

Signify Classified - Internal
Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



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: P837559

Luminaire Tested: HCSQ445D010-HM44560830-41SQH

Issue Date: 5/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P837559
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: HCSQ445D010-HM44560830-41SQH
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, HAZE TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 3000K CCT
Ballast/Driver: -

Summary

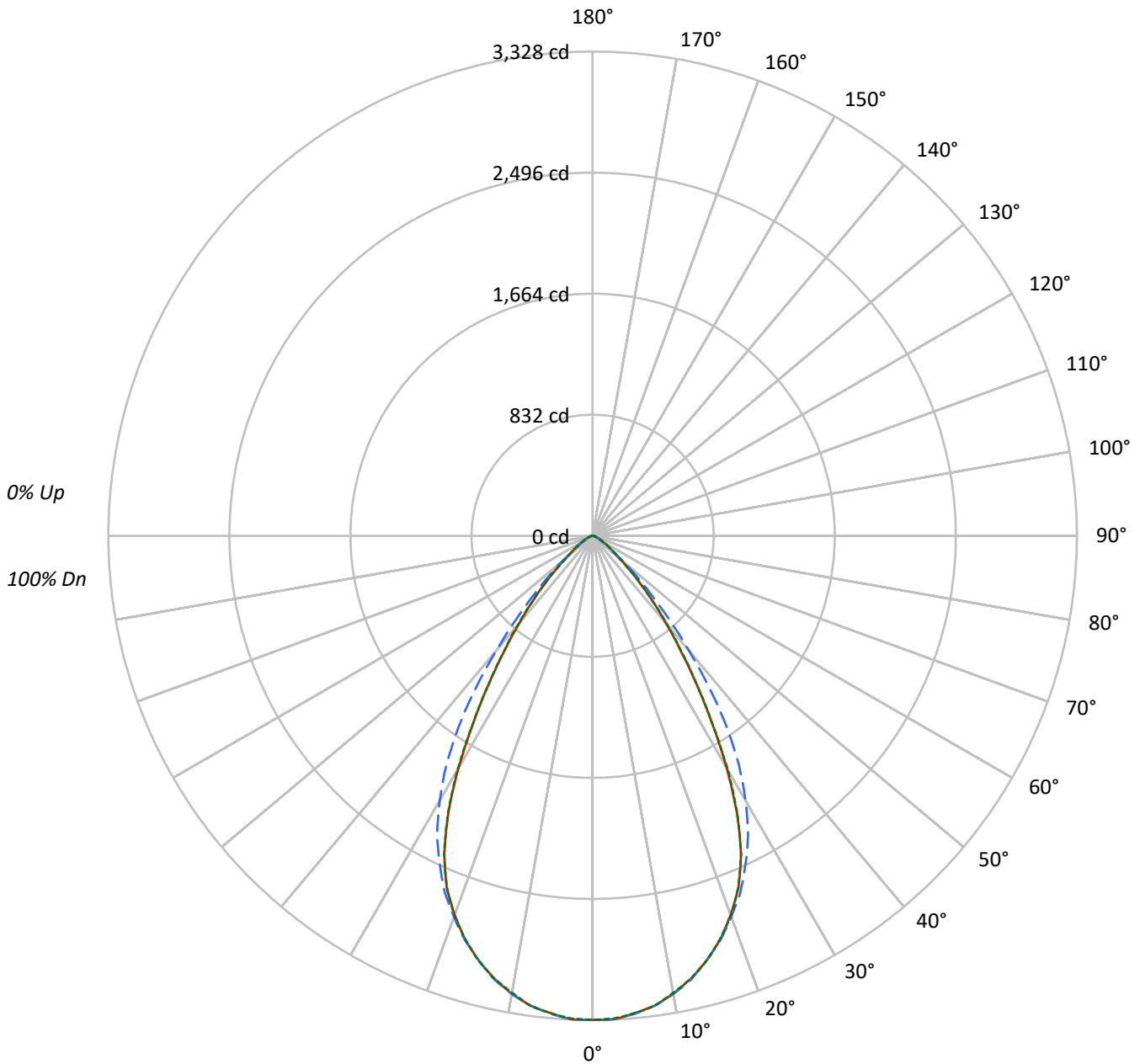
Lumens per Lamp: N/A
Luminaire Lumens: 3740.8 lumens
Efficiency: N/A
Efficacy: 81.5 lumens/watt
Spacing Criteria (0/90/45): 0.98 / 0.98 / 1.01
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 45.9
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°	322382	322382	322382
5°	320414	320813	320414
10°	314420	314616	313810
15°	303245	303045	303456
20°	285855	287340	286495
25°	257937	265847	257937
30°	206016	235224	207627
35°	147072	190333	147308
40°	99298	129446	100853
45°	63076	76598	63364
50°	35930	40888	34694
55°	23612	19795	23257
60°	16333	11548	15926
65°	11301	8481	11301
70°	8157	6401	8157
75°	5390	5390	5390
80°	3459	4575	4575
85°	4557	4557	4557

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 76598 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	311.8	8.3
10°-20°	847.7	22.7
20°-30°	1109.9	29.7
30°-40°	872.4	23.3
40°-50°	407.5	10.9
50°-60°	126.3	3.4
60°-70°	45.1	1.2
70°-80°	15.9	0.4
80°-90°	4.4	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°	2269.4	60.7
0°-40°	3141.7	84.0
0°-60°	3675.5	98.3
0°-90°	3740.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3740.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3328	3328	3328	3328	3328	
5°	3295	3297	3299	3303	3295	312
15°	3024	3024	3022	3024	3026	847
25°	2413	2446	2487	2448	2413	1085
35°	1244	1357	1609	1373	1246	784
45°	460	516	559	506	462	367
55°	140	132	117	130	138	131
65°	49	45	37	43	49	51
75°	14	14	14	14	14	17
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°	3327.8	3327.8	3327.8	3327.8	3327.8
2.5°	3327.8	3323.7	3325.8	3321.7	3321.7
5°	3294.9	3297.0	3299.0	3303.2	3294.9
7.5°	3257.9	3262.0	3260.0	3260.0	3260.0
10°	3196.3	3198.3	3198.3	3198.3	3190.1
12.5°	3118.2	3122.3	3124.3	3118.2	3118.2
15°	3023.6	3023.6	3021.6	3023.6	3025.7
17.5°	2910.6	2916.7	2916.7	2910.6	2908.5
20°	2772.8	2783.1	2787.2	2779.0	2779.0
22.5°	2618.7	2629.0	2653.6	2633.1	2616.6
25°	2413.1	2446.0	2487.1	2448.1	2413.1
27.5°	2148.0	2219.9	2314.5	2232.3	2154.1
30°	1841.7	1958.9	2102.8	1965.0	1856.1
32.5°	1529.3	1660.8	1872.5	1671.1	1529.3
35°	1243.6	1356.6	1609.4	1373.1	1245.6
37.5°	988.7	1097.6	1319.6	1110.0	1003.1
40°	785.2	873.6	1023.6	871.5	797.5
42.5°	612.5	676.3	774.9	674.2	610.5
45°	460.4	515.9	559.1	505.6	462.5
47.5°	339.2	376.2	400.8	370.0	330.9
50°	238.4	265.2	271.3	259.0	230.2
52.5°	178.8	178.8	180.9	176.8	174.7
55°	139.8	131.6	117.2	129.5	137.7
57.5°	108.9	100.7	82.2	96.6	106.9
60°	84.3	76.1	59.6	74.0	82.2
62.5°	65.8	57.6	47.3	57.6	63.7
65°	49.3	45.2	37.0	43.2	49.3
67.5°	37.0	32.9	28.8	32.9	37.0
70°	28.8	26.7	22.6	24.7	28.8
72.5°	20.6	18.5	18.5	18.5	20.6
75°	14.4	14.4	14.4	14.4	14.4
77.5°	10.3	10.3	10.3	10.3	10.3
80°	6.2	6.2	8.2	8.2	8.2
82.5°	4.1	4.1	6.2	6.2	6.2
85°	4.1	4.1	4.1	4.1	4.1
87.5°	2.1	2.1	2.1	4.1	4.1
90°	0.0	0.0	0.0	0.0	0.0

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Scaled Data Report





— 0°-180° - - 45°-225° - - - - 90°-270°

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