

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: P838624

Luminaire Tested: HCSQ645D010-HM64560835-61SQC

Issue Date: 5/21/2024

Test Information

Test Method: LM-79-2019
Report Number: P838624
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-HM64560835-61SQC
Description: HALO COMMERCIAL 6" SQUARE, NEW CONSTRUCTION FRAME, SPECULAR CLEAR TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 3500K CCT
Ballast/Driver: -

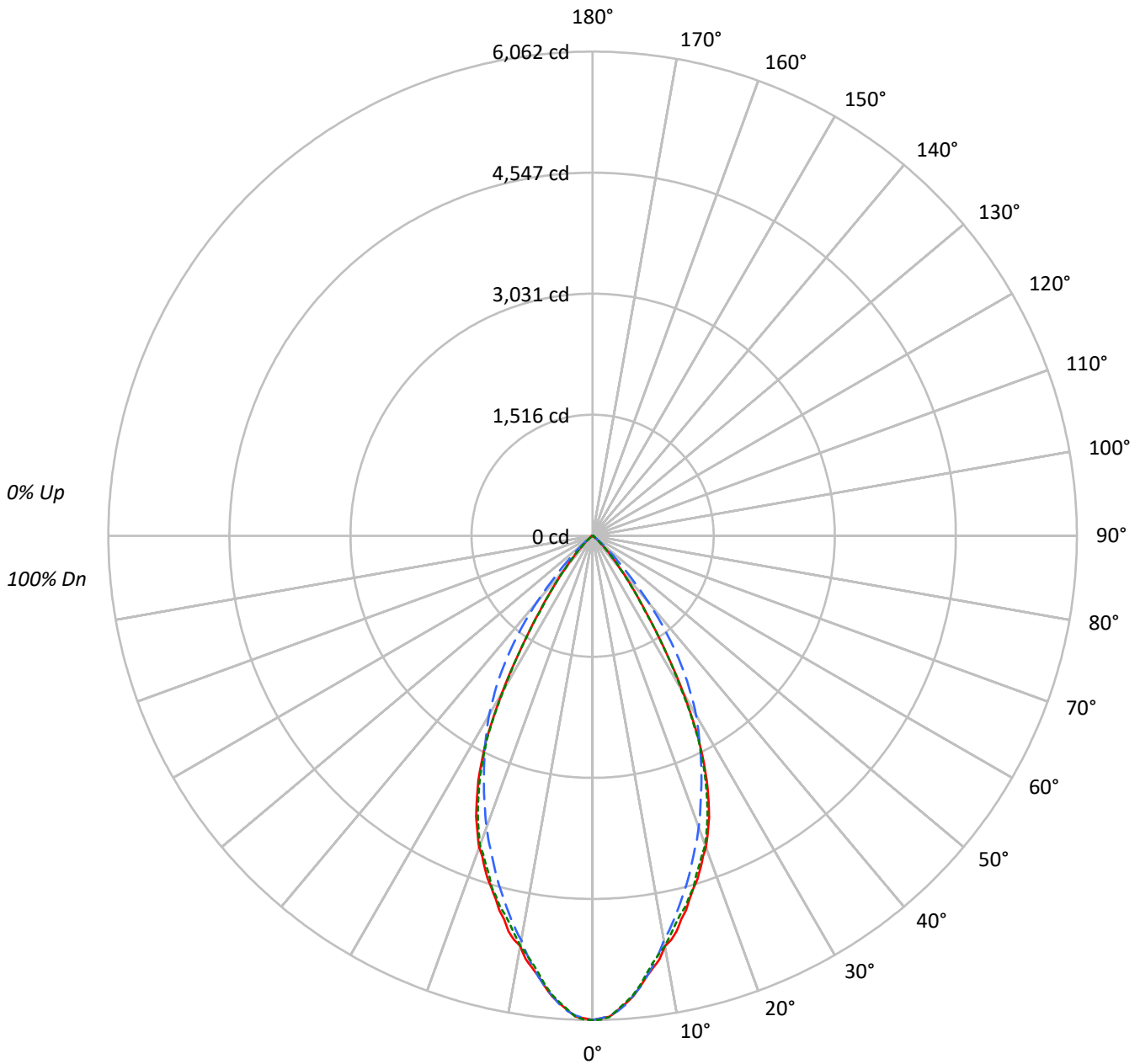
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4540.6 lumens
Efficiency: N/A
Efficacy: 98.9 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°	261003	261003	261003
5°	250361	249925	249575
10°	228030	224930	227850
15°	209563	201891	208297
20°	190180	177933	188879
25°	160729	152938	158515
30°	112538	128746	110629
35°	60445	98757	59279
40°	29929	61112	29704
45°	13067	25769	12823
50°	4207	9357	4207
55°	2124	3040	1974
60°	1395	1395	1395
65°	1029	1029	1029
70°	768	768	768
75°	665	665	665
80°	496	496	496
85°	988	988	988

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 25769 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	532.3	11.7
10°-20°	1285.4	28.3
20°-30°	1484.9	32.7
30°-40°	927.3	20.4
40°-50°	257.6	5.7
50°-60°	36.0	0.8
60°-70°	10.6	0.2
70°-80°	4.5	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°	3302.6	72.7
0°-40°	4229.9	93.2
0°-60°	4523.5	99.6
0°-90°	4540.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4540.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6062	6062	6062	6062	6062	
5°	5793	5776	5783	5774	5774	534
15°	4701	4612	4529	4600	4673	1317
25°	3383	3284	3219	3282	3337	1511
35°	1150	1419	1879	1403	1128	764
45°	215	273	423	271	211	186
55°	28	28	40	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°	6062.0	6062.0	6062.0	6062.0	6062.0
1°	6043.8	6043.8	6043.8	6060.0	6060.0
2°	6025.6	6021.5	6011.4	6023.5	6029.6
3°	5950.6	5958.7	5962.8	5956.7	5942.5
4°	5873.7	5865.6	5887.9	5873.7	5861.6
5°	5792.7	5776.5	5782.6	5774.5	5774.5
6°	5679.3	5699.6	5683.4	5669.2	5661.1
7°	5555.8	5572.0	5561.9	5541.7	5527.5
8°	5458.6	5448.5	5432.3	5428.3	5404.0
9°	5365.5	5329.1	5292.6	5298.7	5304.8
10°	5215.7	5219.7	5144.8	5201.5	5211.6
11°	5152.9	5130.6	5031.4	5078.0	5094.2
12°	5061.8	4990.9	4905.9	4944.4	4974.7
13°	4930.2	4857.3	4780.4	4839.1	4869.4
14°	4831.0	4748.0	4650.8	4725.7	4788.5
15°	4701.4	4612.3	4529.3	4600.2	4673.0
16°	4588.0	4484.7	4401.7	4470.6	4579.9
17°	4488.8	4361.2	4260.0	4332.9	4438.2
18°	4373.4	4225.6	4132.4	4209.4	4328.8
19°	4245.8	4096.0	4013.0	4075.8	4213.4
20°	4150.7	3982.6	3883.4	3944.2	4122.3
22.5°	3810.5	3634.4	3543.3	3616.1	3757.9
25°	3383.3	3284.1	3219.3	3282.1	3336.7
27.5°	2877.1	2877.1	2899.4	2873.1	2856.9
30°	2263.6	2427.6	2589.6	2419.5	2225.2
32.5°	1652.2	1915.4	2241.4	1949.8	1650.1
35°	1150.0	1419.3	1878.9	1403.1	1127.8
37.5°	799.8	977.9	1482.1	988.1	789.6
40°	532.5	656.0	1087.3	668.2	528.5
42.5°	348.3	433.3	702.6	435.3	340.2
45°	214.6	273.3	423.2	271.3	210.6
47.5°	125.5	162.0	247.0	164.0	123.5
50°	62.8	95.2	139.7	93.1	62.8
52.5°	36.4	50.6	76.9	48.6	36.4
55°	28.3	28.3	40.5	28.3	26.3
57.5°	22.3	22.3	22.3	22.3	20.2
60°	16.2	18.2	16.2	16.2	16.2
62.5°	14.2	14.2	12.1	14.2	12.1
65°	10.1	10.1	10.1	10.1	10.1
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°	4.0	6.1	4.0	6.1	6.1
75°	4.0	4.0	4.0	4.0	4.0



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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

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°	4.0	4.0	4.0	4.0	2.0
80°	2.0	2.0	2.0	2.0	2.0

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