

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: P837502

Luminaire Tested: HCSQ435D010-HM43040930-41SQMW

Issue Date: 5/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P837502
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2309-165-3)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 5/17/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCSQ435D010-HM43040930-41SQMW
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, MATTE WHITE TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 3000K CCT
Ballast/Driver: -

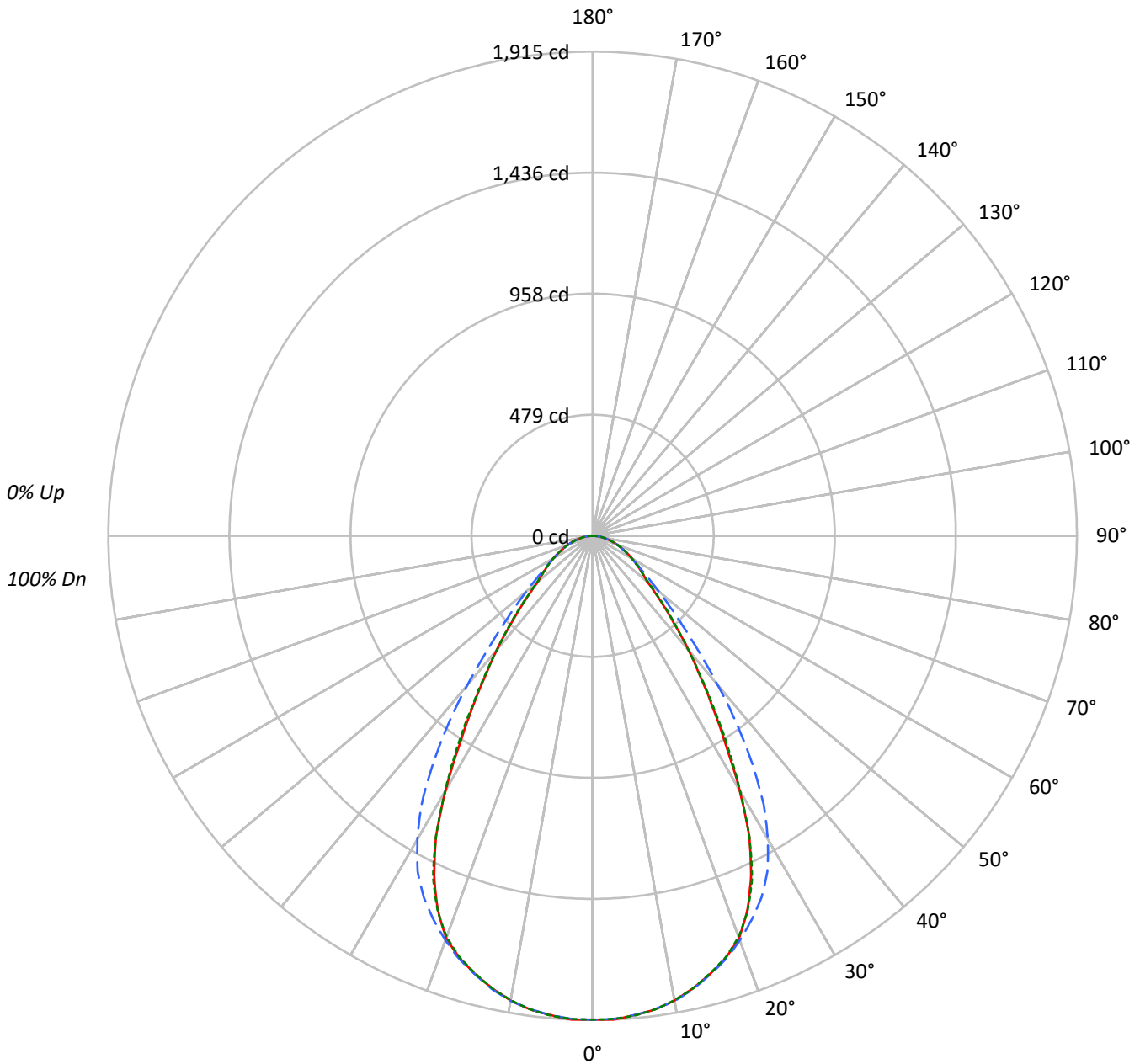
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2777.4 lumens
Efficiency: N/A
Efficacy: 81.7 lumens/watt
Spacing Criteria (0/90/45): 1.03 / 1.03 / 1.07
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 34
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	111	108	105	102	109	106	103	100	101	99	97	98	96	94	94	93	91	89								
2	104	98	92	88	102	96	91	87	92	88	85	89	86	83	86	84	81	79								
3	97	89	82	77	95	87	81	76	84	79	75	82	78	74	79	76	73	71								
4	91	81	74	69	89	80	73	68	77	72	67	75	70	66	73	69	66	64								
5	85	74	67	62	83	73	66	61	71	65	61	70	64	60	68	63	60	58								
6	79	69	61	56	78	68	61	56	66	60	55	64	59	55	63	58	54	53								
7	75	63	56	51	73	63	56	51	61	55	50	60	54	50	59	54	50	48								
8	70	59	52	47	69	58	51	47	57	51	46	56	50	46	55	50	46	44								
9	66	55	48	43	65	54	48	43	53	47	43	52	47	43	51	46	43	41								
10	63	51	45	40	62	51	44	40	50	44	40	49	44	40	48	43	40	38								

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	185400	185400	185400
5°	185097	185097	185243
10°	183588	183725	183440
15°	180016	180166	179715
20°	174618	175536	174000
25°	158475	168812	159587
30°	130084	155030	130577
35°	97780	130137	99187
40°	74473	97034	74284
45°	55623	68857	56637
50°	42365	51317	43254
55°	38171	40181	38171
60°	34856	34565	34565
65°	31702	31702	31702
70°	29486	29061	29061
75°	27286	26725	27286
80°	24882	24045	24882
85°	21452	21452	21452

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 68857 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	180.5	6.5
10°-20°	505.3	18.2
20°-30°	694.9	25.0
30°-40°	591.6	21.3
40°-50°	357.3	12.9
50°-60°	210.6	7.6
60°-70°	138.1	5.0
70°-80°	76.6	2.8
80°-90°	22.4	0.8
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°	1380.7	49.7
0°-40°	1972.3	71.0
0°-60°	2540.3	91.5
0°-90°	2777.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2777.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1914	1914	1914	1914	1914	
5°	1903	1905	1903	1902	1905	181
15°	1795	1799	1796	1795	1792	505
25°	1483	1529	1579	1532	1493	670
35°	827	910	1100	935	839	523
45°	406	449	503	454	413	319
55°	226	230	238	230	226	203
65°	138	140	138	138	138	138
75°	73	73	71	71	73	77
85°	19	19	19	19	19	22
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1913.8	1913.8	1913.8	1913.8	1913.8
2.5°	1915.3	1910.9	1912.4	1910.9	1912.4
5°	1903.4	1904.9	1903.4	1901.9	1904.9
7.5°	1890.0	1888.6	1888.6	1887.1	1890.0
10°	1866.3	1863.3	1867.7	1864.8	1864.8
12.5°	1833.5	1838.0	1836.5	1836.5	1833.5
15°	1794.9	1799.3	1796.4	1794.9	1791.9
17.5°	1750.3	1753.2	1754.7	1748.8	1748.8
20°	1693.8	1699.7	1702.7	1692.3	1687.8
22.5°	1600.1	1626.8	1643.2	1625.4	1603.0
25°	1482.6	1528.7	1579.3	1531.7	1493.0
27.5°	1341.3	1406.8	1497.5	1417.2	1341.3
30°	1162.9	1259.5	1385.9	1269.9	1167.3
32.5°	978.5	1081.1	1258.0	1098.9	999.3
35°	826.8	910.1	1100.4	935.4	838.7
37.5°	695.9	767.3	935.4	783.7	703.4
40°	588.9	645.4	767.3	652.8	587.4
42.5°	486.3	539.8	621.6	547.2	492.2
45°	406.0	449.1	502.6	453.6	413.4
47.5°	337.6	373.3	411.9	373.3	342.0
50°	281.1	309.3	340.5	309.3	287.0
52.5°	251.3	260.2	281.1	261.7	251.3
55°	226.0	230.5	237.9	230.5	226.0
57.5°	202.2	205.2	203.7	203.7	202.2
60°	179.9	181.4	178.4	179.9	178.4
62.5°	159.1	159.1	156.1	159.1	157.6
65°	138.3	139.8	138.3	138.3	138.3
67.5°	120.5	120.5	119.0	120.5	120.5
70°	104.1	104.1	102.6	104.1	102.6
72.5°	87.7	87.7	86.2	86.2	86.2
75°	72.9	72.9	71.4	71.4	72.9
77.5°	58.0	58.0	56.5	58.0	58.0
80°	44.6	44.6	43.1	44.6	44.6
82.5°	31.2	31.2	31.2	32.7	32.7
85°	19.3	19.3	19.3	19.3	19.3
87.5°	8.9	8.9	8.9	8.9	10.4
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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