

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: P837269

Luminaire Tested: HCSQ407D010-HM40525940-41SQH

Issue Date: 5/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P837269
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: HCSQ407D010-HM40525940-41SQH
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, HAZE TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 4000K CCT
Ballast/Driver: -

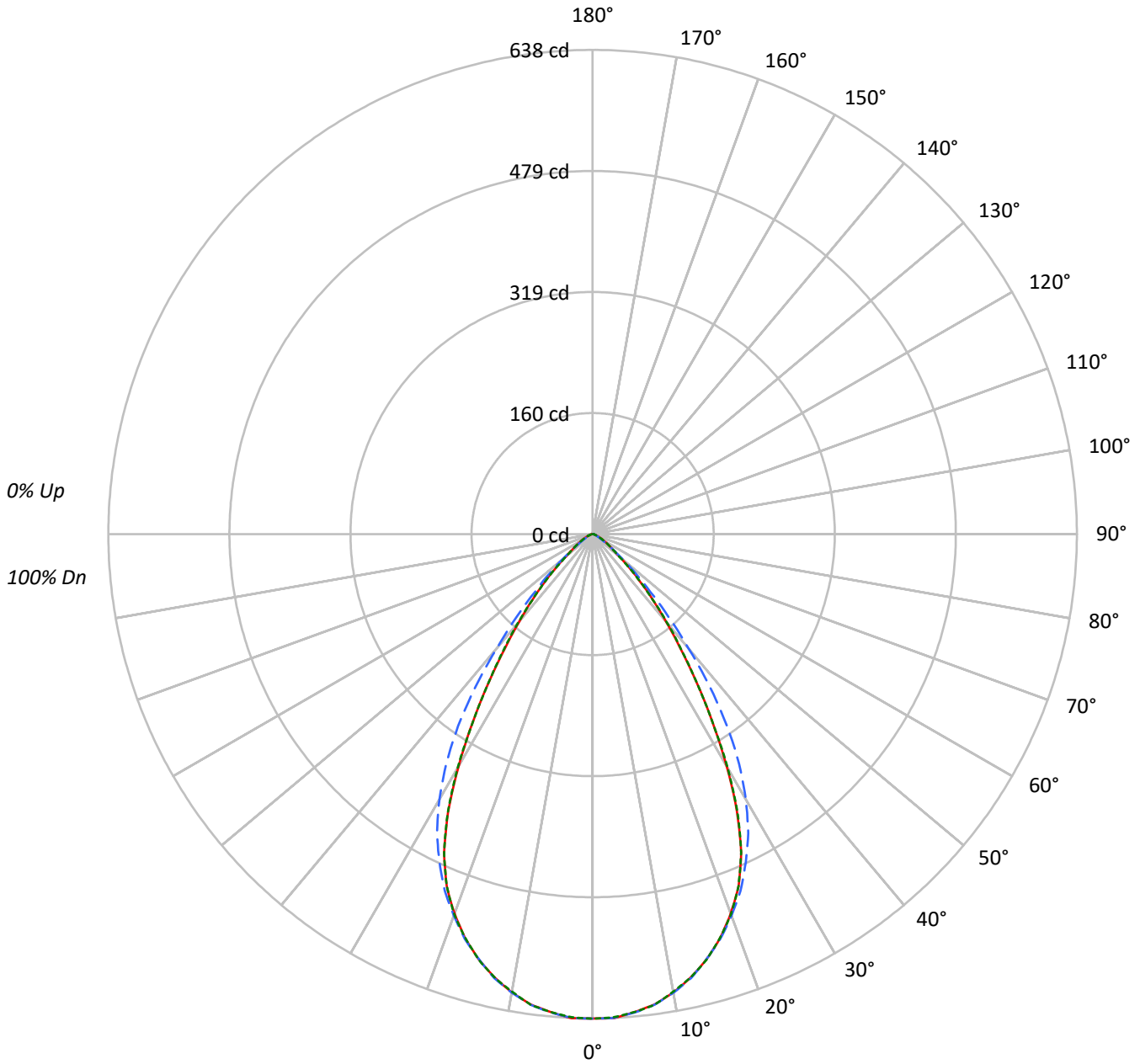
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 717.7 lumens
Efficiency: N/A
Efficacy: 89.7 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): 8
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																			
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	55	50	46	45																			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	61855	61855	61855
5°	61479	61556	61479
10°	60320	60360	60212
15°	58180	58140	58220
20°	54845	55134	54969
25°	49490	51008	49490
30°	39521	45125	39834
35°	28218	36520	28265
40°	19045	24837	19349
45°	12097	14700	12152
50°	6888	7852	6661
55°	4526	3800	4459
60°	3139	2209	3061
65°	2178	1628	2178
70°	1558	1218	1558
75°	1048	1048	1048
80°	669	893	893
85°	889	889	889

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 14700 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	59.8	8.3
10°-20°	162.6	22.7
20°-30°	212.9	29.7
30°-40°	167.4	23.3
40°-50°	78.2	10.9
50°-60°	24.2	3.4
60°-70°	8.6	1.2
70°-80°	3.0	0.4
80°-90°	0.9	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°	435.4	60.7
0°-40°	602.8	84.0
0°-60°	705.2	98.3
0°-90°	717.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	717.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	638	638	638	638	638	
5°	632	633	633	634	632	60
15°	580	580	580	580	580	162
25°	463	469	477	470	463	208
35°	239	260	309	263	239	150
45°	88	99	107	97	89	70
55°	27	25	22	25	26	25
65°	10	9	7	8	10	10
75°	3	3	3	3	3	3
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°	638.5	638.5	638.5	638.5	638.5
2.5°	638.5	637.7	638.1	637.3	637.3
5°	632.2	632.6	633.0	633.7	632.2
7.5°	625.1	625.9	625.5	625.5	625.5
10°	613.2	613.6	613.6	613.6	612.1
12.5°	598.2	599.0	599.4	598.2	598.2
15°	580.1	580.1	579.7	580.1	580.5
17.5°	558.4	559.6	559.6	558.4	558.0
20°	532.0	534.0	534.8	533.2	533.2
22.5°	502.4	504.4	509.1	505.2	502.0
25°	463.0	469.3	477.2	469.7	463.0
27.5°	412.1	425.9	444.1	428.3	413.3
30°	353.3	375.8	403.4	377.0	356.1
32.5°	293.4	318.6	359.3	320.6	293.4
35°	238.6	260.3	308.8	263.4	239.0
37.5°	189.7	210.6	253.2	213.0	192.4
40°	150.6	167.6	196.4	167.2	153.0
42.5°	117.5	129.7	148.7	129.4	117.1
45°	88.3	99.0	107.3	97.0	88.7
47.5°	65.1	72.2	76.9	71.0	63.5
50°	45.7	50.9	52.1	49.7	44.2
52.5°	34.3	34.3	34.7	33.9	33.5
55°	26.8	25.2	22.5	24.8	26.4
57.5°	20.9	19.3	15.8	18.5	20.5
60°	16.2	14.6	11.4	14.2	15.8
62.5°	12.6	11.0	9.1	11.0	12.2
65°	9.5	8.7	7.1	8.3	9.5
67.5°	7.1	6.3	5.5	6.3	7.1
70°	5.5	5.1	4.3	4.7	5.5
72.5°	3.9	3.5	3.5	3.5	3.9
75°	2.8	2.8	2.8	2.8	2.8
77.5°	2.0	2.0	2.0	2.0	2.0
80°	1.2	1.2	1.6	1.6	1.6
82.5°	0.8	0.8	1.2	1.2	1.2
85°	0.8	0.8	0.8	0.8	0.8
87.5°	0.4	0.4	0.4	0.8	0.8
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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