

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: P838559

Luminaire Tested: HCSQ635D010-HM63040930-61SQC

Issue Date: 5/21/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P838559  
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: HCSQ635D010-HM63040930-61SQC  
Description: HALO COMMERCIAL 6" SQUARE, NEW CONSTRUCTION FRAME, SPECULAR CLEAR TRIM  
Light Source: (1) HIGH LUMEN LED 90CRI / 3000K CCT  
Ballast/Driver: -

**Summary**

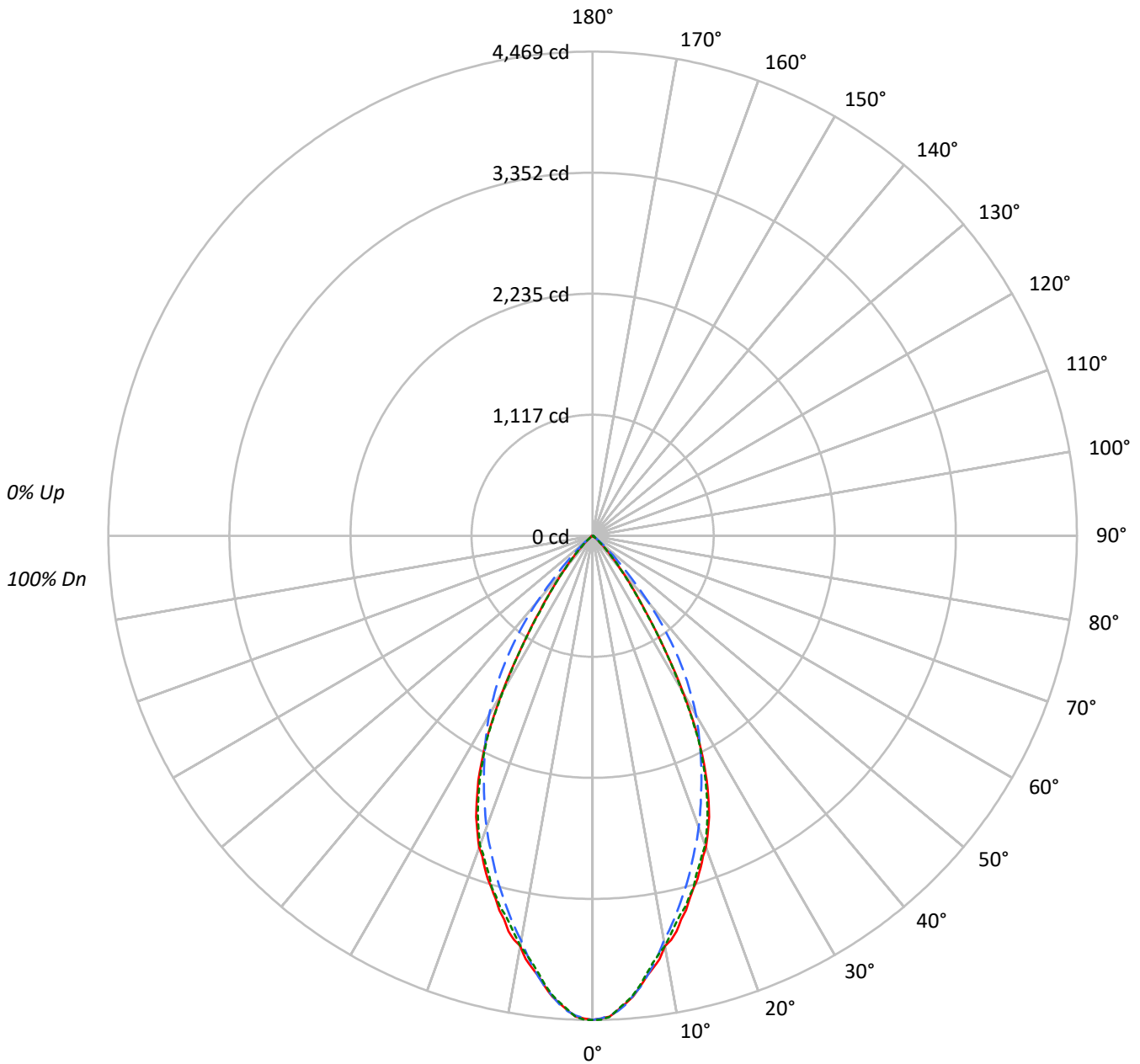
Lumens per Lamp: N/A  
Luminaire Lumens: 3347.5 lumens  
Efficiency: N/A  
Efficacy: 98.5 lumens/watt  
Spacing Criteria (0/90/45): 0.82 / 0.81 / 0.85  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
CIE Type: Direct

Input Watts (W): 34  
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																			
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°	192420	192420	192420
5°	184576	184252	183992
10°	168112	165825	167980
15°	154495	148839	153564
20°	140206	131179	139248
25°	118496	112752	116862
30°	82967	94914	81560
35°	44561	72808	43699
40°	22066	45054	21898
45°	9633	18998	9450
50°	3101	6899	3101
55°	1569	2244	1456
60°	1025	1025	1025
65°	764	764	764
70°	566	566	566
75°	499	499	499
80°	372	372	372
85°	741	741	741

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 45°  
 Vertical Angle: 45°  
 Luminance: 18998 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	392.4	11.7
10°-20°	947.6	28.3
20°-30°	1094.7	32.7
30°-40°	683.6	20.4
40°-50°	189.9	5.7
50°-60°	26.6	0.8
60°-70°	7.8	0.2
70°-80°	3.4	0.1
80°-90°	1.4	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°	2434.8	72.7
0°-40°	3118.4	93.2
0°-60°	3334.9	99.6
0°-90°	3347.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3347.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	4469	4469	4469	4469	4469	
5°	4271	4259	4263	4257	4257	394
15°	3466	3400	3339	3391	3445	971
25°	2494	2421	2373	2420	2460	1114
35°	848	1046	1385	1034	831	563
45°	158	202	312	200	155	137
55°	21	21	30	21	19	21
65°	8	8	8	8	8	8
75°	3	3	3	3	3	3
85°	2	2	2	2	2	1
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	4469.1	4469.1	4469.1	4469.1	4469.1
1°	4455.7	4455.7	4455.7	4467.6	4467.6
2°	4442.2	4439.2	4431.8	4440.7	4445.2
3°	4387.0	4393.0	4396.0	4391.5	4381.0
4°	4330.3	4324.3	4340.7	4330.3	4321.3
5°	4270.6	4258.6	4263.1	4257.1	4257.1
6°	4187.0	4201.9	4190.0	4179.5	4173.6
7°	4095.9	4107.9	4100.4	4085.5	4075.0
8°	4024.3	4016.8	4004.9	4001.9	3984.0
9°	3955.6	3928.8	3901.9	3906.4	3910.8
10°	3845.2	3848.1	3792.9	3834.7	3842.2
11°	3798.9	3782.5	3709.3	3743.7	3755.6
12°	3731.7	3679.5	3616.8	3645.1	3667.5
13°	3634.7	3581.0	3524.2	3567.5	3589.9
14°	3561.5	3500.3	3428.7	3483.9	3530.2
15°	3466.0	3400.3	3339.1	3391.4	3445.1
16°	3382.4	3306.3	3245.1	3295.9	3376.5
17°	3309.3	3215.2	3140.6	3194.3	3272.0
18°	3224.2	3115.2	3046.6	3103.3	3191.4
19°	3130.2	3019.7	2958.5	3004.8	3106.3
20°	3060.0	2936.1	2863.0	2907.8	3039.1
22.5°	2809.2	2679.4	2612.2	2665.9	2770.4
25°	2494.3	2421.1	2373.4	2419.6	2459.9
27.5°	2121.1	2121.1	2137.5	2118.1	2106.2
30°	1668.8	1789.7	1909.1	1783.8	1640.5
32.5°	1218.0	1412.1	1652.4	1437.5	1216.5
35°	847.8	1046.4	1385.2	1034.4	831.4
37.5°	589.6	721.0	1092.6	728.4	582.1
40°	392.6	483.6	801.6	492.6	389.6
42.5°	256.7	319.4	518.0	320.9	250.8
45°	158.2	201.5	312.0	200.0	155.2
47.5°	92.5	119.4	182.1	120.9	91.1
50°	46.3	70.2	103.0	68.7	46.3
52.5°	26.9	37.3	56.7	35.8	26.9
55°	20.9	20.9	29.9	20.9	19.4
57.5°	16.4	16.4	16.4	16.4	14.9
60°	11.9	13.4	11.9	11.9	11.9
62.5°	10.4	10.4	9.0	10.4	9.0
65°	7.5	7.5	7.5	7.5	7.5
67.5°	6.0	6.0	6.0	6.0	6.0
70°	4.5	4.5	4.5	4.5	4.5
72.5°	3.0	4.5	3.0	4.5	4.5
75°	3.0	3.0	3.0	3.0	3.0



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
82.5°	1.5	1.5	1.5	1.5	1.5
85°	1.5	1.5	1.5	1.5	1.5
87.5°	1.5	1.5	1.5	1.5	1.5
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°	3.0	3.0	3.0	3.0	1.5
80°	1.5	1.5	1.5	1.5	1.5

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