

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: P837207

Luminaire Tested: HCSQ405D010-HM40525835-41SQMW

Issue Date: 5/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P837207
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-HM40525835-41SQMW
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, MATTE WHITE TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 3500K CCT
Ballast/Driver: -

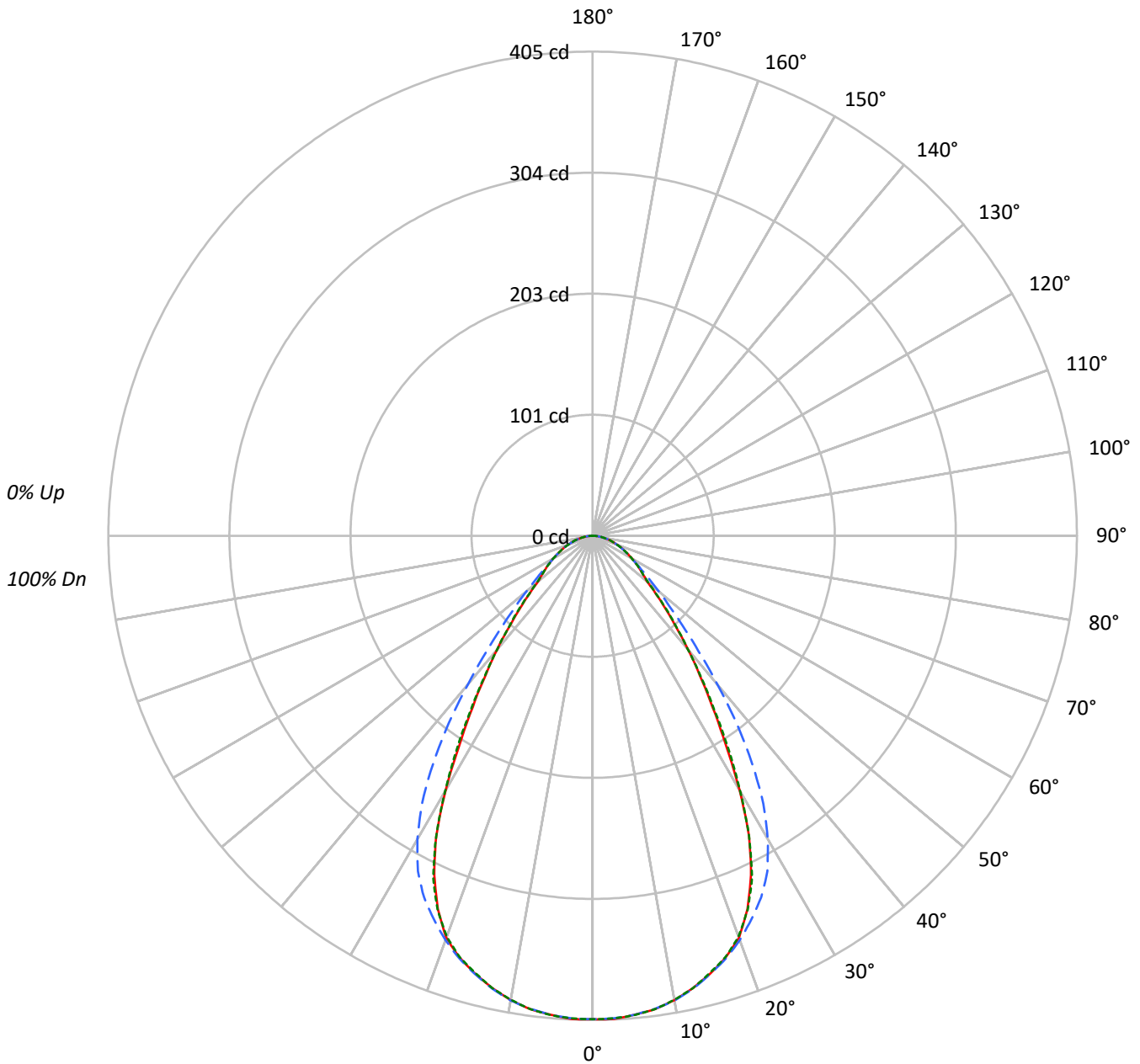
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 586.9 lumens
Efficiency: N/A
Efficacy: 97.8 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

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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°	39176	39176	39176
5°	39112	39112	39141
10°	38797	38827	38768
15°	38041	38071	37981
20°	36897	37093	36773
25°	33489	35669	33724
30°	27485	32764	27596
35°	20661	27496	20956
40°	15732	20499	15694
45°	11755	14550	11974
50°	8952	10851	9133
55°	8073	8496	8073
60°	7363	7304	7304
65°	6693	6693	6693
70°	6231	6146	6146
75°	5764	5652	5764
80°	5244	5077	5244
85°	4557	4557	4557

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 14550 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	38.1	6.5
10°-20°	106.8	18.2
20°-30°	146.9	25.0
30°-40°	125.0	21.3
40°-50°	75.5	12.9
50°-60°	44.5	7.6
60°-70°	29.2	5.0
70°-80°	16.2	2.8
80°-90°	4.7	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°	291.8	49.7
0°-40°	416.8	71.0
0°-60°	536.8	91.5
0°-90°	586.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	586.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	404	404	404	404	404	
5°	402	402	402	402	402	38
15°	379	380	380	379	379	107
25°	313	323	334	324	316	142
35°	175	192	232	198	177	111
45°	86	95	106	96	87	67
55°	48	49	50	49	48	43
65°	29	30	29	29	29	29
75°	15	15	15	15	15	16
85°	4	4	4	4	4	5
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	404.4	404.4	404.4	404.4	404.4
2.5°	404.7	403.8	404.1	403.8	404.1
5°	402.2	402.5	402.2	401.9	402.5
7.5°	399.4	399.1	399.1	398.8	399.4
10°	394.4	393.7	394.7	394.1	394.1
12.5°	387.5	388.4	388.1	388.1	387.5
15°	379.3	380.2	379.6	379.3	378.7
17.5°	369.9	370.5	370.8	369.5	369.5
20°	357.9	359.2	359.8	357.6	356.7
22.5°	338.1	343.8	347.2	343.5	338.7
25°	313.3	323.0	333.7	323.7	315.5
27.5°	283.4	297.3	316.4	299.5	283.4
30°	245.7	266.2	292.9	268.4	246.7
32.5°	206.8	228.5	265.8	232.2	211.2
35°	174.7	192.3	232.5	197.7	177.2
37.5°	147.1	162.1	197.7	165.6	148.6
40°	124.4	136.4	162.1	138.0	124.1
42.5°	102.8	114.1	131.4	115.6	104.0
45°	85.8	94.9	106.2	95.8	87.4
47.5°	71.3	78.9	87.0	78.9	72.3
50°	59.4	65.4	72.0	65.4	60.6
52.5°	53.1	55.0	59.4	55.3	53.1
55°	47.8	48.7	50.3	48.7	47.8
57.5°	42.7	43.4	43.1	43.1	42.7
60°	38.0	38.3	37.7	38.0	37.7
62.5°	33.6	33.6	33.0	33.6	33.3
65°	29.2	29.5	29.2	29.2	29.2
67.5°	25.5	25.5	25.1	25.5	25.5
70°	22.0	22.0	21.7	22.0	21.7
72.5°	18.5	18.5	18.2	18.2	18.2
75°	15.4	15.4	15.1	15.1	15.4
77.5°	12.3	12.3	11.9	12.3	12.3
80°	9.4	9.4	9.1	9.4	9.4
82.5°	6.6	6.6	6.6	6.9	6.9
85°	4.1	4.1	4.1	4.1	4.1
87.5°	1.9	1.9	1.9	1.9	2.2
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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