

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: P837434

Luminaire Tested: HCSQ430D010-HM43040827-41SQH

Issue Date: 5/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P837434
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-HM43040827-41SQH
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, HAZE TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 2700K CCT
Ballast/Driver: -

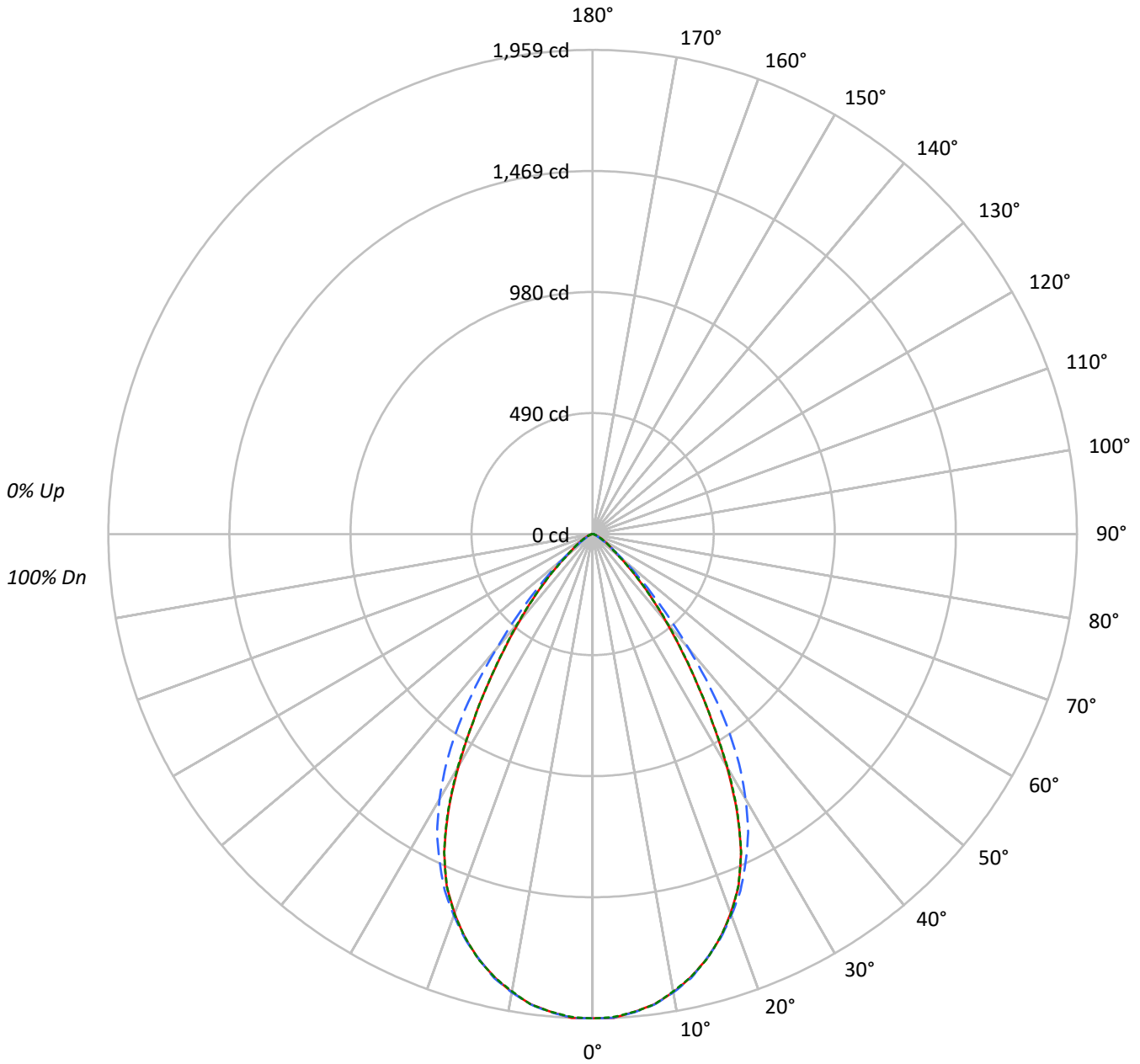
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2202.5 lumens
Efficiency: N/A
Efficacy: 78.1 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°	189818	189818	189818
5°	188656	188890	188656
10°	185122	185240	184768
15°	178551	178431	178672
20°	168309	169185	168680
25°	151870	156530	151870
30°	121303	138496	122243
35°	86592	112066	86734
40°	58463	76219	59387
45°	37141	45101	37306
50°	21160	24084	20421
55°	13900	11654	13698
60°	9610	6801	9378
65°	6648	4997	6648
70°	4787	3767	4787
75°	3182	3182	3182
80°	2008	2678	2678
85°	2668	2668	2668

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 45101 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	183.6	8.3
10°-20°	499.1	22.7
20°-30°	653.5	29.7
30°-40°	513.6	23.3
40°-50°	239.9	10.9
50°-60°	74.4	3.4
60°-70°	26.5	1.2
70°-80°	9.4	0.4
80°-90°	2.6	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°	1336.2	60.7
0°-40°	1849.8	84.0
0°-60°	2164.1	98.3
0°-90°	2202.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2202.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1959	1959	1959	1959	1959	
5°	1940	1941	1942	1945	1940	183
15°	1780	1780	1779	1780	1782	499
25°	1421	1440	1464	1441	1421	639
35°	732	799	948	808	733	462
45°	271	304	329	298	272	216
55°	82	78	69	76	81	77
65°	29	27	22	25	29	30
75°	8	8	8	8	8	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°	1959.4	1959.4	1959.4	1959.4	1959.4
2.5°	1959.4	1957.0	1958.2	1955.8	1955.8
5°	1940.0	1941.2	1942.4	1944.9	1940.0
7.5°	1918.2	1920.7	1919.4	1919.4	1919.4
10°	1881.9	1883.1	1883.1	1883.1	1878.3
12.5°	1835.9	1838.4	1839.6	1835.9	1835.9
15°	1780.3	1780.3	1779.1	1780.3	1781.5
17.5°	1713.7	1717.3	1717.3	1713.7	1712.5
20°	1632.6	1638.7	1641.1	1636.2	1636.2
22.5°	1541.8	1547.9	1562.4	1550.3	1540.6
25°	1420.8	1440.2	1464.4	1441.4	1420.8
27.5°	1264.7	1307.1	1362.7	1314.3	1268.3
30°	1084.4	1153.4	1238.1	1157.0	1092.8
32.5°	900.4	977.9	1102.5	983.9	900.4
35°	732.2	798.8	947.6	808.4	733.4
37.5°	582.1	646.3	777.0	653.5	590.6
40°	462.3	514.4	602.7	513.1	469.6
42.5°	360.7	398.2	456.3	397.0	359.4
45°	271.1	303.8	329.2	297.7	272.3
47.5°	199.7	221.5	236.0	217.8	194.8
50°	140.4	156.1	159.8	152.5	135.5
52.5°	105.3	105.3	106.5	104.1	102.9
55°	82.3	77.5	69.0	76.2	81.1
57.5°	64.1	59.3	48.4	56.9	62.9
60°	49.6	44.8	35.1	43.6	48.4
62.5°	38.7	33.9	27.8	33.9	37.5
65°	29.0	26.6	21.8	25.4	29.0
67.5°	21.8	19.4	16.9	19.4	21.8
70°	16.9	15.7	13.3	14.5	16.9
72.5°	12.1	10.9	10.9	10.9	12.1
75°	8.5	8.5	8.5	8.5	8.5
77.5°	6.1	6.1	6.1	6.1	6.1
80°	3.6	3.6	4.8	4.8	4.8
82.5°	2.4	2.4	3.6	3.6	3.6
85°	2.4	2.4	2.4	2.4	2.4
87.5°	1.2	1.2	1.2	2.4	2.4
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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