

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: P838730

Luminaire Tested: HCSQ655D010-HM64560940-61SQH

Issue Date: 5/21/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P838730  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2309-166-2)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 5/21/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: HALO COMMERCIAL  
Catalog Number: HCSQ655D010-HM64560940-61SQH  
Description: HALO COMMERCIAL 6" SQUARE, NEW CONSTRUCTION FRAME, HAZE TRIM  
Light Source: (1) HIGH LUMEN LED 90CRI / 4000K CCT  
Ballast/Driver: -

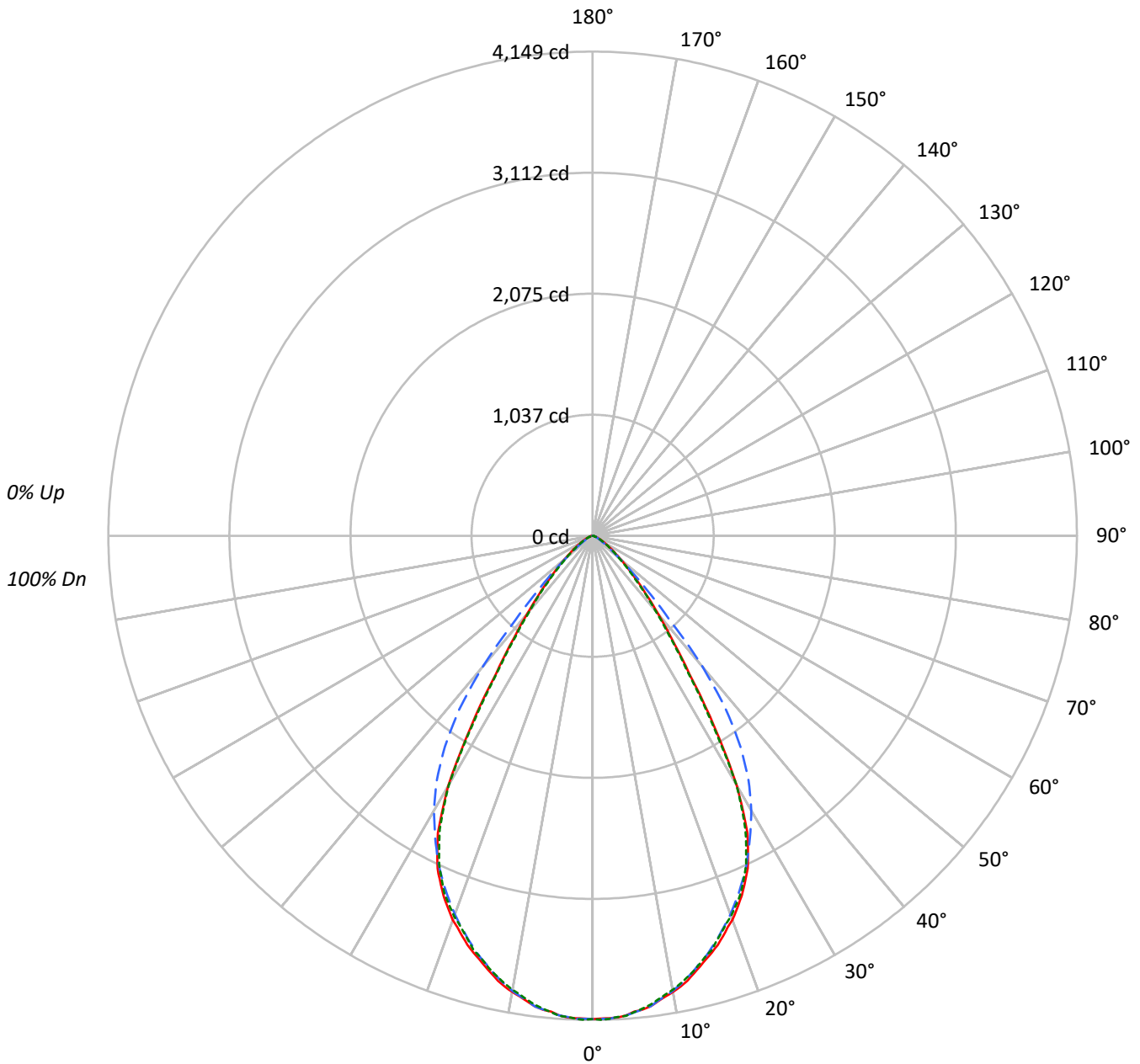
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4658.3 lumens  
Efficiency: N/A  
Efficacy: 86.3 lumens/watt  
Spacing Criteria (0/90/45): 1.02 / 1.01 / 1.04  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
CIE Type: Direct

Input Watts (W): 54  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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			100																
1	113	110	107	105	110	108	105	103	104	102	100	100	98	97	97	95	94	92			92																
2	107	101	97	93	104	100	96	92	96	93	90	93	91	88	91	88	86	85			85																
3	101	94	88	84	99	92	87	83	90	85	82	87	84	81	85	82	79	78			78																
4	95	87	81	76	93	86	80	76	83	78	75	81	77	74	79	76	73	71			71																
5	90	80	74	69	88	79	74	69	78	72	68	76	71	68	74	70	67	66			66																
6	85	75	68	64	83	74	68	63	72	67	63	71	66	63	70	65	62	61			61																
7	80	70	63	59	78	69	63	59	68	62	58	67	62	58	65	61	58	56			56																
8	76	65	59	54	74	65	59	54	64	58	54	63	57	54	62	57	54	52			52																
9	72	61	55	51	70	61	55	50	60	54	50	59	54	50	58	53	50	48			48																
10	68	58	51	47	67	57	51	47	56	51	47	55	50	47	55	50	47	45			45																

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	178332	178332	178332
5°	176926	177224	177125
10°	173550	173148	172746
15°	167417	166499	166397
20°	160513	158199	158937
25°	149404	148093	147765
30°	122775	135109	122432
35°	75825	116034	74017
40°	48674	82245	46999
45°	31754	39865	30214
50°	21079	19847	19693
55°	14315	10344	13279
60°	9696	6329	8904
65°	6785	4676	6082
70°	4343	3474	4054
75°	3061	2678	2678
80°	2281	1711	1711
85°	1136	2272	1136

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 45°  
 Vertical Angle: 45°  
 Luminance: 39865 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	386.8	8.3
10°-20°	1049.8	22.5
20°-30°	1417.2	30.4
30°-40°	1106.0	23.7
40°-50°	463.3	9.9
50°-60°	157.1	3.4
60°-70°	56.0	1.2
70°-80°	18.2	0.4
80°-90°	3.7	0.1
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°	2853.9	61.3
0°-40°	3959.9	85.0
0°-60°	4580.3	98.3
0°-90°	4658.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4658.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	4142	4142	4142	4142	4142	
5°	4094	4098	4100	4094	4098	387
15°	3756	3747	3735	3731	3733	1056
25°	3145	3131	3117	3117	3110	1415
35°	1443	1693	2208	1691	1408	949
45°	522	558	655	533	496	419
55°	191	175	138	165	177	176
65°	67	55	46	53	60	68
75°	18	16	16	16	16	20
85°	2	2	5	2	2	4
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	4141.9	4141.9	4141.9	4141.9	4141.9
1°	4137.3	4144.2	4139.6	4141.9	4148.8
2°	4137.3	4137.3	4141.9	4139.6	4141.9
3°	4132.7	4132.7	4128.1	4128.1	4128.1
4°	4118.9	4118.9	4118.9	4114.3	4123.5
5°	4093.6	4098.2	4100.5	4093.6	4098.2
6°	4084.4	4086.7	4082.1	4079.8	4075.2
7°	4063.8	4056.9	4063.8	4047.7	4050.0
8°	4029.3	4029.3	4024.7	4020.1	4015.5
9°	3997.1	3997.1	3992.5	3985.6	3981.1
10°	3969.6	3962.7	3960.4	3953.5	3951.2
11°	3937.4	3923.6	3921.3	3914.4	3914.4
12°	3898.4	3891.5	3875.4	3873.1	3873.1
13°	3850.1	3843.2	3831.7	3822.5	3831.7
14°	3804.2	3799.6	3778.9	3785.8	3783.5
15°	3755.9	3746.7	3735.3	3730.7	3733.0
16°	3712.3	3696.2	3680.1	3682.4	3696.2
17°	3666.3	3643.4	3627.3	3625.0	3631.9
18°	3608.9	3590.5	3565.3	3574.4	3574.4
19°	3551.5	3526.2	3510.1	3507.8	3517.0
20°	3503.2	3464.2	3452.7	3450.4	3468.8
22.5°	3337.8	3298.8	3289.6	3298.8	3317.2
25°	3144.9	3131.1	3117.3	3117.3	3110.4
27.5°	2871.5	2903.7	2919.7	2887.6	2834.7
30°	2469.5	2605.0	2717.6	2588.9	2462.6
32.5°	1945.7	2226.0	2485.6	2219.1	1899.8
35°	1442.6	1693.0	2207.6	1690.7	1408.2
37.5°	1111.8	1272.7	1876.8	1252.0	1079.7
40°	866.0	960.2	1463.3	948.7	836.2
42.5°	673.1	732.8	974.0	719.0	650.1
45°	521.5	558.2	654.7	533.0	496.2
47.5°	406.6	422.7	448.0	404.3	383.6
50°	314.7	314.7	296.3	303.2	294.0
52.5°	243.5	234.3	199.9	220.5	225.1
55°	190.7	174.6	137.8	165.4	176.9
57.5°	144.7	128.6	98.8	121.8	133.2
60°	112.6	96.5	73.5	91.9	103.4
62.5°	87.3	73.5	57.4	68.9	78.1
65°	66.6	55.1	45.9	52.8	59.7
67.5°	50.5	41.3	34.5	39.1	45.9
70°	34.5	32.2	27.6	29.9	32.2
72.5°	25.3	23.0	20.7	20.7	23.0
75°	18.4	16.1	16.1	16.1	16.1



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
82.5°	4.6	4.6	4.6	4.6	4.6
85°	2.3	2.3	4.6	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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Scaled Data Report





77.5°	11.5	11.5	11.5	11.5	11.5
80°	9.2	9.2	6.9	6.9	6.9

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Scaled Data Report



(END OF REPORT)