

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: P837452

Luminaire Tested: HCSQ430D010-HM43040840-41SQMW

Issue Date: 5/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P837452
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: HCSQ430D010-HM43040840-41SQMW
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, MATTE WHITE TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 4000K CCT
Ballast/Driver: -

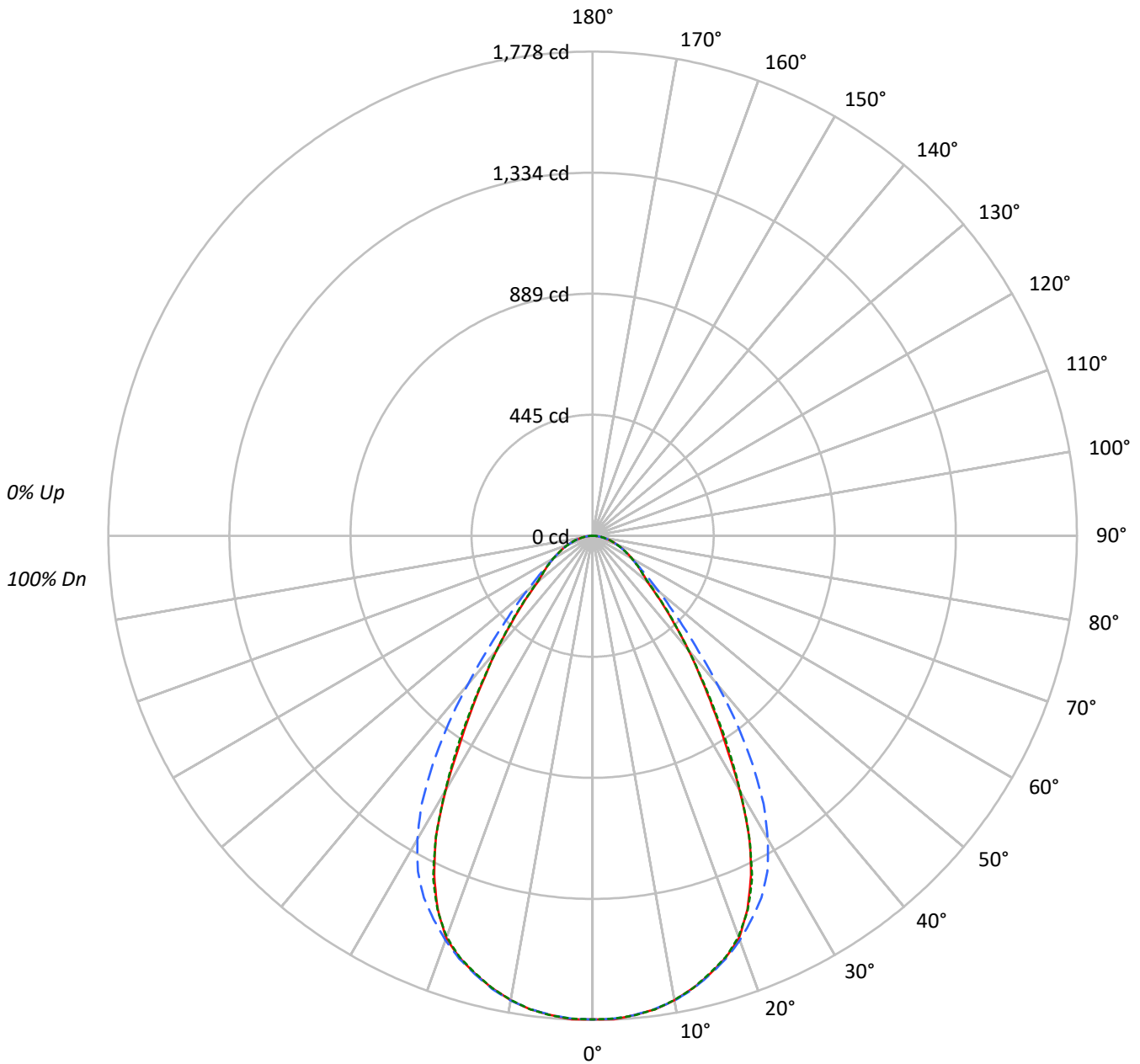
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2577.5 lumens
Efficiency: N/A
Efficacy: 91.4 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): 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								
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°	172060	172060	172060
5°	171774	171774	171911
10°	170367	170505	170239
15°	167058	167198	166777
20°	162051	162897	161474
25°	147070	156658	148107
30°	120722	143877	121180
35°	90743	120770	92044
40°	69111	90054	68934
45°	51609	63912	52554
50°	39306	47625	40134
55°	35435	37292	35435
60°	32356	32085	32085
65°	29410	29410	29410
70°	27361	26965	26965
75°	25303	24779	25303
80°	23096	22315	23096
85°	19896	19896	19896

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 63912 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	167.5	6.5
10°-20°	468.9	18.2
20°-30°	644.9	25.0
30°-40°	549.0	21.3
40°-50°	331.6	12.9
50°-60°	195.4	7.6
60°-70°	128.2	5.0
70°-80°	71.0	2.8
80°-90°	20.8	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°	1281.4	49.7
0°-40°	1830.4	71.0
0°-60°	2357.5	91.5
0°-90°	2577.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2577.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1776	1776	1776	1776	1776	
5°	1766	1768	1766	1765	1768	168
15°	1666	1670	1667	1666	1663	469
25°	1376	1419	1466	1421	1386	622
35°	767	845	1021	868	778	486
45°	377	417	466	421	384	296
55°	210	214	221	214	210	189
65°	128	130	128	128	128	128
75°	68	68	66	66	68	72
85°	18	18	18	18	18	21
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1776.1	1776.1	1776.1	1776.1	1776.1
2.5°	1777.5	1773.3	1774.7	1773.3	1774.7
5°	1766.4	1767.8	1766.4	1765.1	1767.8
7.5°	1754.0	1752.6	1752.6	1751.3	1754.0
10°	1731.9	1729.2	1733.3	1730.6	1730.6
12.5°	1701.6	1705.7	1704.3	1704.3	1701.6
15°	1665.7	1669.8	1667.1	1665.7	1662.9
17.5°	1624.3	1627.1	1628.4	1622.9	1622.9
20°	1571.9	1577.4	1580.1	1570.5	1566.3
22.5°	1484.9	1509.8	1524.9	1508.4	1487.7
25°	1375.9	1418.7	1465.6	1421.4	1385.6
27.5°	1244.8	1305.5	1389.7	1315.2	1244.8
30°	1079.2	1168.9	1286.2	1178.6	1083.3
32.5°	908.1	1003.3	1167.5	1019.8	927.4
35°	767.3	844.6	1021.2	868.0	778.3
37.5°	645.9	712.1	868.0	727.3	652.8
40°	546.5	598.9	712.1	605.8	545.1
42.5°	451.3	501.0	576.9	507.9	456.8
45°	376.7	416.8	466.5	420.9	383.6
47.5°	313.3	346.4	382.3	346.4	317.4
50°	260.8	287.0	316.0	287.0	266.3
52.5°	233.2	241.5	260.8	242.9	233.2
55°	209.8	213.9	220.8	213.9	209.8
57.5°	187.7	190.4	189.1	189.1	187.7
60°	167.0	168.4	165.6	167.0	165.6
62.5°	147.7	147.7	144.9	147.7	146.3
65°	128.3	129.7	128.3	128.3	128.3
67.5°	111.8	111.8	110.4	111.8	111.8
70°	96.6	96.6	95.2	96.6	95.2
72.5°	81.4	81.4	80.0	80.0	80.0
75°	67.6	67.6	66.2	66.2	67.6
77.5°	53.8	53.8	52.4	53.8	53.8
80°	41.4	41.4	40.0	41.4	41.4
82.5°	29.0	29.0	29.0	30.4	30.4
85°	17.9	17.9	17.9	17.9	17.9
87.5°	8.3	8.3	8.3	8.3	9.7
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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