

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: P837194

Luminaire Tested: HCSQ405D010-HM40525827-41SQH

Issue Date: 5/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P837194
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2309-165-2)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 5/17/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCSQ405D010-HM40525827-41SQH
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, HAZE TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 2700K CCT
Ballast/Driver: -

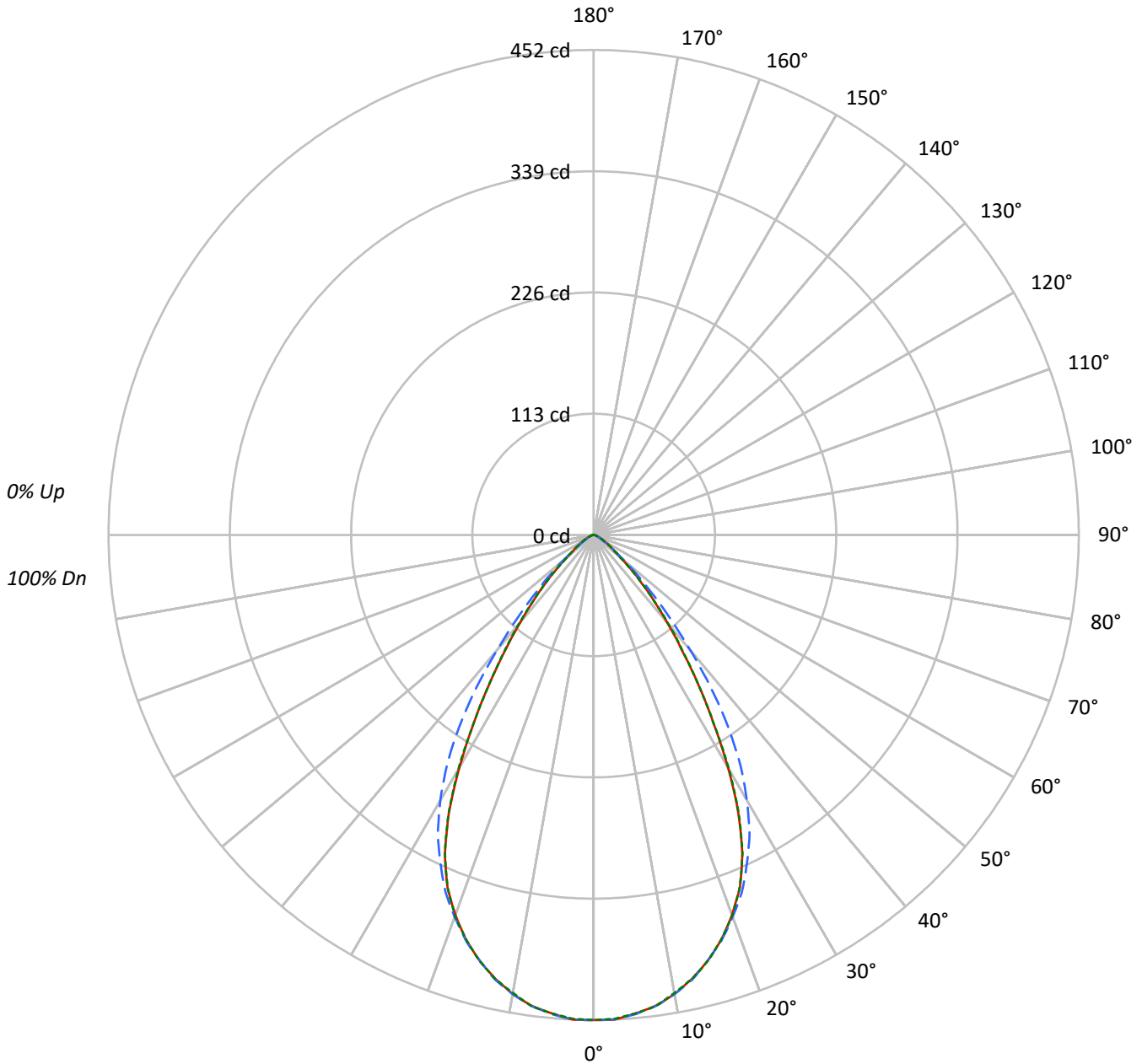
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 508.3 lumens
Efficiency: N/A
Efficacy: 84.7 lumens/watt
Spacing Criteria (0/90/45): 0.98 / 0.98 / 1.01
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	113	110	107	105	110	108	105	103	104	102	100	100	98	97	96	95	94	92								
2	107	101	97	93	104	100	95	92	96	93	90	93	90	88	90	88	86	85								
3	101	93	88	84	98	92	87	83	89	85	82	87	83	80	85	82	79	77								
4	95	87	80	76	93	85	80	75	83	78	74	81	77	74	79	76	73	71								
5	89	80	74	69	88	79	73	69	77	72	68	76	71	68	74	70	67	65								
6	84	75	68	63	83	74	68	63	72	67	63	71	66	62	69	65	62	60								
7	80	70	63	59	78	69	63	58	68	62	58	66	61	58	65	61	57	56								
8	75	65	59	54	74	65	58	54	63	58	54	62	57	54	61	57	53	52								
9	72	61	55	50	70	61	54	50	60	54	50	59	54	50	58	53	50	48								
10	68	57	51	47	67	57	51	47	56	51	47	55	50	47	54	50	46	45								

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	43807	43807	43807
5°	43537	43595	43537
10°	42722	42752	42643
15°	41200	41180	41230
20°	38845	39041	38928
25°	35049	36118	35049
30°	27988	31959	28212
35°	19986	25864	20022
40°	13493	17591	13708
45°	8576	10412	8604
50°	4883	5561	4717
55°	3209	2685	3158
60°	2228	1569	2170
65°	1536	1146	1536
70°	1105	878	1105
75°	749	749	749
80°	446	614	614
85°	667	667	667

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 10412 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	42.4	8.3
10°-20°	115.2	22.7
20°-30°	150.8	29.7
30°-40°	118.5	23.3
40°-50°	55.4	10.9
50°-60°	17.2	3.4
60°-70°	6.1	1.2
70°-80°	2.2	0.4
80°-90°	0.6	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°	308.4	60.7
0°-40°	426.9	84.0
0°-60°	499.4	98.3
0°-90°	508.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	508.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	452	452	452	452	452	
5°	448	448	448	449	448	42
15°	411	411	411	411	411	115
25°	328	332	338	333	328	147
35°	169	184	219	187	169	107
45°	63	70	76	69	63	50
55°	19	18	16	18	19	18
65°	7	6	5	6	7	7
75°	2	2	2	2	2	2
85°	1	1	1	1	1	1
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	452.2	452.2	452.2	452.2	452.2
2.5°	452.2	451.6	451.9	451.3	451.3
5°	447.7	448.0	448.3	448.8	447.7
7.5°	442.7	443.2	443.0	443.0	443.0
10°	434.3	434.6	434.6	434.6	433.5
12.5°	423.7	424.2	424.5	423.7	423.7
15°	410.8	410.8	410.6	410.8	411.1
17.5°	395.5	396.3	396.3	395.5	395.2
20°	376.8	378.2	378.7	377.6	377.6
22.5°	355.8	357.2	360.6	357.8	355.5
25°	327.9	332.4	337.9	332.6	327.9
27.5°	291.9	301.6	314.5	303.3	292.7
30°	250.2	266.2	285.7	267.0	252.2
32.5°	207.8	225.7	254.4	227.1	207.8
35°	169.0	184.3	218.7	186.6	169.3
37.5°	134.3	149.1	179.3	150.8	136.3
40°	106.7	118.7	139.1	118.4	108.4
42.5°	83.2	91.9	105.3	91.6	83.0
45°	62.6	70.1	76.0	68.7	62.8
47.5°	46.1	51.1	54.5	50.3	45.0
50°	32.4	36.0	36.9	35.2	31.3
52.5°	24.3	24.3	24.6	24.0	23.7
55°	19.0	17.9	15.9	17.6	18.7
57.5°	14.8	13.7	11.2	13.1	14.5
60°	11.5	10.3	8.1	10.1	11.2
62.5°	8.9	7.8	6.4	7.8	8.7
65°	6.7	6.1	5.0	5.9	6.7
67.5°	5.0	4.5	3.9	4.5	5.0
70°	3.9	3.6	3.1	3.4	3.9
72.5°	2.8	2.5	2.5	2.5	2.8
75°	2.0	2.0	2.0	2.0	2.0
77.5°	1.4	1.4	1.4	1.4	1.4
80°	0.8	0.8	1.1	1.1	1.1
82.5°	0.6	0.6	0.8	0.8	0.8
85°	0.6	0.6	0.6	0.6	0.6
87.5°	0.3	0.3	0.3	0.6	0.6
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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