

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: P837557

Luminaire Tested: HCSQ445D010-HM44560827-41SQMW

Issue Date: 5/17/2024



Test Information

Test Method: LM-79-2019
Report Number: P837557
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: HCSQ445D010-HM44560827-41SQMW
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, MATTE WHITE TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 2700K CCT
Ballast/Driver: -

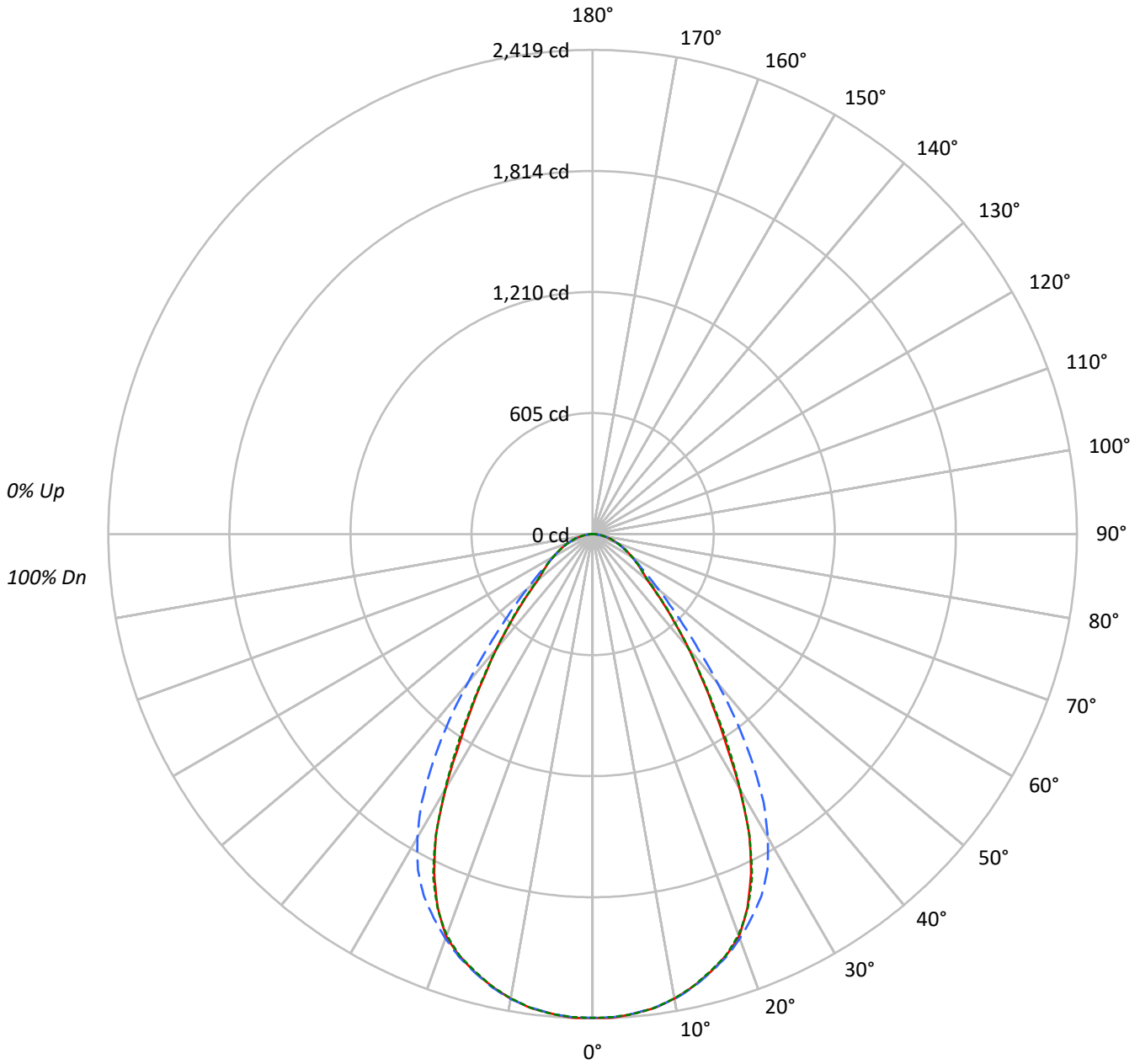
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3507.4 lumens
Efficiency: N/A
Efficacy: 76.4 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): 45.9
Input Voltage (V): NR
Input Current (Ain): 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

TEST NUMBER: P837557
CATALOG NUMBER: HCSQ445D010-HM44560827-41SQMW

Luminous Intensity Polar Plot





TEST NUMBER: P837557

CATALOG NUMBER: HCSQ445D010-HM44560827-41SQMW

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°	234138	234138	234138
5°	233759	233759	233943
10°	231838	232025	231661
15°	227334	227524	226953
20°	220515	221680	219742
25°	200131	213182	201541
30°	164281	195792	164907
35°	123478	164350	125264
40°	94050	122542	93809
45°	70241	86956	71529
50°	53487	64821	54618
55°	48203	50754	48203
60°	44020	43671	43671
65°	40023	40023	40023
70°	37247	36709	36709
75°	34435	33724	34435
80°	31409	30405	31409
85°	27121	27121	27121

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°

Vertical Angle: 45°

Luminance: 86956 cd/sqm



TEST NUMBER: P837557

CATALOG NUMBER: HCSQ445D010-HM44560827-41SQMW

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	228.0	6.5
10°-20°	638.1	18.2
20°-30°	877.6	25.0
30°-40°	747.1	21.3
40°-50°	451.3	12.9
50°-60°	266.0	7.6
60°-70°	174.4	5.0
70°-80°	96.7	2.8
80°-90°	28.3	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°	1743.7	49.7
0°-40°	2490.8	71.0
0°-60°	3208.0	91.5
0°-90°	3507.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3507.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2417	2417	2417	2417	2417	
5°	2404	2406	2404	2402	2406	228
15°	2267	2272	2269	2267	2263	638
25°	1872	1930	1994	1934	1886	846
35°	1044	1149	1390	1181	1059	661
45°	513	567	635	573	522	403
55°	285	291	300	291	285	257
65°	175	176	175	175	175	175
75°	92	92	90	90	92	98
85°	24	24	24	24	24	28
90°	0	0	0	0	0	



TEST NUMBER: P837557

CATALOG NUMBER: HCSQ445D010-HM44560827-41SQMW

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2416.9	2416.9	2416.9	2416.9	2416.9
2.5°	2418.8	2413.2	2415.1	2413.2	2415.1
5°	2403.8	2405.7	2403.8	2401.9	2405.7
7.5°	2386.9	2385.0	2385.0	2383.1	2386.9
10°	2356.8	2353.1	2358.7	2355.0	2355.0
12.5°	2315.5	2321.2	2319.3	2319.3	2315.5
15°	2266.7	2272.3	2268.6	2266.7	2262.9
17.5°	2210.4	2214.1	2216.0	2208.5	2208.5
20°	2139.0	2146.5	2150.3	2137.1	2131.5
22.5°	2020.7	2054.5	2075.1	2052.6	2024.4
25°	1872.3	1930.5	1994.4	1934.3	1885.5
27.5°	1693.9	1776.5	1891.1	1789.7	1693.9
30°	1468.6	1590.6	1750.3	1603.8	1474.2
32.5°	1235.7	1365.3	1588.8	1387.8	1262.0
35°	1044.1	1149.3	1389.7	1181.2	1059.2
37.5°	878.9	969.0	1181.2	989.7	888.3
40°	743.7	815.0	969.0	824.4	741.8
42.5°	614.1	681.7	785.0	691.1	621.6
45°	512.7	567.1	634.7	572.8	522.1
47.5°	426.3	471.4	520.2	471.4	431.9
50°	354.9	390.6	430.1	390.6	362.4
52.5°	317.4	328.6	354.9	330.5	317.4
55°	285.4	291.1	300.5	291.1	285.4
57.5°	255.4	259.2	257.3	257.3	255.4
60°	227.2	229.1	225.4	227.2	225.4
62.5°	200.9	200.9	197.2	200.9	199.1
65°	174.6	176.5	174.6	174.6	174.6
67.5°	152.1	152.1	150.2	152.1	152.1
70°	131.5	131.5	129.6	131.5	129.6
72.5°	110.8	110.8	108.9	108.9	108.9
75°	92.0	92.0	90.1	90.1	92.0
77.5°	73.2	73.2	71.4	73.2	73.2
80°	56.3	56.3	54.5	56.3	56.3
82.5°	39.4	39.4	39.4	41.3	41.3
85°	24.4	24.4	24.4	24.4	24.4
87.5°	11.3	11.3	11.3	11.3	13.1
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



Report Generated By 670245859 / DESKTOP-T8S5UU9

Signify Classified - Internal
Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report





— 0°-180° - - 45°-225° - - - - 90°-270°

Signify Classified - Internal
Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report



Signify Classified - Internal
Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report



Signify Classified - Internal
Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report



(END OF REPORT)