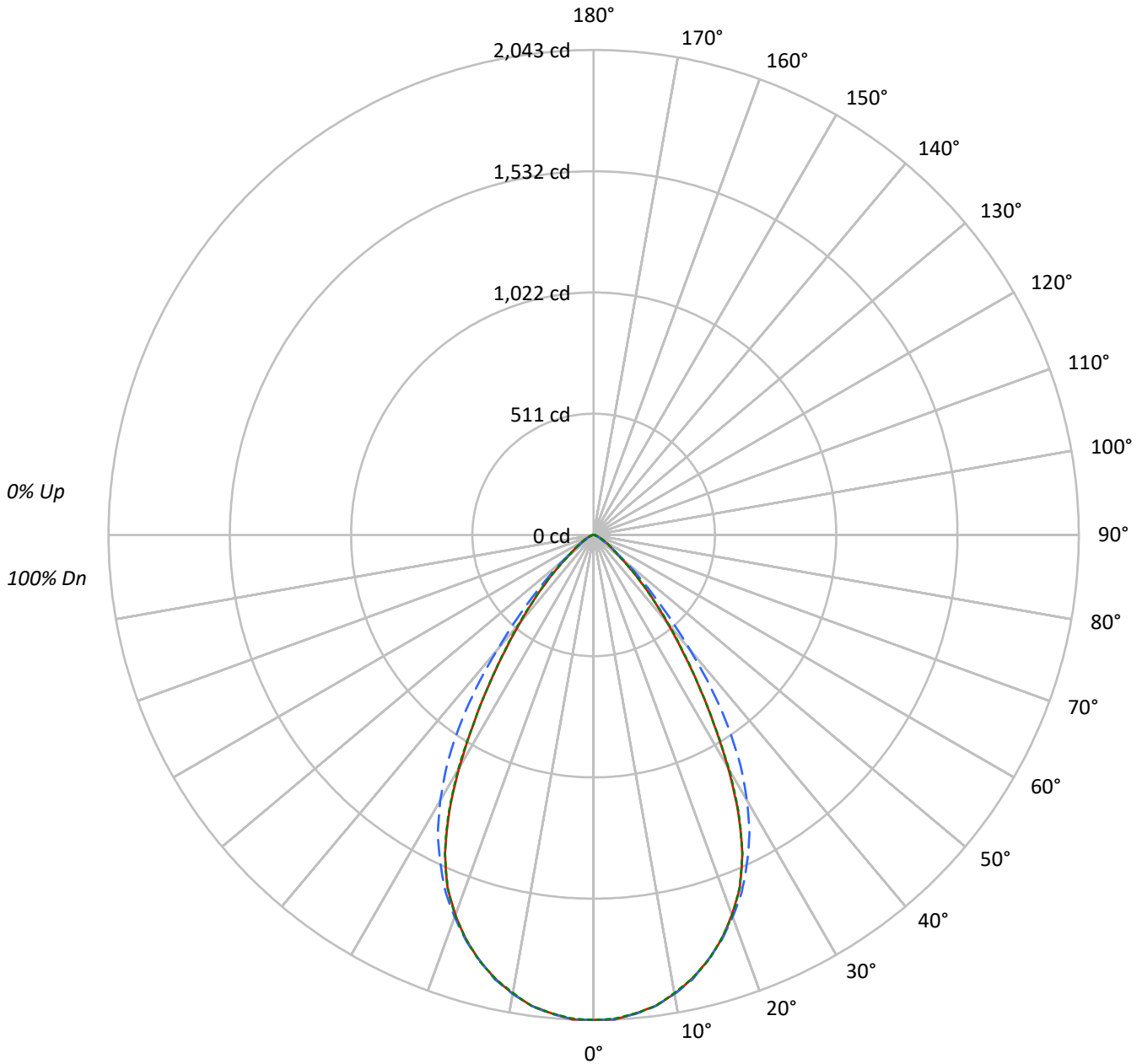
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2296.9 lumens
Efficiency: N/A
Efficacy: 81.5 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): 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					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	100					100			
1	113	110	107	105	110	108	105	103	104	102	100	100	98	97	96	95	94	92					92			
2	107	101	97	93	104	100	95	92	96	93	90	93	90	88	90	88	86	85					85			
3	101	93	88	84	98	92	87	83	89	85	82	87	83	80	85	82	79	77					77			
4	95	87	80	76	93	85	80	75	83	78	74	81	77	74	79	76	73	71					71			
5	89	80	74	69	88	79	73	69	77	72	68	76	71	68	74	70	67	65					65			
6	84	75	68	63	83	74	68	63	72	67	63	71	66	62	69	65	62	60					60			
7	80	70	63	59	78	69	63	58	68	62	58	66	61	58	65	61	57	56					56			
8	75	65	59	54	74	65	58	54	63	58	54	62	57	54	61	57	53	52					52			
9	72	61	55	50	70	61	54	50	60	54	50	59	54	50	58	53	50	48					48			
10	68	57	51	47	67	57	51	47	56	51	47	55	50	47	55	50	46	45					45			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	197955	197955	197955
5°	196747	196990	196747
10°	193061	193179	192687
15°	186204	186073	186324
20°	175526	176433	175917
25°	158379	163243	158379
30°	126505	144425	127489
35°	90306	116868	90448
40°	60967	79481	61928
45°	38731	47033	38909
50°	22064	25109	21311
55°	14491	12144	14289
60°	10017	7091	9784
65°	6946	5203	6946
70°	5013	3937	5013
75°	3294	3294	3294
80°	2120	2789	2789
85°	2779	2779	2779

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°

Vertical Angle: 45°

Luminance: 47033 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	191.4	8.3
10°-20°	520.5	22.7
20°-30°	681.5	29.7
30°-40°	535.6	23.3
40°-50°	250.2	10.9
50°-60°	77.5	3.4
60°-70°	27.7	1.2
70°-80°	9.7	0.4
80°-90°	2.7	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°	1393.5	60.7
0°-40°	1929.1	84.0
0°-60°	2256.8	98.3
0°-90°	2296.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2296.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2043	2043	2043	2043	2043	
5°	2023	2024	2026	2028	2023	191
15°	1857	1857	1855	1857	1858	520
25°	1482	1502	1527	1503	1482	666
35°	764	833	988	843	765	481
45°	283	317	343	310	284	225
55°	86	81	72	80	85	80
65°	30	28	23	26	30	32
75°	9	9	9	9	9	10
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°	2043.4	2043.4	2043.4	2043.4	2043.4
2.5°	2043.4	2040.8	2042.1	2039.6	2039.6
5°	2023.2	2024.4	2025.7	2028.2	2023.2
7.5°	2000.4	2003.0	2001.7	2001.7	2001.7
10°	1962.6	1963.8	1963.8	1963.8	1958.8
12.5°	1914.6	1917.1	1918.4	1914.6	1914.6
15°	1856.6	1856.6	1855.3	1856.6	1857.8
17.5°	1787.1	1790.9	1790.9	1787.1	1785.9
20°	1702.6	1708.9	1711.4	1706.4	1706.4
22.5°	1607.9	1614.2	1629.4	1616.8	1606.7
25°	1481.7	1501.9	1527.2	1503.2	1481.7
27.5°	1318.9	1363.1	1421.1	1370.7	1322.7
30°	1130.9	1202.8	1291.1	1206.6	1139.7
32.5°	939.0	1019.8	1149.8	1026.1	939.0
35°	763.6	833.0	988.2	843.1	764.8
37.5°	607.1	674.0	810.3	681.5	615.9
40°	482.1	536.4	628.5	535.1	489.7
42.5°	376.1	415.2	475.8	414.0	374.8
45°	282.7	316.8	343.3	310.5	284.0
47.5°	208.2	231.0	246.1	227.2	203.2
50°	146.4	162.8	166.6	159.0	141.4
52.5°	109.8	109.8	111.1	108.5	107.3
55°	85.8	80.8	71.9	79.5	84.6
57.5°	66.9	61.8	50.5	59.3	65.6
60°	51.7	46.7	36.6	45.4	50.5
62.5°	40.4	35.3	29.0	35.3	39.1
65°	30.3	27.8	22.7	26.5	30.3
67.5°	22.7	20.2	17.7	20.2	22.7
70°	17.7	16.4	13.9	15.1	17.7
72.5°	12.6	11.4	11.4	11.4	12.6
75°	8.8	8.8	8.8	8.8	8.8
77.5°	6.3	6.3	6.3	6.3	6.3
80°	3.8	3.8	5.0	5.0	5.0
82.5°	2.5	2.5	3.8	3.8	3.8
85°	2.5	2.5	2.5	2.5	2.5
87.5°	1.3	1.3	1.3	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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