

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: P837232

Luminaire Tested: HCSQ405D010-HM40525940-41SQMW

Issue Date: 5/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P837232
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: HCSQ405D010-HM40525940-41SQMW
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, MATTE WHITE TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 4000K CCT
Ballast/Driver: -

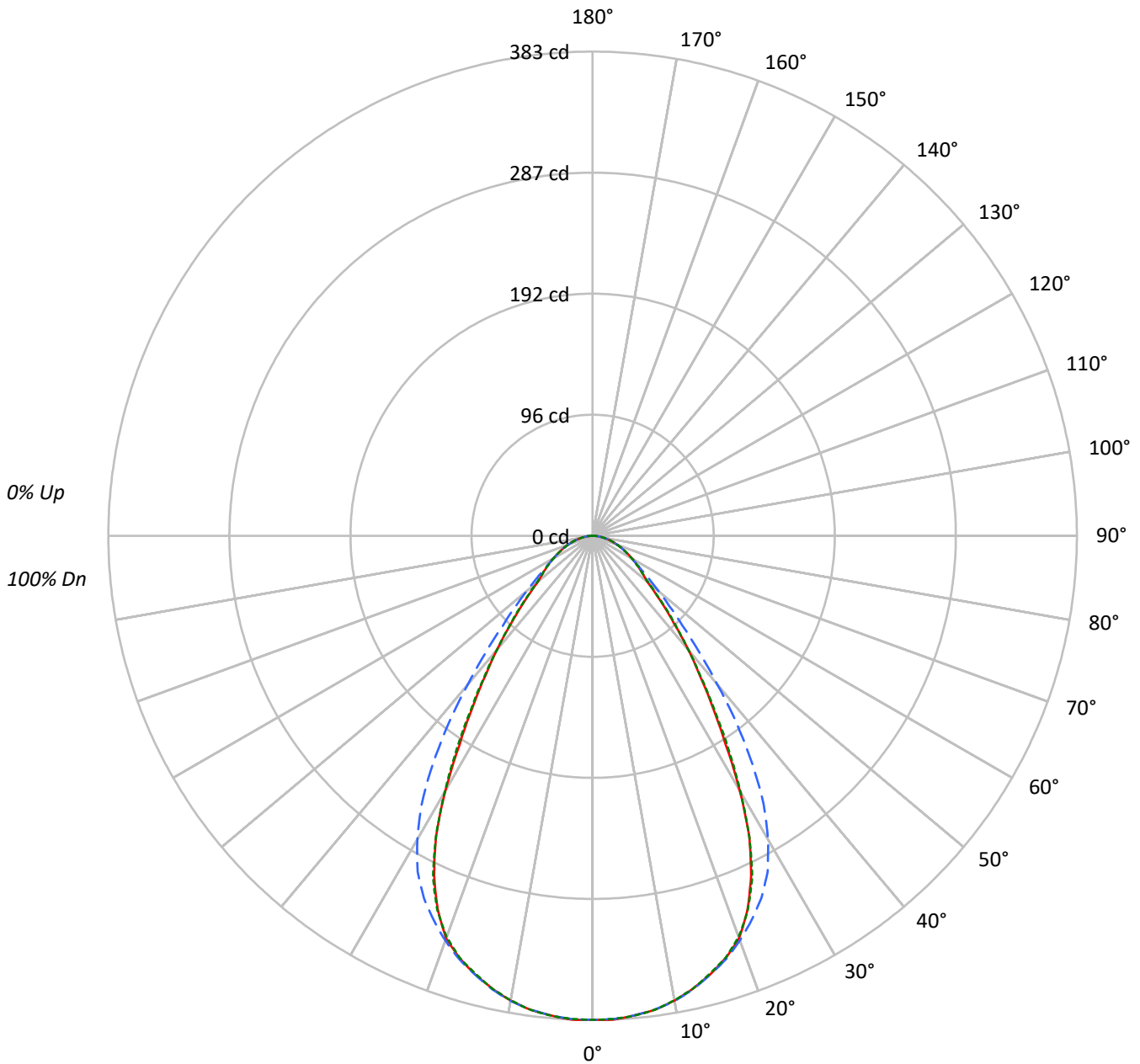
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 555.7 lumens
Efficiency: N/A
Efficacy: 92.6 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): 6
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

TEST NUMBER: P837232
CATALOG NUMBER: HCSQ405D010-HM40525940-41SQMW

Luminous Intensity Polar Plot





TEST NUMBER: P837232

CATALOG NUMBER: HCSQ405D010-HM40525940-41SQMW

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20					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					100			
1	111	108	105	102	109	106	103	100	101	99	97	98	96	94	94	93	91	89					89			
2	104	98	92	88	102	96	91	87	92	88	85	89	86	83	86	84	81	79					79			
3	97	89	82	77	95	87	81	76	84	79	75	82	78	74	79	76	73	71					71			
4	91	81	74	69	89	80	73	68	77	72	67	75	70	66	73	69	66	64					64			
5	85	74	67	62	83	73	66	61	71	65	61	70	64	60	68	63	60	58					58			
6	79	69	61	56	78	68	61	56	66	60	55	64	59	55	63	58	54	53					53			
7	75	63	56	51	73	63	56	51	61	55	50	60	54	50	59	54	50	48					48			
8	70	59	52	47	69	58	51	47	57	51	46	56	50	46	55	50	46	44					44			
9	66	55	48	43	65	54	48	43	53	47	43	52	47	43	51	46	43	41					41			
10	63	51	45	40	62	51	44	40	50	44	40	49	44	40	48	43	40	38					38			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	37094	37094	37094
5°	37031	37031	37060
10°	36731	36761	36702
15°	36015	36045	35955
20°	34938	35124	34814
25°	31704	33777	31928
30°	26030	31019	26131
35°	19561	26042	19845
40°	14897	19412	14859
45°	11125	13782	11330
50°	8470	10263	8651
55°	7634	8040	7634
60°	6975	6917	6917
65°	6350	6350	6350
70°	5891	5807	5807
75°	5465	5352	5465
80°	4965	4798	4965
85°	4335	4335	4335

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 13782 cd/sqm



TEST NUMBER: P837232

CATALOG NUMBER: HCSQ405D010-HM40525940-41SQMW

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	36.1	6.5
10°-20°	101.1	18.2
20°-30°	139.0	25.0
30°-40°	118.4	21.3
40°-50°	71.5	12.9
50°-60°	42.1	7.6
60°-70°	27.6	5.0
70°-80°	15.3	2.8
80°-90°	4.5	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°	276.3	49.7
0°-40°	394.6	71.0
0°-60°	508.3	91.5
0°-90°	555.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	555.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	383	383	383	383	383	
5°	381	381	381	380	381	36
15°	359	360	359	359	358	101
25°	297	306	316	306	299	134
35°	165	182	220	187	168	105
45°	81	90	101	91	83	64
55°	45	46	48	46	45	41
65°	28	28	28	28	28	28
75°	15	15	14	14	15	15
85°	4	4	4	4	4	4
90°	0	0	0	0	0	



TEST NUMBER: P837232

CATALOG NUMBER: HCSQ405D010-HM40525940-41SQMW

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	382.9	382.9	382.9	382.9	382.9
2.5°	383.2	382.3	382.6	382.3	382.6
5°	380.8	381.1	380.8	380.5	381.1
7.5°	378.2	377.9	377.9	377.6	378.2
10°	373.4	372.8	373.7	373.1	373.1
12.5°	366.9	367.7	367.4	367.4	366.9
15°	359.1	360.0	359.4	359.1	358.5
17.5°	350.2	350.8	351.1	349.9	349.9
20°	338.9	340.1	340.7	338.6	337.7
22.5°	320.1	325.5	328.8	325.2	320.7
25°	296.6	305.9	316.0	306.5	298.7
27.5°	268.4	281.5	299.6	283.5	268.4
30°	232.7	252.0	277.3	254.1	233.6
32.5°	195.8	216.3	251.7	219.9	199.9
35°	165.4	182.1	220.2	187.1	167.8
37.5°	139.2	153.5	187.1	156.8	140.7
40°	117.8	129.1	153.5	130.6	117.5
42.5°	97.3	108.0	124.4	109.5	98.5
45°	81.2	89.9	100.6	90.7	82.7
47.5°	67.5	74.7	82.4	74.7	68.4
50°	56.2	61.9	68.1	61.9	57.4
52.5°	50.3	52.1	56.2	52.4	50.3
55°	45.2	46.1	47.6	46.1	45.2
57.5°	40.5	41.1	40.8	40.8	40.5
60°	36.0	36.3	35.7	36.0	35.7
62.5°	31.8	31.8	31.2	31.8	31.5
65°	27.7	28.0	27.7	27.7	27.7
67.5°	24.1	24.1	23.8	24.1	24.1
70°	20.8	20.8	20.5	20.8	20.5
72.5°	17.6	17.6	17.3	17.3	17.3
75°	14.6	14.6	14.3	14.3	14.6
77.5°	11.6	11.6	11.3	11.6	11.6
80°	8.9	8.9	8.6	8.9	8.9
82.5°	6.2	6.2	6.2	6.5	6.5
85°	3.9	3.9	3.9	3.9	3.9
87.5°	1.8	1.8	1.8	1.8	2.1
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)