

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: P838644

Luminaire Tested: HCSQ645D010-HM64560935-61SQC

Issue Date: 5/21/2024

Test Information

Test Method: LM-79-2019
Report Number: P838644
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-HM64560935-61SQC
Description: HALO COMMERCIAL 6" SQUARE, NEW CONSTRUCTION FRAME, SPECULAR CLEAR TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 3500K CCT
Ballast/Driver: -

Summary

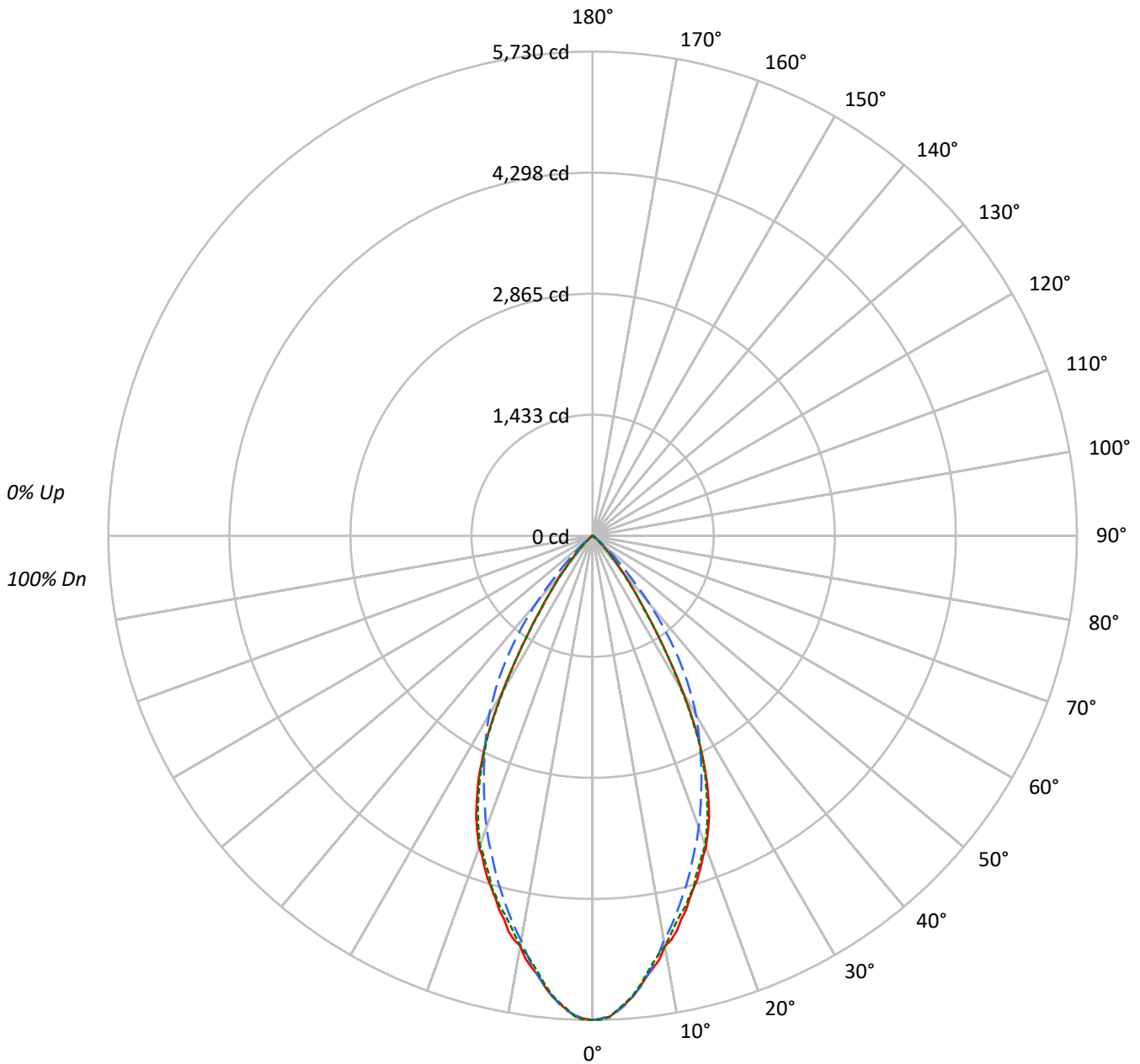
Lumens per Lamp: N/A
Luminaire Lumens: 4292.3 lumens
Efficiency: N/A
Efficacy: 93.5 lumens/watt
Spacing Criteria (0/90/45): 0.82 / 0.81 / 0.85
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
CIE Type: Direct

Input Watts (W): 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					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								
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°	246730	246730	246730
5°	236669	236258	235926
10°	215556	212632	215390
15°	198102	190850	196908
20°	179780	168201	178552
25°	151941	144572	149850
30°	106383	121706	104578
35°	57139	93359	56036
40°	28294	57768	28080
45°	12355	24356	12123
50°	3972	8848	3972
55°	2012	2875	1869
60°	1318	1318	1318
65°	978	978	978
70°	718	718	718
75°	632	632	632
80°	471	471	471
85°	939	939	939

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 24356 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	503.2	11.7
10°-20°	1215.1	28.3
20°-30°	1403.7	32.7
30°-40°	876.6	20.4
40°-50°	243.5	5.7
50°-60°	34.1	0.8
60°-70°	10.0	0.2
70°-80°	4.3	0.1
80°-90°	1.8	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°	3122.0	72.7
0°-40°	3998.6	93.2
0°-60°	4276.2	99.6
0°-90°	4292.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4292.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5730	5730	5730	5730	5730	
5°	5476	5461	5466	5459	5459	505
15°	4444	4360	4282	4349	4418	1245
25°	3198	3104	3043	3103	3154	1428
35°	1087	1342	1776	1326	1066	722
45°	203	258	400	256	199	176
55°	27	27	38	27	25	27
65°	10	10	10	10	10	10
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°	5730.5	5730.5	5730.5	5730.5	5730.5
1°	5713.3	5713.3	5713.3	5728.6	5728.6
2°	5696.0	5692.2	5682.6	5694.1	5699.9
3°	5625.2	5632.9	5636.7	5631.0	5617.6
4°	5552.5	5544.8	5565.9	5552.5	5541.0
5°	5475.9	5460.6	5466.4	5458.7	5458.7
6°	5368.7	5387.9	5372.6	5359.2	5351.5
7°	5252.0	5267.3	5257.7	5238.6	5225.2
8°	5160.1	5150.5	5135.2	5131.4	5108.4
9°	5072.1	5037.6	5003.2	5008.9	5014.7
10°	4930.4	4934.3	4863.5	4917.0	4926.6
11°	4871.1	4850.1	4756.3	4800.3	4815.6
12°	4785.0	4718.0	4637.6	4674.0	4702.7
13°	4660.6	4591.7	4518.9	4574.4	4603.1
14°	4566.8	4488.3	4396.4	4467.3	4526.6
15°	4444.3	4360.1	4281.6	4348.6	4417.5
16°	4337.1	4239.5	4161.0	4226.1	4329.4
17°	4243.3	4122.7	4027.0	4095.9	4195.5
18°	4134.2	3994.5	3906.5	3979.2	4092.1
19°	4013.6	3872.0	3793.5	3852.9	3983.0
20°	3923.7	3764.8	3671.0	3728.5	3896.9
22.5°	3602.1	3435.6	3349.5	3418.4	3552.4
25°	3198.3	3104.5	3043.2	3102.6	3154.3
27.5°	2719.8	2719.8	2740.8	2716.0	2700.6
30°	2139.8	2294.9	2448.0	2287.2	2103.5
32.5°	1561.8	1810.6	2118.8	1843.2	1559.9
35°	1087.1	1341.7	1776.2	1326.4	1066.1
37.5°	756.0	924.5	1401.0	934.0	746.5
40°	503.4	620.1	1027.8	631.6	499.6
42.5°	329.2	409.6	664.2	411.5	321.6
45°	202.9	258.4	400.0	256.5	199.1
47.5°	118.7	153.1	233.5	155.0	116.8
50°	59.3	90.0	132.1	88.0	59.3
52.5°	34.5	47.8	72.7	45.9	34.5
55°	26.8	26.8	38.3	26.8	24.9
57.5°	21.1	21.1	21.1	21.1	19.1
60°	15.3	17.2	15.3	15.3	15.3
62.5°	13.4	13.4	11.5	13.4	11.5
65°	9.6	9.6	9.6	9.6	9.6
67.5°	7.7	7.7	7.7	7.7	7.7
70°	5.7	5.7	5.7	5.7	5.7
72.5°	3.8	5.7	3.8	5.7	5.7
75°	3.8	3.8	3.8	3.8	3.8



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
82.5°	1.9	1.9	1.9	1.9	1.9
85°	1.9	1.9	1.9	1.9	1.9
87.5°	1.9	1.9	1.9	1.9	1.9
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°	3.8	3.8	3.8	3.8	1.9
80°	1.9	1.9	1.9	1.9	1.9

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