

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: P837482

Luminaire Tested: HCSQ435D010-HM43040830-41SQMW

Issue Date: 5/17/2024



Test Information

Test Method: LM-79-2019
Report Number: P837482
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-HM43040830-41SQMW
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, MATTE WHITE TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 3000K CCT
Ballast/Driver: -

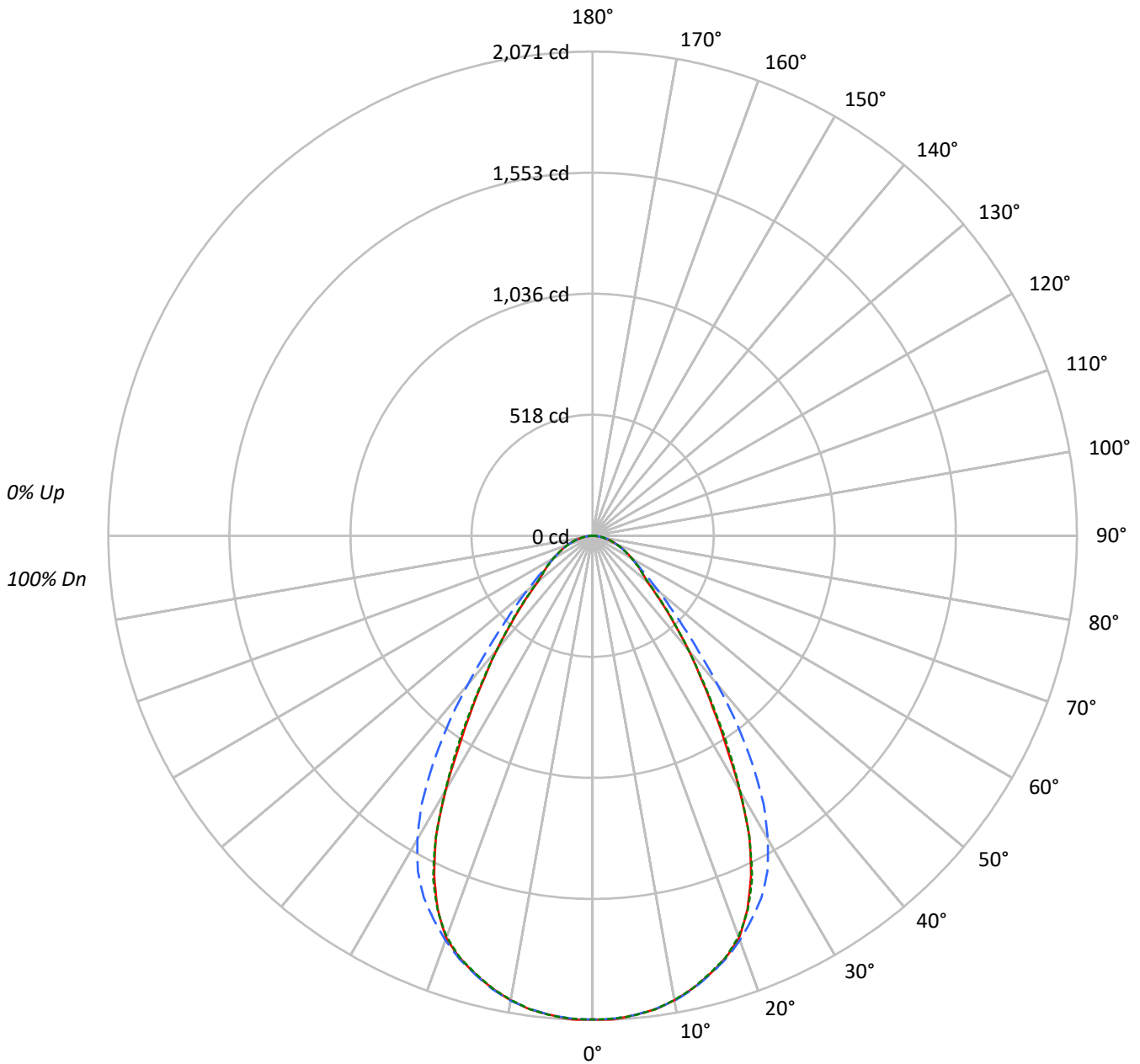
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3002.7 lumens
Efficiency: N/A
Efficacy: 88.3 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									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°	200445	200445	200445
5°	200121	200121	200277
10°	198481	198638	198324
15°	194618	194779	194297
20°	188783	189773	188113
25°	171334	182504	172531
30°	140633	167614	141170
35°	105715	140698	107229
40°	80506	104913	80303
45°	60130	74447	61226
50°	45801	55492	46766
55°	41278	43440	41278
60°	37685	37375	37375
65°	34269	34269	34269
70°	31865	31412	31412
75°	29495	28896	29495
80°	26890	25997	26890
85°	23231	23231	23231

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 74447 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	195.2	6.5
10°-20°	546.3	18.2
20°-30°	751.3	25.0
30°-40°	639.6	21.3
40°-50°	386.3	12.9
50°-60°	227.7	7.6
60°-70°	149.3	5.0
70°-80°	82.8	2.8
80°-90°	24.2	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°	1492.8	49.7
0°-40°	2132.3	71.0
0°-60°	2746.4	91.5
0°-90°	3002.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3002.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2069	2069	2069	2069	2069	
5°	2058	2060	2058	2056	2060	195
15°	1940	1945	1942	1940	1937	546
25°	1603	1653	1707	1656	1614	724
35°	894	984	1190	1011	907	566
45°	439	486	543	490	447	345
55°	244	249	257	249	244	220
65°	150	151	150	150	150	150
75°	79	79	77	77	79	84
85°	21	21	21	21	21	24
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2069.1	2069.1	2069.1	2069.1	2069.1
2.5°	2070.7	2065.9	2067.5	2065.9	2067.5
5°	2057.9	2059.5	2057.9	2056.2	2059.5
7.5°	2043.4	2041.8	2041.8	2040.2	2043.4
10°	2017.7	2014.4	2019.3	2016.1	2016.1
12.5°	1982.3	1987.1	1985.5	1985.5	1982.3
15°	1940.5	1945.3	1942.1	1940.5	1937.3
17.5°	1892.3	1895.5	1897.1	1890.7	1890.7
20°	1831.2	1837.6	1840.8	1829.6	1824.7
22.5°	1729.9	1758.8	1776.5	1757.2	1733.1
25°	1602.9	1652.7	1707.4	1655.9	1614.1
27.5°	1450.1	1520.9	1619.0	1532.1	1450.1
30°	1257.2	1361.7	1498.4	1373.0	1262.0
32.5°	1057.9	1168.8	1360.1	1188.1	1080.4
35°	893.9	983.9	1189.7	1011.2	906.7
37.5°	752.4	829.6	1011.2	847.3	760.4
40°	636.6	697.7	829.6	705.8	635.0
42.5°	525.7	583.6	672.0	591.6	532.1
45°	438.9	485.5	543.4	490.3	446.9
47.5°	364.9	403.5	445.3	403.5	369.8
50°	303.9	334.4	368.2	334.4	310.3
52.5°	271.7	281.3	303.9	283.0	271.7
55°	244.4	249.2	257.2	249.2	244.4
57.5°	218.6	221.9	220.3	220.3	218.6
60°	194.5	196.1	192.9	194.5	192.9
62.5°	172.0	172.0	168.8	172.0	170.4
65°	149.5	151.1	149.5	149.5	149.5
67.5°	130.2	130.2	128.6	130.2	130.2
70°	112.5	112.5	110.9	112.5	110.9
72.5°	94.9	94.9	93.2	93.2	93.2
75°	78.8	78.8	77.2	77.2	78.8
77.5°	62.7	62.7	61.1	62.7	62.7
80°	48.2	48.2	46.6	48.2	48.2
82.5°	33.8	33.8	33.8	35.4	35.4
85°	20.9	20.9	20.9	20.9	20.9
87.5°	9.6	9.6	9.6	9.6	11.3
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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