

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



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: P838649

Luminaire Tested: HCSQ645D010-HM64560940-61SQC

Issue Date: 5/21/2024

Test Information

Test Method: LM-79-2019
Report Number: P838649
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: HCSQ645D010-HM64560940-61SQC
Description: HALO COMMERCIAL 6" SQUARE, NEW CONSTRUCTION FRAME, SPECULAR CLEAR TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 4000K CCT
Ballast/Driver: -

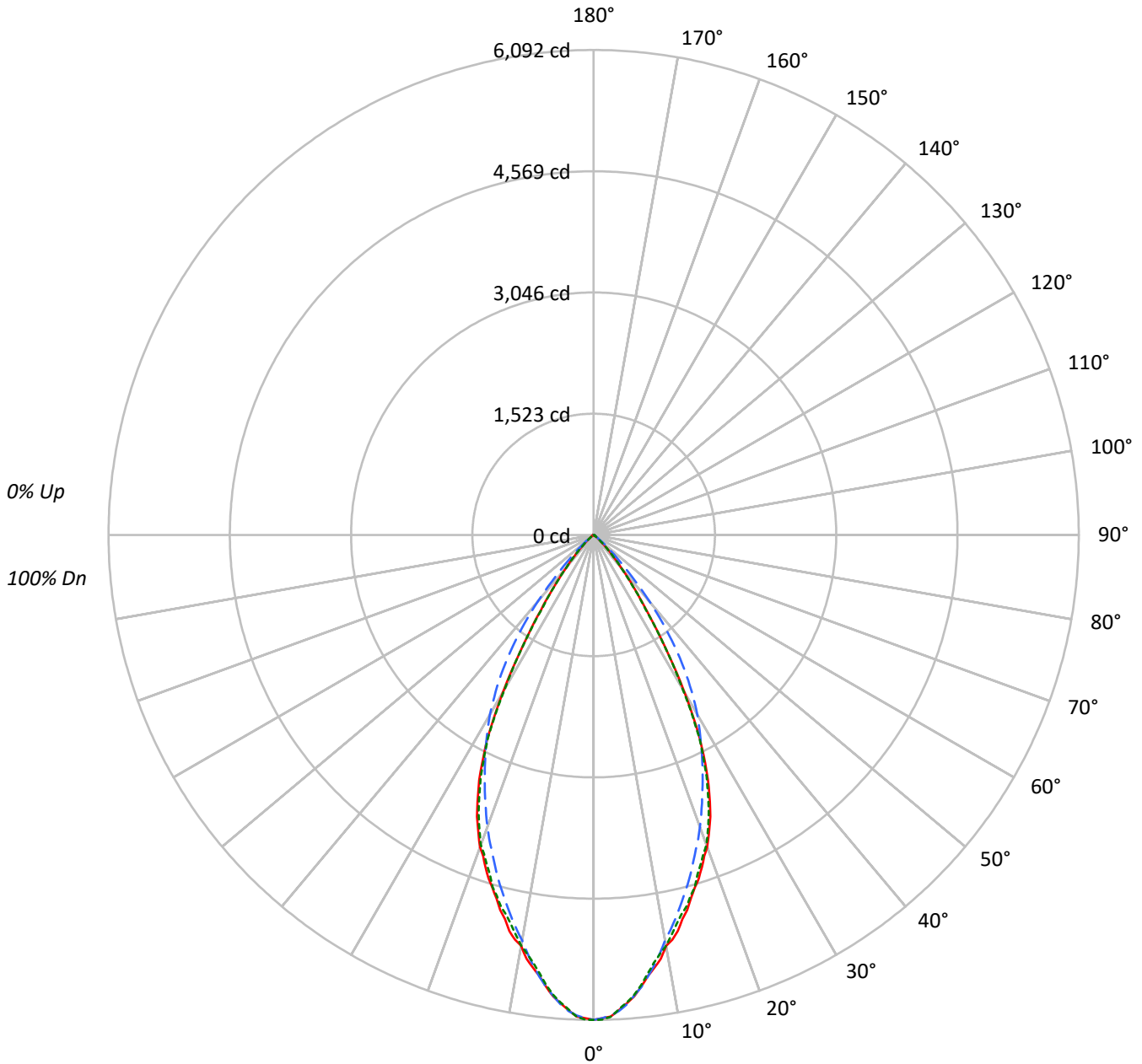
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4563.2 lumens
Efficiency: N/A
Efficacy: 99.4 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): 45.9
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°	262299	262299	262299
5°	251606	251165	250815
10°	229162	226049	228983
15°	210606	202894	209335
20°	191124	178817	189818
25°	161527	153698	159304
30°	113100	129387	111176
35°	60750	99251	59573
40°	30075	61415	29851
45°	13134	25896	12884
50°	4227	9404	4227
55°	2139	3055	1989
60°	1404	1404	1404
65°	1039	1039	1039
70°	768	768	768
75°	682	682	682
80°	496	496	496
85°	988	988	988

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 25896 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	535.0	11.7
10°-20°	1291.8	28.3
20°-30°	1492.2	32.7
30°-40°	931.9	20.4
40°-50°	258.9	5.7
50°-60°	36.2	0.8
60°-70°	10.7	0.2
70°-80°	4.6	0.1
80°-90°	1.9	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°	3319.0	72.7
0°-40°	4250.9	93.2
0°-60°	4546.0	99.6
0°-90°	4563.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4563.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6092	6092	6092	6092	6092	
5°	5822	5805	5811	5803	5803	537
15°	4725	4635	4552	4623	4696	1323
25°	3400	3300	3235	3298	3353	1519
35°	1156	1426	1888	1410	1133	768
45°	216	275	425	273	212	187
55°	28	28	41	28	26	28
65°	10	10	10	10	10	11
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°	6092.1	6092.1	6092.1	6092.1	6092.1
1°	6073.8	6073.8	6073.8	6090.1	6090.1
2°	6055.5	6051.4	6041.3	6053.5	6059.6
3°	5980.2	5988.4	5992.4	5986.3	5972.1
4°	5902.9	5894.8	5917.2	5902.9	5890.7
5°	5821.5	5805.2	5811.3	5803.2	5803.2
6°	5707.6	5727.9	5711.6	5697.4	5689.3
7°	5583.4	5599.7	5589.6	5569.2	5555.0
8°	5485.8	5475.6	5459.3	5455.3	5430.8
9°	5392.2	5355.6	5318.9	5325.0	5331.1
10°	5241.6	5245.7	5170.4	5227.4	5237.5
11°	5178.5	5156.1	5056.4	5103.2	5119.5
12°	5087.0	5015.7	4930.3	4968.9	4999.5
13°	4954.7	4881.4	4804.1	4863.1	4893.7
14°	4855.0	4771.6	4673.9	4749.2	4812.3
15°	4724.8	4635.2	4551.8	4623.0	4696.3
16°	4610.8	4507.0	4423.6	4492.8	4602.7
17°	4511.1	4382.9	4281.2	4354.4	4460.2
18°	4395.1	4246.6	4153.0	4230.3	4350.4
19°	4266.9	4116.4	4032.9	4096.0	4234.4
20°	4171.3	4002.4	3902.7	3963.8	4142.8
22.5°	3829.5	3652.4	3560.9	3634.1	3776.6
25°	3400.1	3300.4	3235.3	3298.4	3353.3
27.5°	2891.4	2891.4	2913.8	2887.4	2871.1
30°	2274.9	2439.7	2602.5	2431.6	2236.2
32.5°	1660.4	1924.9	2252.5	1959.5	1658.3
35°	1155.8	1426.4	1888.3	1410.1	1133.4
37.5°	803.7	982.8	1489.5	993.0	793.6
40°	535.1	659.3	1092.7	671.5	531.1
42.5°	350.0	435.4	706.1	437.5	341.8
45°	215.7	274.7	425.3	272.7	211.6
47.5°	126.2	162.8	248.2	164.8	124.1
50°	63.1	95.6	140.4	93.6	63.1
52.5°	36.6	50.9	77.3	48.8	36.6
55°	28.5	28.5	40.7	28.5	26.5
57.5°	22.4	22.4	22.4	22.4	20.3
60°	16.3	18.3	16.3	16.3	16.3
62.5°	14.2	14.2	12.2	14.2	12.2
65°	10.2	10.2	10.2	10.2	10.2
67.5°	8.1	8.1	8.1	8.1	8.1
70°	6.1	6.1	6.1	6.1	6.1
72.5°	4.1	6.1	4.1	6.1	6.1
75°	4.1	4.1	4.1	4.1	4.1



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
82.5°	2.0	2.0	2.0	2.0	2.0
85°	2.0	2.0	2.0	2.0	2.0
87.5°	2.0	2.0	2.0	2.0	2.0
90°	0.0	0.0	0.0	0.0	0.0

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Scaled Data Report





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

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77.5°	4.1	4.1	4.1	4.1	2.0
80°	2.0	2.0	2.0	2.0	2.0

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(END OF REPORT)