

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: P838769

Luminaire Tested: HCSQ660D010-HM64560940-61SQC

Issue Date: 5/21/2024



Test Information

Test Method: LM-79-2019
Report Number: P838769
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: HCSQ660D010-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

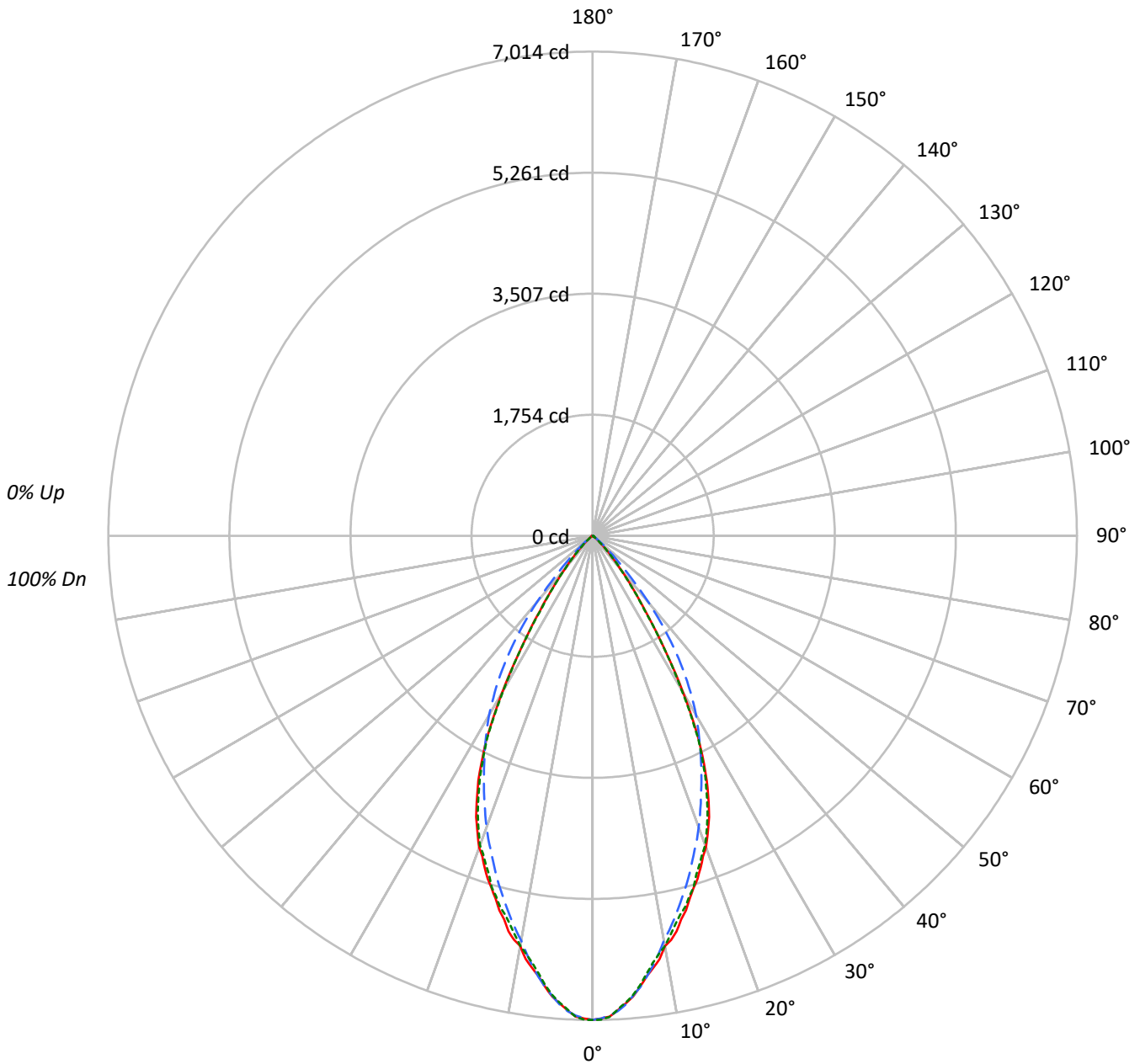
Lumens per Lamp: N/A
Luminaire Lumens: 5253.8 lumens
Efficiency: N/A
Efficacy: 93.8 lumens/watt
Spacing Criteria (0/90/45): 0.82 / 0.81 / 0.85
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
CIE Type: Direct

Input Watts (W): 56
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: P838769

CATALOG NUMBER: HCSQ660D010-HM64560940-61SQC

Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	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	100	100	100	100		
	1	114	111	108	106	111	109	107	105	105	103	101	101	100	98	98	96	95	94	94	94	94	94	94		
	2	108	103	99	96	106	102	98	95	98	95	93	95	93	91	93	91	89	87	87	87	87	87	87		
	3	103	97	92	88	101	95	91	87	93	89	86	90	87	84	88	85	83	81	81	81	81	81	81		
	4	98	90	85	81	96	89	84	80	87	83	79	85	81	78	83	80	78	76	76	76	76	76	76		
	5	93	85	79	75	91	84	78	74	82	77	74	80	76	73	79	75	72	71	71	71	71	71	71		
	6	88	80	74	70	87	79	73	69	77	72	69	76	72	68	75	71	68	66	66	66	66	66	66		
	7	84	75	69	65	83	74	69	65	73	68	64	72	67	64	71	67	64	62	62	62	62	62	62		
	8	80	71	65	61	79	70	65	61	69	64	60	68	64	60	67	63	60	59	59	59	59	59	59		
	9	76	67	61	57	75	66	61	57	65	60	57	65	60	57	64	60	56	55	55	55	55	55	55		
	10	73	63	58	54	72	63	57	54	62	57	54	61	57	53	61	56	53	52	52	52	52	52	52		

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	302001	302001	302001
5°	289687	289182	288775
10°	263845	260260	263640
15°	242476	233602	241014
20°	220050	205883	218547
25°	185974	176962	183414
30°	130217	148970	128005
35°	69943	114273	68587
40°	34628	70712	34369
45°	15119	29812	14833
50°	4863	10824	4863
55°	2462	3521	2289
60°	1610	1610	1610
65°	1192	1192	1192
70°	881	881	881
75°	782	782	782
80°	570	570	570
85°	1136	1136	1136

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 29812 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	615.9	11.7
10°-20°	1487.3	28.3
20°-30°	1718.1	32.7
30°-40°	1072.9	20.4
40°-50°	298.1	5.7
50°-60°	41.7	0.8
60°-70°	12.3	0.2
70°-80°	5.2	0.1
80°-90°	2.2	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°	3821.3	72.7
0°-40°	4894.3	93.2
0°-60°	5234.1	99.6
0°-90°	5253.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5253.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	7014	7014	7014	7014	7014	
5°	6703	6684	6691	6682	6682	618
15°	5440	5337	5241	5323	5407	1524
25°	3915	3800	3725	3798	3861	1748
35°	1331	1642	2174	1624	1305	884
45°	248	316	490	314	244	215
55°	33	33	47	33	30	32
65°	12	12	12	12	12	12
75°	5	5	5	5	5	5
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°	7014.2	7014.2	7014.2	7014.2	7014.2
1°	6993.1	6993.1	6993.1	7011.8	7011.8
2°	6972.0	6967.3	6955.6	6969.7	6976.7
3°	6885.3	6894.7	6899.4	6892.3	6875.9
4°	6796.3	6786.9	6812.7	6796.3	6782.2
5°	6702.6	6683.8	6690.9	6681.5	6681.5
6°	6571.4	6594.8	6576.1	6559.7	6550.3
7°	6428.5	6447.2	6435.5	6412.1	6395.7
8°	6316.0	6304.3	6285.6	6280.9	6252.8
9°	6208.3	6166.1	6123.9	6131.0	6138.0
10°	6034.9	6039.6	5952.9	6018.5	6030.2
11°	5962.3	5936.5	5821.7	5875.6	5894.3
12°	5856.9	5774.9	5676.5	5721.0	5756.1
13°	5704.6	5620.2	5531.2	5599.2	5634.3
14°	5589.8	5493.7	5381.3	5468.0	5540.6
15°	5439.8	5336.8	5240.7	5322.7	5407.0
16°	5308.7	5189.2	5093.1	5172.8	5299.3
17°	5193.9	5046.3	4929.1	5013.5	5135.3
18°	5060.3	4889.3	4781.5	4870.6	5008.8
19°	4912.7	4739.4	4643.3	4715.9	4875.2
20°	4802.6	4608.2	4493.4	4563.7	4769.8
22.5°	4409.0	4205.2	4099.8	4184.1	4348.1
25°	3914.7	3799.9	3725.0	3797.6	3860.8
27.5°	3329.0	3329.0	3354.8	3324.3	3305.6
30°	2619.2	2808.9	2996.4	2799.6	2574.7
32.5°	1911.7	2216.2	2593.4	2256.1	1909.3
35°	1330.7	1642.3	2174.1	1623.5	1304.9
37.5°	925.4	1131.5	1714.9	1143.3	913.7
40°	616.1	759.0	1258.1	773.1	611.5
42.5°	403.0	501.3	812.9	503.7	393.6
45°	248.3	316.3	489.6	313.9	243.6
47.5°	145.2	187.4	285.8	189.8	142.9
50°	72.6	110.1	161.6	107.8	72.6
52.5°	42.2	58.6	89.0	56.2	42.2
55°	32.8	32.8	46.9	32.8	30.5
57.5°	25.8	25.8	25.8	25.8	23.4
60°	18.7	21.1	18.7	18.7	18.7
62.5°	16.4	16.4	14.1	16.4	14.1
65°	11.7	11.7	11.7	11.7	11.7
67.5°	9.4	9.4	9.4	9.4	9.4
70°	7.0	7.0	7.0	7.0	7.0
72.5°	4.7	7.0	4.7	7.0	7.0
75°	4.7	4.7	4.7	4.7	4.7



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
82.5°	2.3	2.3	2.3	2.3	2.3
85°	2.3	2.3	2.3	2.3	2.3
87.5°	2.3	2.3	2.3	2.3	2.3
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°	4.7	4.7	4.7	4.7	2.3
80°	2.3	2.3	2.3	2.3	2.3

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(END OF REPORT)