

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: P837462

Luminaire Tested: HCSQ430D010-HM43040930-41SQMW

Issue Date: 5/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P837462
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-HM43040930-41SQMW
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, MATTE WHITE TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 3000K CCT
Ballast/Driver: -

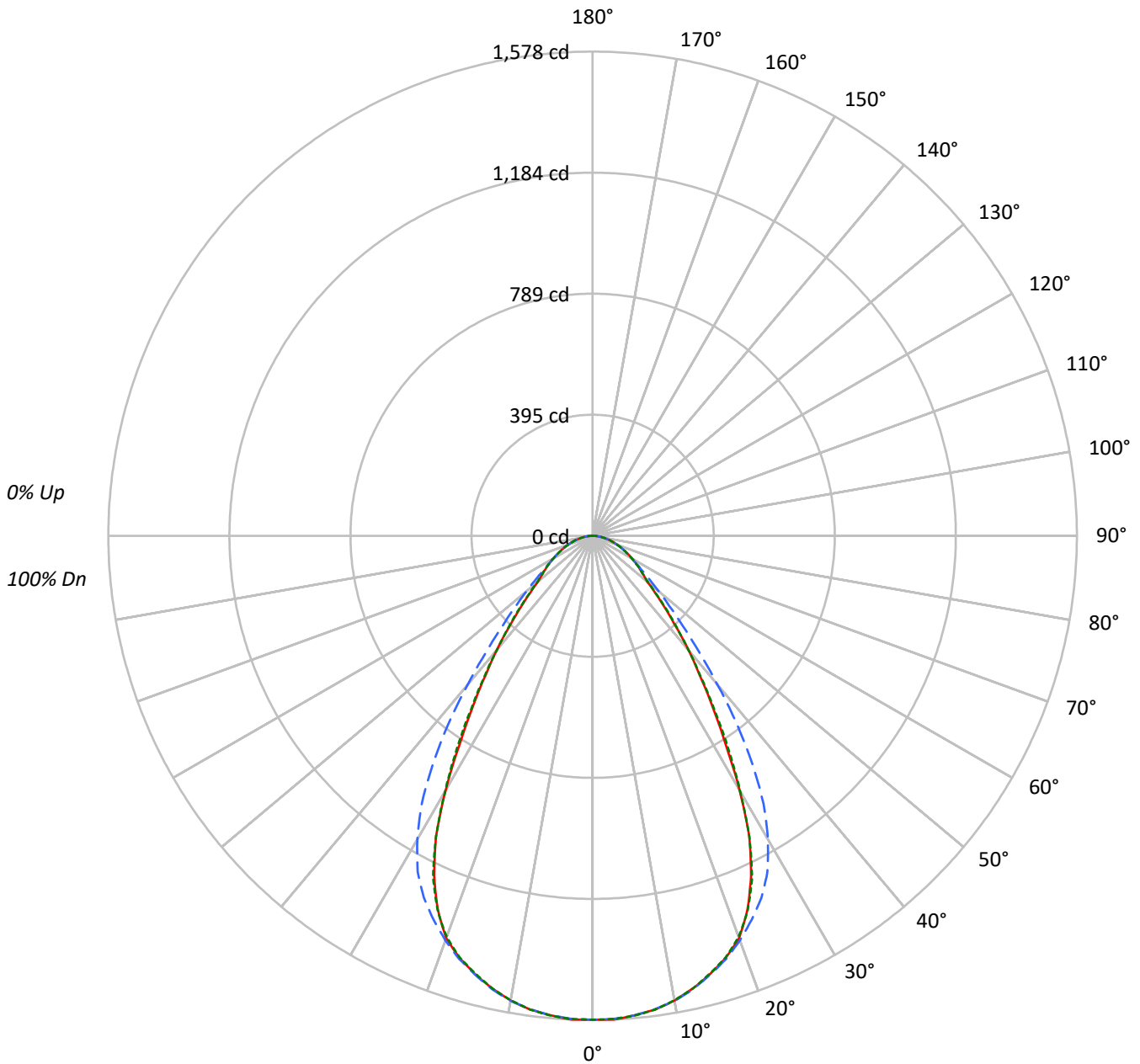
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2288.9 lumens
Efficiency: N/A
Efficacy: 81.2 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	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°	152792	152792	152792
5°	152539	152539	152666
10°	151293	151411	151175
15°	148353	148473	148102
20°	143897	144660	143392
25°	130598	139118	131518
30°	107197	127769	107611
35°	80584	107253	81743
40°	61372	79975	61220
45°	45841	56746	46677
50°	34905	42290	35643
55°	31466	33121	31466
60°	28733	28501	28501
65°	26132	26132	26132
70°	24302	23963	23963
75°	22458	22009	22458
80°	20530	19805	20530
85°	17673	17673	17673

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 56746 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	148.8	6.5
10°-20°	416.4	18.2
20°-30°	572.7	25.0
30°-40°	487.5	21.3
40°-50°	294.5	12.9
50°-60°	173.6	7.6
60°-70°	113.8	5.0
70°-80°	63.1	2.8
80°-90°	18.5	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°	1137.9	49.7
0°-40°	1625.4	71.0
0°-60°	2093.5	91.5
0°-90°	2288.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2288.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1577	1577	1577	1577	1577	
5°	1569	1570	1569	1567	1570	149
15°	1479	1483	1480	1479	1477	416
25°	1222	1260	1302	1262	1230	552
35°	681	750	907	771	691	431
45°	335	370	414	374	341	263
55°	186	190	196	190	186	168
65°	114	115	114	114	114	114
75°	60	60	59	59	60	64
85°	16	16	16	16	16	18
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1577.2	1577.2	1577.2	1577.2	1577.2
2.5°	1578.4	1574.8	1576.0	1574.8	1576.0
5°	1568.6	1569.9	1568.6	1567.4	1569.9
7.5°	1557.6	1556.4	1556.4	1555.2	1557.6
10°	1538.0	1535.5	1539.2	1536.8	1536.8
12.5°	1511.0	1514.7	1513.5	1513.5	1511.0
15°	1479.2	1482.9	1480.4	1479.2	1476.7
17.5°	1442.4	1444.9	1446.1	1441.2	1441.2
20°	1395.8	1400.7	1403.2	1394.6	1390.9
22.5°	1318.6	1340.7	1354.2	1339.5	1321.1
25°	1221.8	1259.8	1301.5	1262.3	1230.4
27.5°	1105.4	1159.3	1234.1	1167.9	1105.4
30°	958.3	1038.0	1142.2	1046.6	962.0
32.5°	806.4	890.9	1036.8	905.6	823.5
35°	681.4	750.0	906.9	770.8	691.2
37.5°	573.5	632.4	770.8	645.8	579.7
40°	485.3	531.9	632.4	538.0	484.1
42.5°	400.7	444.9	512.3	451.0	405.6
45°	334.6	370.1	414.2	373.8	340.7
47.5°	278.2	307.6	339.5	307.6	281.9
50°	231.6	254.9	280.6	254.9	236.5
52.5°	207.1	214.5	231.6	215.7	207.1
55°	186.3	190.0	196.1	190.0	186.3
57.5°	166.7	169.1	167.9	167.9	166.7
60°	148.3	149.5	147.1	148.3	147.1
62.5°	131.1	131.1	128.7	131.1	129.9
65°	114.0	115.2	114.0	114.0	114.0
67.5°	99.3	99.3	98.0	99.3	99.3
70°	85.8	85.8	84.6	85.8	84.6
72.5°	72.3	72.3	71.1	71.1	71.1
75°	60.0	60.0	58.8	58.8	60.0
77.5°	47.8	47.8	46.6	47.8	47.8
80°	36.8	36.8	35.5	36.8	36.8
82.5°	25.7	25.7	25.7	27.0	27.0
85°	15.9	15.9	15.9	15.9	15.9
87.5°	7.4	7.4	7.4	7.4	8.6
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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