

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: P837216

Luminaire Tested: HCSQ405D010-HM40525927-41SQMB

Issue Date: 5/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P837216
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2309-165-4)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 5/17/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCSQ405D010-HM40525927-41SQMB
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, MATTE BLACK TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 2700K CCT
Ballast/Driver: -

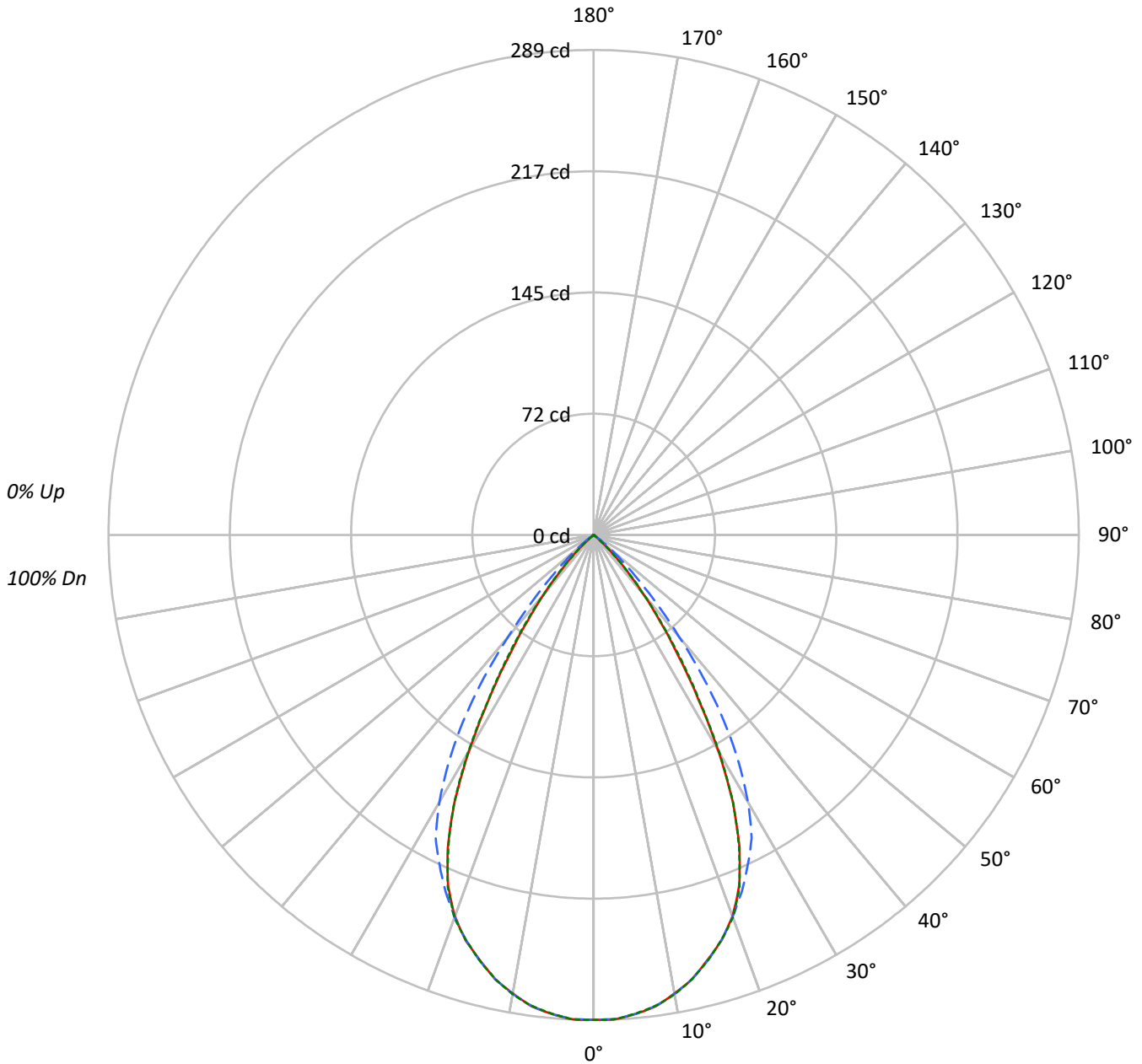
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 288.8 lumens
Efficiency: N/A
Efficacy: 48.1 lumens/watt
Spacing Criteria (0/90/45): 0.96 / 0.96 / 0.99
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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CATALOG NUMBER: HCSQ405D010-HM40525927-41SQMB

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	113	111	108	106	111	108	106	104	104	103	101	101	99	98	97	96	95	93								
2	108	103	99	95	105	101	97	94	98	95	92	95	92	90	92	90	88	87								
3	102	96	91	86	100	94	90	86	92	88	84	89	86	83	87	84	82	80								
4	97	89	83	79	95	88	83	79	86	81	78	84	80	77	82	79	76	74								
5	92	83	77	73	90	82	77	73	80	76	72	79	75	71	77	74	71	69								
6	87	78	72	67	85	77	71	67	76	70	67	74	70	66	73	69	66	64								
7	82	73	67	63	81	72	66	62	71	66	62	70	65	62	69	65	61	60								
8	78	69	62	58	77	68	62	58	67	62	58	66	61	58	65	61	57	56								
9	74	65	58	54	73	64	58	54	63	58	54	62	57	54	61	57	54	52								
10	71	61	55	51	70	60	55	51	60	54	51	59	54	51	58	54	50	49								

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	27997	27997	27997
5°	27871	27871	27841
10°	27298	27327	27347
15°	26297	26327	26327
20°	24928	24959	25010
25°	21977	23217	21891
30°	16589	20571	16735
35°	10395	16013	10750
40°	5868	9965	5868
45°	2466	5028	2425
50°	196	1944	241
55°	84	405	84
60°	97	58	97
65°	69	69	69
70°	85	85	85
75°	112	112	112
80°	0	167	167
85°	0	333	333

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 5028 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	27.1	9.4
10°-20°	73.7	25.5
20°-30°	95.6	33.1
30°-40°	68.0	23.5
40°-50°	22.0	7.6
50°-60°	1.6	0.5
60°-70°	0.3	0.1
70°-80°	0.3	0.1
80°-90°	0.2	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°	196.4	68.0
0°-40°	264.3	91.5
0°-60°	288.0	99.7
0°-90°	288.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	288.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	289	289	289	289	289	
5°	287	287	287	287	286	27
15°	262	263	262	263	262	74
25°	206	211	217	212	205	92
35°	88	104	135	105	91	56
45°	18	26	37	26	18	15
55°	0	0	2	0	0	1
65°	0	0	0	0	0	0
75°	0	0	0	0	0	0
85°	0	0	0	0	0	0
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	289.0	289.0	289.0	289.0	289.0
2.5°	289.0	289.0	288.7	288.7	289.0
5°	286.6	286.9	286.6	286.6	286.3
7.5°	283.4	283.4	283.1	283.1	283.1
10°	277.5	277.8	277.8	277.8	278.0
12.5°	271.1	271.1	271.1	271.1	271.1
15°	262.2	263.0	262.5	263.0	262.5
17.5°	253.4	253.4	253.1	253.6	253.1
20°	241.8	241.8	242.1	242.6	242.6
22.5°	226.5	229.2	230.3	229.8	227.1
25°	205.6	211.0	217.2	212.1	204.8
27.5°	179.4	189.5	203.8	191.2	179.9
30°	148.3	163.5	183.9	164.1	149.6
32.5°	116.1	133.8	160.9	135.1	117.2
35°	87.9	104.0	135.4	105.1	90.9
37.5°	64.9	79.6	107.5	80.2	66.8
40°	46.4	57.1	78.8	58.2	46.4
42.5°	29.8	40.5	55.5	40.8	31.1
45°	18.0	25.5	36.7	26.0	17.7
47.5°	8.0	14.5	22.8	15.0	8.0
50°	1.3	5.9	12.9	6.2	1.6
52.5°	0.8	1.1	6.2	1.1	0.8
55°	0.5	0.5	2.4	0.5	0.5
57.5°	0.5	0.5	0.5	0.5	0.5
60°	0.5	0.3	0.3	0.3	0.5
62.5°	0.3	0.3	0.3	0.3	0.3
65°	0.3	0.3	0.3	0.3	0.3
67.5°	0.3	0.3	0.3	0.3	0.3
70°	0.3	0.3	0.3	0.3	0.3
72.5°	0.3	0.3	0.3	0.3	0.3
75°	0.3	0.3	0.3	0.3	0.3
77.5°	0.3	0.3	0.3	0.3	0.3
80°	0.0	0.3	0.3	0.3	0.3
82.5°	0.0	0.3	0.3	0.3	0.3
85°	0.0	0.0	0.3	0.3	0.3
87.5°	0.0	0.0	0.3	0.3	0.3
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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