

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: P837219

Luminaire Tested: HCSQ405D010-HM40525930-41SQH

Issue Date: 5/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P837219
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-HM40525930-41SQH
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, HAZE TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 3000K CCT
Ballast/Driver: -

Summary

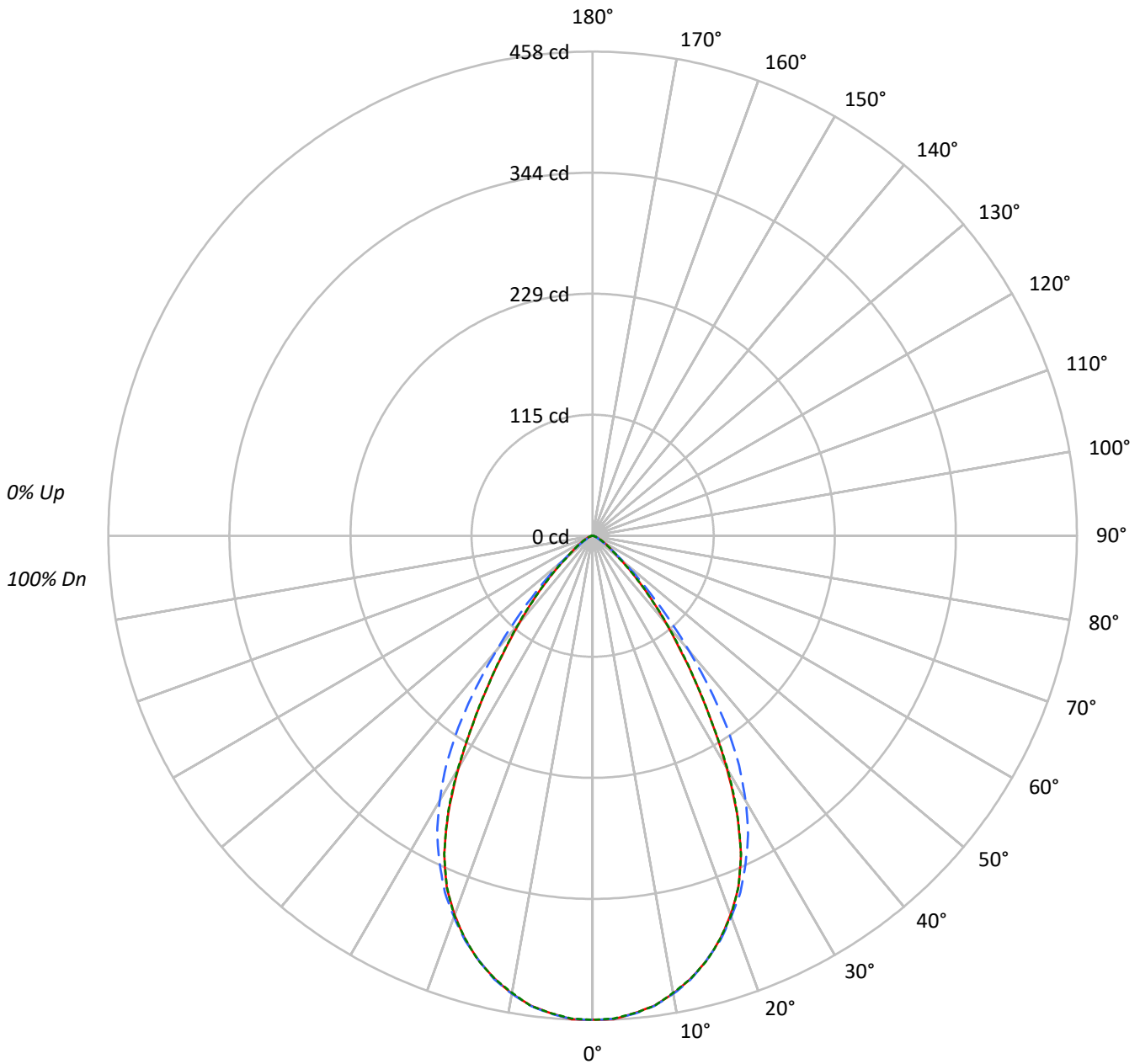
Lumens per Lamp: N/A
Luminaire Lumens: 514.6 lumens
Efficiency: N/A
Efficacy: 85.8 lumens/watt
Spacing Criteria (0/90/45): 0.98 / 0.98 / 1.01
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

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									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				100															
1	113	110	107	105	110	108	105	103	104	102	100	100	98	97	96	95	94	92				92															
2	107	101	97	93	104	100	95	92	96	93	90	93	90	88	90	88	86	85				85															
3	101	93	88	84	98	92	87	83	89	85	82	87	83	80	85	82	79	77				77															
4	95	87	80	76	93	85	80	75	83	78	74	81	77	74	79	76	73	71				71															
5	89	80	74	69	88	79	73	69	77	72	68	76	71	68	74	70	67	65				65															
6	84	75	68	63	83	74	68	63	72	67	63	71	66	62	69	65	62	60				60															
7	80	70	63	59	78	69	63	58	68	62	58	66	61	58	65	61	57	56				56															
8	75	65	59	54	74	65	58	54	63	58	54	62	57	54	61	57	53	52				52															
9	72	61	55	50	70	61	54	50	60	54	50	59	54	50	58	53	50	48				48															
10	68	57	51	47	67	57	51	47	56	51	47	55	50	47	55	50	46	45				45															

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	44350	44350	44350
5°	44081	44140	44081
10°	43253	43283	43175
15°	41722	41692	41752
20°	39330	39536	39412
25°	35488	36578	35488
30°	28346	32362	28570
35°	20235	26183	20270
40°	13658	17806	13873
45°	8672	10535	8713
50°	4943	5622	4778
55°	3243	2719	3192
60°	2248	1589	2189
65°	1559	1169	1559
70°	1133	878	1133
75°	749	749	749
80°	446	614	614
85°	667	667	667

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 10535 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	42.9	8.3
10°-20°	116.6	22.7
20°-30°	152.7	29.7
30°-40°	120.0	23.3
40°-50°	56.1	10.9
50°-60°	17.4	3.4
60°-70°	6.2	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°	312.2	60.7
0°-40°	432.2	84.0
0°-60°	505.7	98.3
0°-90°	514.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	514.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	458	458	458	458	458	
5°	453	454	454	454	453	43
15°	416	416	416	416	416	117
25°	332	336	342	337	332	149
35°	171	187	221	189	171	108
45°	63	71	77	70	64	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°	457.8	457.8	457.8	457.8	457.8
2.5°	457.8	457.3	457.5	457.0	457.0
5°	453.3	453.6	453.9	454.4	453.3
7.5°	448.2	448.8	448.5	448.5	448.5
10°	439.7	440.0	440.0	440.0	438.9
12.5°	429.0	429.6	429.8	429.0	429.0
15°	416.0	416.0	415.7	416.0	416.3
17.5°	400.4	401.3	401.3	400.4	400.1
20°	381.5	382.9	383.5	382.3	382.3
22.5°	360.3	361.7	365.1	362.2	360.0
25°	332.0	336.5	342.2	336.8	332.0
27.5°	295.5	305.4	318.4	307.1	296.4
30°	253.4	269.5	289.3	270.3	255.4
32.5°	210.4	228.5	257.6	229.9	210.4
35°	171.1	186.6	221.4	188.9	171.4
37.5°	136.0	151.0	181.5	152.7	138.0
40°	108.0	120.2	140.8	119.9	109.7
42.5°	84.3	93.0	106.6	92.8	84.0
45°	63.3	71.0	76.9	69.6	63.6
47.5°	46.7	51.7	55.1	50.9	45.5
50°	32.8	36.5	37.3	35.6	31.7
52.5°	24.6	24.6	24.9	24.3	24.0
55°	19.2	18.1	16.1	17.8	18.9
57.5°	15.0	13.9	11.3	13.3	14.7
60°	11.6	10.5	8.2	10.2	11.3
62.5°	9.0	7.9	6.5	7.9	8.8
65°	6.8	6.2	5.1	5.9	6.8
67.5°	5.1	4.5	4.0	4.5	5.1
70°	4.0	3.7	3.1	3.4	4.0
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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