

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: P837538

Luminaire Tested: HCSQ440D010-HM43040930-41SQC

Issue Date: 5/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P837538
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2309-165-1)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 5/17/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCSQ440D010-HM43040930-41SQC
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, SPECULAR CLEAR TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 3000K CCT
Ballast/Driver: -

Summary

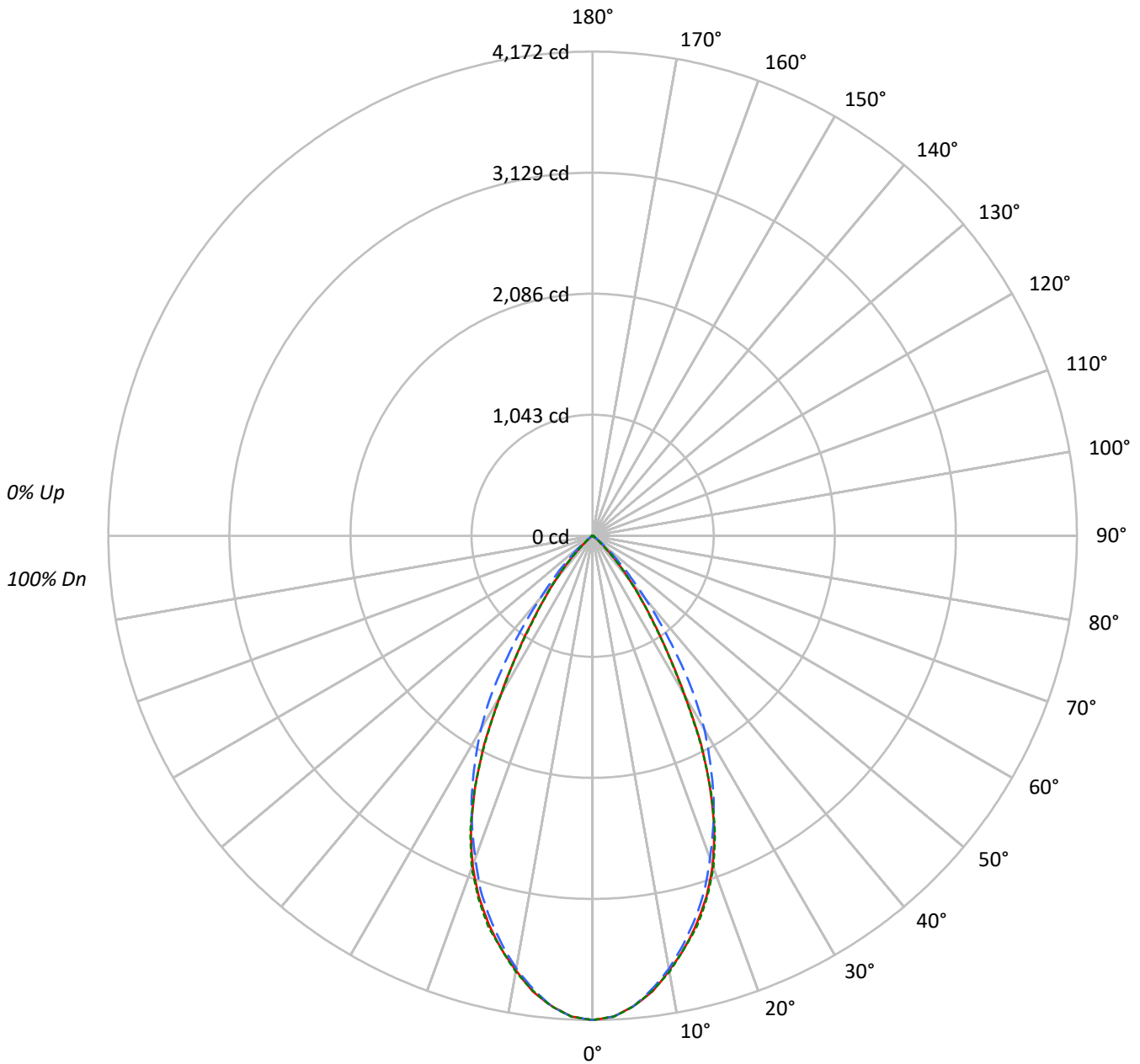
Lumens per Lamp: N/A
Luminaire Lumens: 3371.8 lumens
Efficiency: N/A
Efficacy: 82.2 lumens/watt
Spacing Criteria (0/90/45): 0.85 / 0.85 / 0.87
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 41
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	106	104	105	103	101	101	99	98	97	96	95	94								
2	108	103	99	96	106	101	98	95	98	95	93	95	93	91	93	91	89	87								
3	103	96	91	87	101	95	90	87	92	89	85	90	87	84	88	85	83	81								
4	98	90	85	80	96	89	84	80	87	82	79	85	81	78	83	80	77	76								
5	93	84	79	74	91	83	78	74	82	77	73	80	76	73	78	75	72	71								
6	88	79	73	69	87	79	73	69	77	72	68	76	71	68	74	70	68	66								
7	84	75	69	65	82	74	68	64	73	68	64	71	67	64	70	66	63	62								
8	80	70	64	60	79	70	64	60	69	64	60	68	63	60	67	63	60	58								
9	76	67	61	57	75	66	60	57	65	60	56	64	60	56	63	59	56	55								
10	73	63	57	53	72	63	57	53	62	57	53	61	56	53	60	56	53	52								

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	404203	404203	404203
5°	395536	395702	395702
10°	374120	372458	375124
15°	347134	342380	348999
20°	311608	304629	313525
25°	255938	263356	256836
30°	176921	215178	175590
35°	108944	151992	106342
40°	61460	88865	61031
45°	28072	44540	26907
50°	7144	17859	7400
55°	3429	5438	3141
60°	2306	1976	2616
65°	1948	1559	1948
70°	1445	1445	1926
75°	1273	1273	1909
80°	1897	1897	1897
85°	1890	3779	3779

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 44540 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	379.6	11.3
10°-20°	958.6	28.4
20°-30°	1095.8	32.5
30°-40°	680.2	20.2
40°-50°	214.3	6.4
50°-60°	27.8	0.8
60°-70°	8.2	0.2
70°-80°	4.4	0.1
80°-90°	3.0	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°	2433.9	72.2
0°-40°	3114.1	92.4
0°-60°	3356.2	99.5
0°-90°	3371.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3371.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4172	4172	4172	4172	4172	
5°	4067	4064	4069	4066	4069	380
15°	3461	3436	3414	3436	3480	965
25°	2394	2428	2464	2428	2403	1074
35°	921	1063	1285	1038	899	592
45°	205	246	325	247	196	173
55°	20	20	32	20	19	20
65°	8	8	7	8	8	8
75°	3	3	3	3	5	4
85°	2	3	3	3	3	2
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4172.4	4172.4	4172.4	4172.4	4172.4
2.5°	4147.0	4150.4	4147.0	4153.8	4147.0
5°	4067.4	4064.0	4069.1	4065.7	4069.1
7.5°	3959.0	3938.7	3937.0	3950.6	3952.2
10°	3803.2	3798.2	3786.3	3798.2	3813.4
12.5°	3644.1	3623.7	3606.8	3630.5	3644.1
15°	3461.2	3435.8	3413.8	3435.8	3479.8
17.5°	3259.7	3224.1	3205.5	3230.9	3273.2
20°	3022.6	2985.3	2954.9	2976.9	3041.2
22.5°	2738.1	2734.7	2714.4	2726.3	2750.0
25°	2394.4	2428.2	2463.8	2428.2	2402.8
27.5°	2016.8	2108.2	2189.5	2082.8	2001.5
30°	1581.6	1720.4	1923.6	1710.3	1569.7
32.5°	1222.6	1368.2	1627.3	1349.6	1212.4
35°	921.2	1063.4	1285.2	1038.0	899.2
37.5°	677.3	784.0	977.1	777.2	677.3
40°	486.0	555.4	702.7	553.7	482.6
42.5°	337.0	382.7	491.1	379.3	326.8
45°	204.9	245.5	325.1	247.2	196.4
47.5°	108.4	155.8	204.9	149.0	108.4
50°	47.4	83.0	118.5	81.3	49.1
52.5°	25.4	35.6	64.3	35.6	25.4
55°	20.3	20.3	32.2	20.3	18.6
57.5°	15.2	15.2	16.9	15.2	15.2
60°	11.9	11.9	10.2	11.9	13.5
62.5°	10.2	10.2	8.5	10.2	10.2
65°	8.5	8.5	6.8	8.5	8.5
67.5°	6.8	6.8	6.8	6.8	6.8
70°	5.1	5.1	5.1	6.8	6.8
72.5°	5.1	5.1	5.1	5.1	5.1
75°	3.4	3.4	3.4	3.4	5.1
77.5°	3.4	3.4	3.4	3.4	3.4
80°	3.4	3.4	3.4	3.4	3.4
82.5°	1.7	3.4	3.4	3.4	3.4
85°	1.7	3.4	3.4	3.4	3.4
87.5°	1.7	1.7	3.4	3.4	3.4
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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