

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: P838589

Luminaire Tested: HCSQ640D010-HM63040840-61SQC

Issue Date: 5/21/2024



Test Information

Test Method: LM-79-2019
Report Number: P838589
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-HM63040840-61SQC
Description: HALO COMMERCIAL 6" SQUARE, NEW CONSTRUCTION FRAME, SPECULAR CLEAR TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 4000K CCT
Ballast/Driver: -

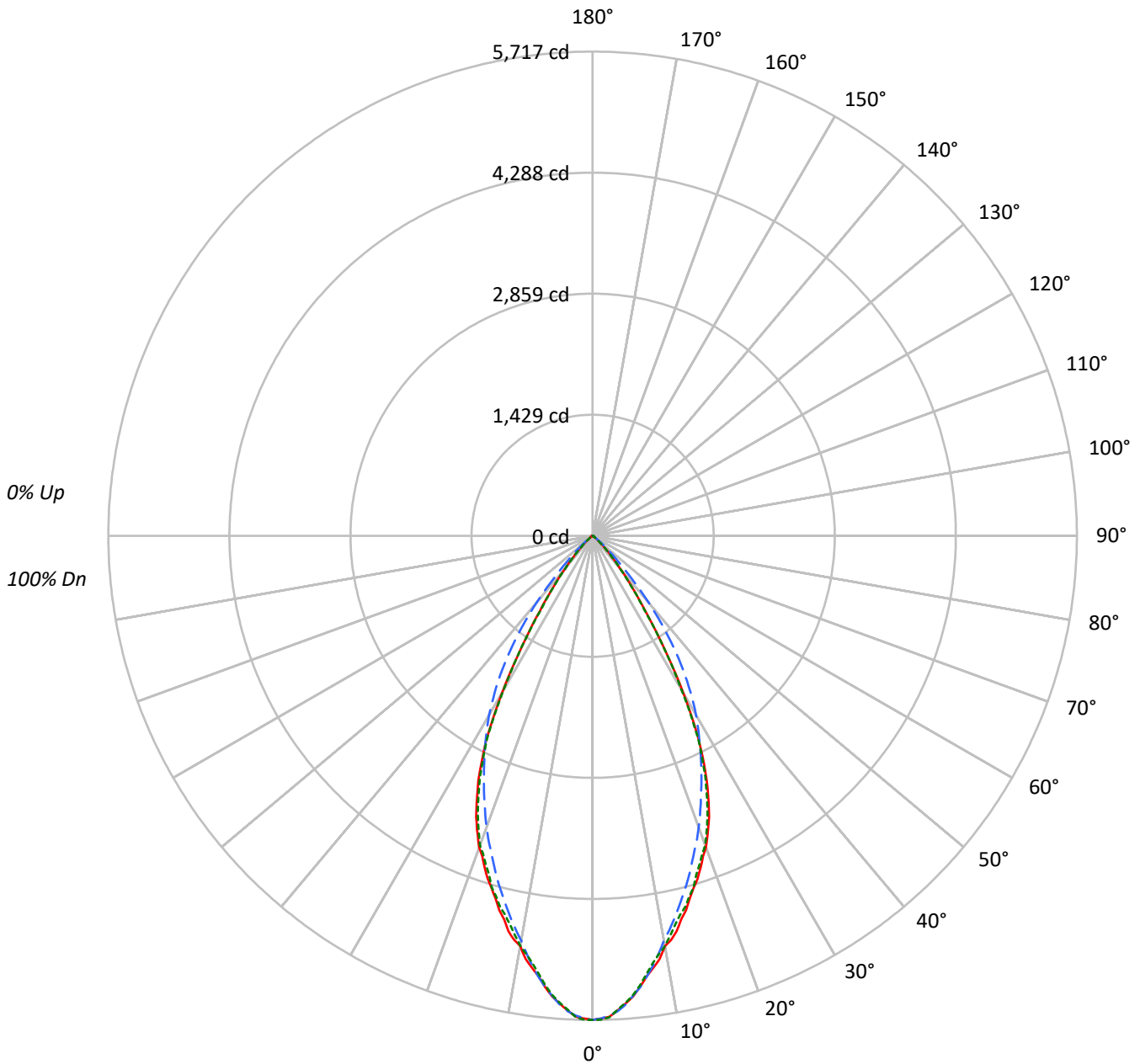
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4282.4 lumens
Efficiency: N/A
Efficacy: 104.4 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°	246162	246162	246162
5°	236125	235714	235385
10°	215062	212142	214896
15°	197648	190413	196453
20°	179367	167816	178139
25°	151589	144244	149503
30°	106140	121427	104335
35°	57008	93144	55904
40°	28226	57638	28013
45°	12324	24301	12093
50°	3965	8828	3965
55°	2004	2867	1862
60°	1318	1318	1318
65°	968	968	968
70°	718	718	718
75°	632	632	632
80°	471	471	471
85°	939	939	939

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 24301 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	502.1	11.7
10°-20°	1212.3	28.3
20°-30°	1400.4	32.7
30°-40°	874.6	20.4
40°-50°	243.0	5.7
50°-60°	34.0	0.8
60°-70°	10.0	0.2
70°-80°	4.3	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°	3114.8	72.7
0°-40°	3989.4	93.2
0°-60°	4266.3	99.6
0°-90°	4282.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4282.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5717	5717	5717	5717	5717	
5°	5463	5448	5454	5446	5446	504
15°	4434	4350	4272	4339	4407	1242
25°	3191	3097	3036	3095	3147	1425
35°	1085	1339	1772	1323	1064	721
45°	202	258	399	256	199	175
55°	27	27	38	27	25	26
65°	10	10	10	10	10	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°	5717.3	5717.3	5717.3	5717.3	5717.3
1°	5700.1	5700.1	5700.1	5715.4	5715.4
2°	5682.9	5679.1	5669.6	5681.0	5686.8
3°	5612.3	5619.9	5623.7	5618.0	5604.7
4°	5539.7	5532.1	5553.1	5539.7	5528.3
5°	5463.3	5448.1	5453.8	5446.2	5446.2
6°	5356.4	5375.5	5360.2	5346.9	5339.2
7°	5239.9	5255.2	5245.6	5226.6	5213.2
8°	5148.3	5138.7	5123.4	5119.6	5096.7
9°	5060.4	5026.0	4991.7	4997.4	5003.1
10°	4919.1	4922.9	4852.3	4905.7	4915.3
11°	4859.9	4838.9	4745.3	4789.3	4804.5
12°	4774.0	4707.1	4626.9	4663.2	4691.9
13°	4649.9	4581.1	4508.5	4563.9	4592.6
14°	4556.3	4478.0	4386.3	4457.0	4516.2
15°	4434.1	4350.1	4271.8	4338.6	4407.3
16°	4327.1	4229.7	4151.5	4216.4	4319.5
17°	4233.6	4113.3	4017.8	4086.5	4185.8
18°	4124.7	3985.3	3897.5	3970.0	4082.7
19°	4004.4	3863.1	3784.8	3844.0	3973.9
20°	3914.7	3756.2	3662.6	3719.9	3887.9
22.5°	3593.9	3427.7	3341.8	3410.5	3544.2
25°	3190.9	3097.4	3036.3	3095.4	3147.0
27.5°	2713.5	2713.5	2734.5	2709.7	2694.4
30°	2134.9	2289.6	2442.4	2282.0	2098.6
32.5°	1558.2	1806.5	2113.9	1838.9	1556.3
35°	1084.6	1338.6	1772.1	1323.3	1063.6
37.5°	754.3	922.3	1397.8	931.9	744.7
40°	502.2	618.7	1025.5	630.2	498.4
42.5°	328.4	408.7	662.6	410.6	320.8
45°	202.4	257.8	399.1	255.9	198.6
47.5°	118.4	152.8	233.0	154.7	116.5
50°	59.2	89.8	131.8	87.8	59.2
52.5°	34.4	47.7	72.6	45.8	34.4
55°	26.7	26.7	38.2	26.7	24.8
57.5°	21.0	21.0	21.0	21.0	19.1
60°	15.3	17.2	15.3	15.3	15.3
62.5°	13.4	13.4	11.5	13.4	11.5
65°	9.5	9.5	9.5	9.5	9.5
67.5°	7.6	7.6	7.6	7.6	7.6
70°	5.7	5.7	5.7	5.7	5.7
72.5°	3.8	5.7	3.8	5.7	5.7
75°	3.8	3.8	3.8	3.8	3.8



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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°	3.8	3.8	3.8	3.8	1.9
80°	1.9	1.9	1.9	1.9	1.9

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(END OF REPORT)