

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: P838584

Luminaire Tested: HCSQ640D010-HM63040835-61SQC

Issue Date: 5/21/2024

Test Information

Test Method: LM-79-2019
Report Number: P838584
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2309-166-1)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 5/21/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCSQ640D010-HM63040835-61SQC
Description: HALO COMMERCIAL 6" SQUARE, NEW CONSTRUCTION FRAME, SPECULAR CLEAR TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 3500K CCT
Ballast/Driver: -

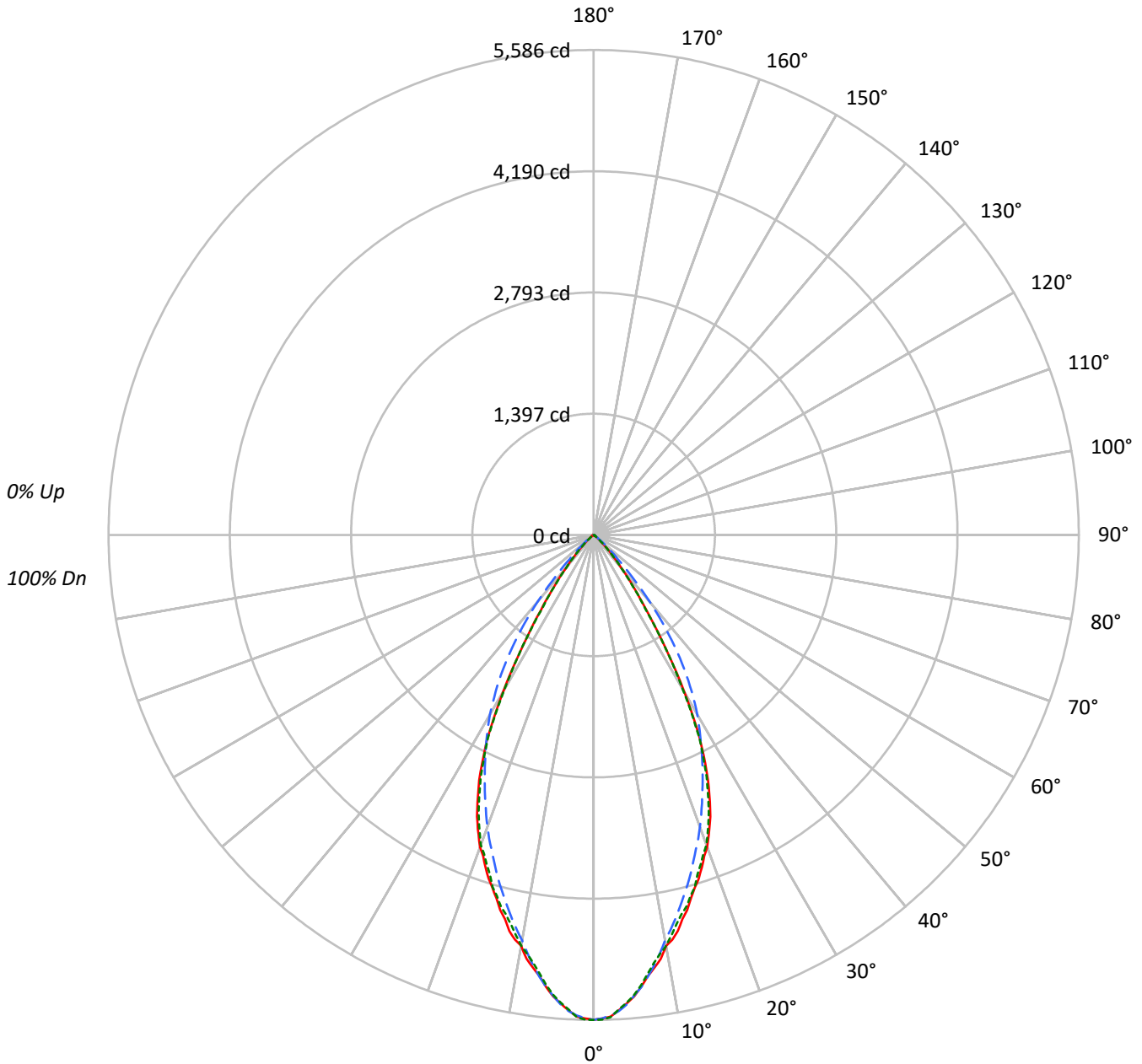
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4184.4 lumens
Efficiency: N/A
Efficacy: 102.1 lumens/watt
Spacing Criteria (0/90/45): 0.82 / 0.81 / 0.85
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
CIE Type: Direct

Input Watts (W): 41
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	114	111	108	106	111	109	107	105	105	103	101	101	100	98	98	96	95	94																			
2	108	103	99	96	106	102	98	95	98	95	93	95	93	91	93	91	89	87																			
3	103	97	92	88	101	95	91	87	93	89	86	90	87	84	88	85	83	81																			
4	98	90	85	81	96	89	84	80	87	83	79	85	81	78	83	80	78	76																			
5	93	85	79	75	91	84	78	74	82	77	74	80	76	73	79	75	72	71																			
6	88	80	74	70	87	79	73	69	77	72	69	76	72	68	75	71	68	66																			
7	84	75	69	65	83	74	69	65	73	68	64	72	67	64	71	67	64	62																			
8	80	71	65	61	79	70	65	61	69	64	60	68	64	60	67	63	60	59																			
9	76	67	61	57	75	66	61	57	65	60	57	65	60	57	64	60	56	55																			
10	73	63	58	54	72	63	57	54	62	57	54	61	57	53	61	56	53	52																			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	240526	240526	240526
5°	230718	230316	229992
10°	210140	207285	209973
15°	193119	186050	191956
20°	175257	163972	174061
25°	148121	140938	146078
30°	103708	118643	101948
35°	55704	91010	54627
40°	27580	56318	27372
45°	12044	23747	11813
50°	3872	8621	3872
55°	1959	2800	1824
60°	1283	1283	1283
65°	947	947	947
70°	705	705	705
75°	616	616	616
80°	471	471	471
85°	939	939	939

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 23747 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	490.6	11.7
10°-20°	1184.6	28.3
20°-30°	1368.4	32.7
30°-40°	854.5	20.4
40°-50°	237.4	5.7
50°-60°	33.2	0.8
60°-70°	9.8	0.2
70°-80°	4.2	0.1
80°-90°	1.8	0.0
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°	3043.5	72.7
0°-40°	3898.0	93.2
0°-60°	4168.6	99.6
0°-90°	4184.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4184.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5586	5586	5586	5586	5586	
5°	5338	5323	5329	5321	5321	492
15°	4332	4250	4174	4239	4306	1214
25°	3118	3026	2967	3025	3075	1393
35°	1060	1308	1732	1293	1039	704
45°	198	252	390	250	194	171
55°	26	26	37	26	24	26
65°	9	9	9	9	9	10
75°	4	4	4	4	4	4
85°	2	2	2	2	2	2
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5586.4	5586.4	5586.4	5586.4	5586.4
1°	5569.6	5569.6	5569.6	5584.5	5584.5
2°	5552.8	5549.1	5539.7	5550.9	5556.5
3°	5483.8	5491.2	5495.0	5489.4	5476.3
4°	5412.9	5405.4	5425.9	5412.9	5401.7
5°	5338.2	5323.3	5328.9	5321.4	5321.4
6°	5233.7	5252.4	5237.5	5224.4	5216.9
7°	5119.9	5134.8	5125.5	5106.9	5093.8
8°	5030.4	5021.0	5006.1	5002.4	4980.0
9°	4944.5	4910.9	4877.4	4883.0	4888.6
10°	4806.5	4810.2	4741.2	4793.4	4802.7
11°	4748.6	4728.1	4636.7	4679.6	4694.5
12°	4664.7	4599.3	4521.0	4556.4	4584.4
13°	4543.4	4476.2	4405.3	4459.4	4487.4
14°	4451.9	4375.4	4285.9	4354.9	4412.8
15°	4332.5	4250.4	4173.9	4239.2	4306.4
16°	4228.0	4132.9	4056.4	4119.8	4220.6
17°	4136.6	4019.1	3925.8	3992.9	4090.0
18°	4030.3	3894.1	3808.2	3879.1	3989.2
19°	3912.7	3774.6	3698.1	3756.0	3882.9
20°	3825.0	3670.1	3578.7	3634.7	3798.9
22.5°	3511.6	3349.2	3265.3	3332.4	3463.0
25°	3117.9	3026.4	2966.7	3024.6	3074.9
27.5°	2651.4	2651.4	2671.9	2647.7	2632.7
30°	2086.0	2237.2	2386.4	2229.7	2050.6
32.5°	1522.5	1765.1	2065.5	1796.8	1520.7
35°	1059.8	1308.0	1731.5	1293.0	1039.3
37.5°	737.0	901.2	1365.8	910.5	727.7
40°	490.7	604.5	1002.0	615.7	487.0
42.5°	320.9	399.3	647.5	401.2	313.5
45°	197.8	251.9	390.0	250.0	194.0
47.5°	115.7	149.3	227.6	151.1	113.8
50°	57.8	87.7	128.7	85.8	57.8
52.5°	33.6	46.6	70.9	44.8	33.6
55°	26.1	26.1	37.3	26.1	24.3
57.5°	20.5	20.5	20.5	20.5	18.7
60°	14.9	16.8	14.9	14.9	14.9
62.5°	13.1	13.1	11.2	13.1	11.2
65°	9.3	9.3	9.3	9.3	9.3
67.5°	7.5	7.5	7.5	7.5	7.5
70°	5.6	5.6	5.6	5.6	5.6
72.5°	3.7	5.6	3.7	5.6	5.6
75°	3.7	3.7	3.7	3.7	3.7



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
82.5°	1.9	1.9	1.9	1.9	1.9
85°	1.9	1.9	1.9	1.9	1.9
87.5°	1.9	1.9	1.9	1.9	1.9
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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77.5°	3.7	3.7	3.7	3.7	1.9
80°	1.9	1.9	1.9	1.9	1.9

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