

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: P837227

Luminaire Tested: HCSQ405D010-HM40525935-41SQMW

Issue Date: 5/17/2024



Test Information

Test Method: LM-79-2019
Report Number: P837227
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2309-165-3)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 5/17/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCSQ405D010-HM40525935-41SQMW
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, MATTE WHITE TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 3500K CCT
Ballast/Driver: -

Summary

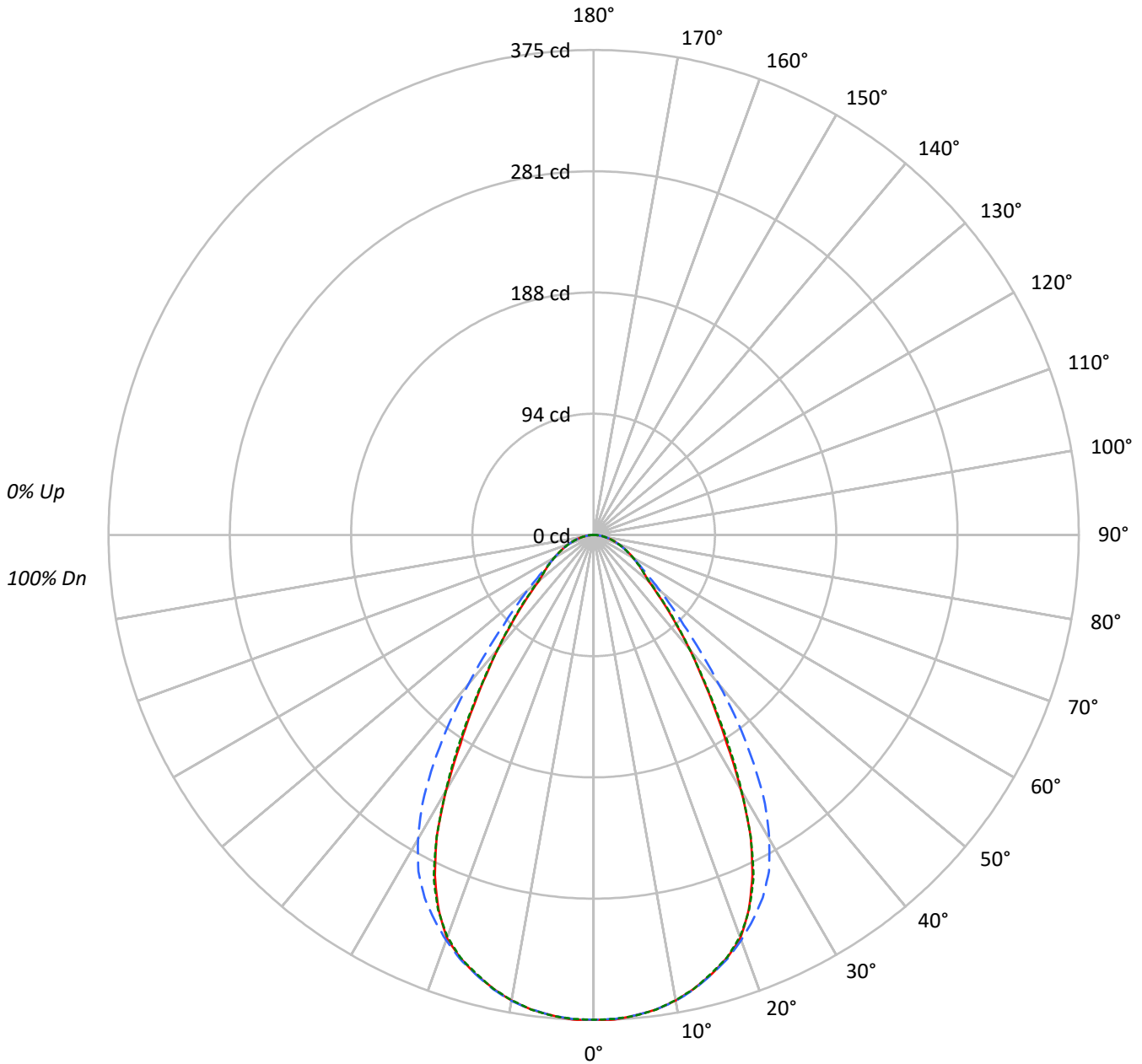
Lumens per Lamp: N/A
Luminaire Lumens: 544.1 lumens
Efficiency: N/A
Efficacy: 90.7 lumens/watt
Spacing Criteria (0/90/45): 1.03 / 1.03 / 1.07
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 6
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	0					
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100								
1	111	108	105	102	109	106	103	100	101	99	97	98	96	94	94	93	91	89								
2	104	98	92	88	102	96	91	87	92	88	85	89	86	83	86	84	81	79								
3	97	89	82	77	95	87	81	76	84	79	75	82	78	74	79	76	73	71								
4	91	81	74	69	89	80	73	68	77	72	67	75	70	66	73	69	66	64								
5	85	74	67	62	83	73	66	61	71	65	61	70	64	60	68	63	60	58								
6	79	69	61	56	78	68	61	56	66	60	55	64	59	55	63	58	54	53								
7	75	63	56	51	73	63	56	51	61	55	50	60	54	50	59	54	50	48								
8	70	59	52	47	69	58	51	47	57	51	46	56	50	46	55	50	46	44								
9	66	55	48	43	65	54	48	43	53	47	43	52	47	43	51	46	43	41								
10	63	51	45	40	62	51	44	40	50	44	40	49	44	40	48	43	40	38								

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	36319	36319	36319
5°	36263	36263	36282
10°	35964	35994	35935
15°	35263	35293	35203
20°	34206	34381	34082
25°	31041	33072	31265
30°	25482	30371	25583
35°	19159	25498	19431
40°	14594	19007	14556
45°	10892	13495	11097
50°	8304	10052	8470
55°	7482	7871	7482
60°	6820	6781	6781
65°	6212	6212	6212
70°	5778	5693	5693
75°	5352	5240	5352
80°	4854	4686	4854
85°	4224	4224	4224

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 13495 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	35.4	6.5
10°-20°	99.0	18.2
20°-30°	136.1	25.0
30°-40°	115.9	21.3
40°-50°	70.0	12.9
50°-60°	41.3	7.6
60°-70°	27.1	5.0
70°-80°	15.0	2.8
80°-90°	4.4	0.8
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°	270.5	49.7
0°-40°	386.4	71.0
0°-60°	497.6	91.5
0°-90°	544.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	544.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	375	375	375	375	375	
5°	373	373	373	373	373	35
15°	352	352	352	352	351	99
25°	290	300	309	300	292	131
35°	162	178	216	183	164	103
45°	80	88	98	89	81	63
55°	44	45	47	45	44	40
65°	27	27	27	27	27	27
75°	14	14	14	14	14	15
85°	4	4	4	4	4	4
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	374.9	374.9	374.9	374.9	374.9
2.5°	375.2	374.3	374.6	374.3	374.6
5°	372.9	373.1	372.9	372.6	373.1
7.5°	370.2	369.9	369.9	369.7	370.2
10°	365.6	365.0	365.9	365.3	365.3
12.5°	359.2	360.0	359.7	359.7	359.2
15°	351.6	352.5	351.9	351.6	351.0
17.5°	342.9	343.4	343.7	342.6	342.6
20°	331.8	332.9	333.5	331.5	330.6
22.5°	313.4	318.7	321.9	318.4	314.0
25°	290.4	299.5	309.4	300.0	292.5
27.5°	262.7	275.6	293.3	277.6	262.7
30°	227.8	246.7	271.5	248.8	228.7
32.5°	191.7	211.8	246.4	215.3	195.7
35°	162.0	178.3	215.6	183.2	164.3
37.5°	136.3	150.3	183.2	153.5	137.8
40°	115.4	126.4	150.3	127.9	115.1
42.5°	95.3	105.7	121.8	107.2	96.4
45°	79.5	88.0	98.5	88.8	81.0
47.5°	66.1	73.1	80.7	73.1	67.0
50°	55.1	60.6	66.7	60.6	56.2
52.5°	49.2	51.0	55.1	51.3	49.2
55°	44.3	45.2	46.6	45.2	44.3
57.5°	39.6	40.2	39.9	39.9	39.6
60°	35.2	35.5	35.0	35.2	35.0
62.5°	31.2	31.2	30.6	31.2	30.9
65°	27.1	27.4	27.1	27.1	27.1
67.5°	23.6	23.6	23.3	23.6	23.6
70°	20.4	20.4	20.1	20.4	20.1
72.5°	17.2	17.2	16.9	16.9	16.9
75°	14.3	14.3	14.0	14.0	14.3
77.5°	11.4	11.4	11.1	11.4	11.4
80°	8.7	8.7	8.4	8.7	8.7
82.5°	6.1	6.1	6.1	6.4	6.4
85°	3.8	3.8	3.8	3.8	3.8
87.5°	1.7	1.7	1.7	1.7	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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