

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: P837486

Luminaire Tested: HCSQ435D010-HM43040835-41SQMB

Issue Date: 5/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P837486
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: HCSQ435D010-HM43040835-41SQMB
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, MATTE BLACK TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 3500K CCT
Ballast/Driver: -

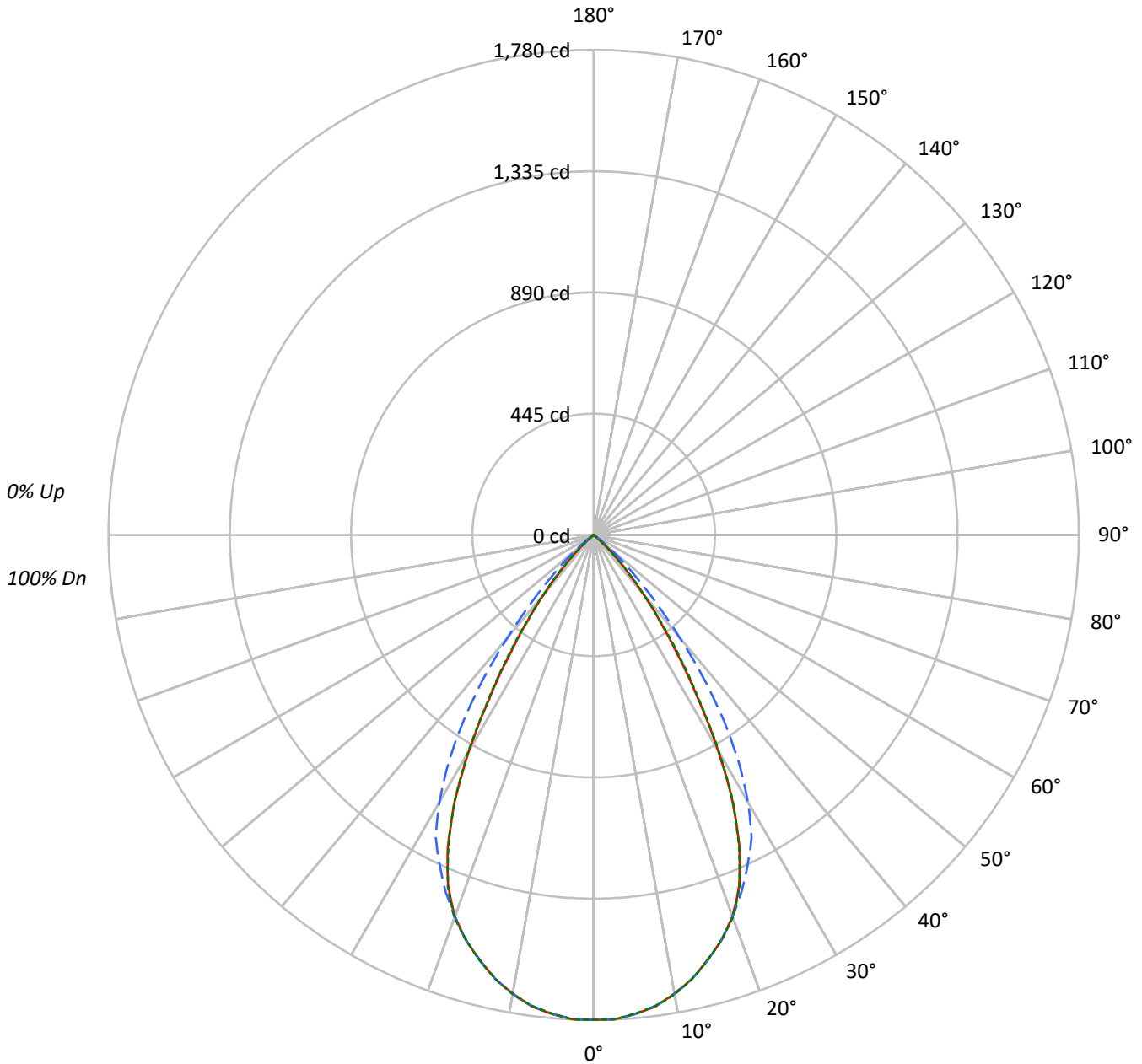
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1777.7 lumens
Efficiency: N/A
Efficacy: 52.3 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): 34
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					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					100			
1	113	111	108	106	111	108	106	104	104	103	101	101	99	98	97	96	95	93					93			
2	108	103	99	95	105	101	97	94	98	95	92	95	92	90	92	90	88	87					87			
3	102	96	91	87	100	94	90	86	92	88	84	89	86	83	87	84	82	80					80			
4	97	89	83	79	95	88	83	79	86	81	78	84	80	77	82	79	76	74					74			
5	92	83	77	73	90	82	77	73	80	76	72	79	75	71	77	74	71	69					69			
6	87	78	72	67	85	77	71	67	76	70	67	74	70	66	73	69	66	64					64			
7	82	73	67	63	81	72	66	62	71	66	62	70	65	62	69	65	61	60					60			
8	78	69	62	58	77	68	62	58	67	62	58	66	61	58	65	61	57	56					56			
9	74	65	58	54	73	64	58	54	63	58	54	62	57	54	61	57	54	52					52			
10	71	61	55	51	70	60	55	51	60	54	51	59	54	51	58	54	50	49					49			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	172390	172390	172390
5°	171609	171609	171444
10°	168065	168232	168390
15°	161913	162083	162083
20°	153505	153670	154010
25°	135334	142923	134810
30°	102119	126673	103036
35°	64039	98584	66180
40°	36118	61372	36118
45°	15152	30990	14933
50°	1251	11936	1492
55°	557	2517	557
60°	639	329	639
65°	390	390	390
70°	482	482	482
75°	636	636	636
80°	0	948	948
85°	0	1890	1890

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 30990 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	166.8	9.4
10°-20°	453.7	25.5
20°-30°	588.6	33.1
30°-40°	418.5	23.5
40°-50°	135.7	7.6
50°-60°	9.8	0.6
60°-70°	1.7	0.1
70°-80°	1.8	0.1
80°-90°	1.2	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°	1209.1	68.0
0°-40°	1627.6	91.6
0°-60°	1773.0	99.7
0°-90°	1777.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1777.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1780	1780	1780	1780	1780	
5°	1765	1766	1765	1765	1763	167
15°	1614	1619	1616	1619	1616	453
25°	1266	1299	1337	1306	1261	567
35°	542	640	834	647	560	346
45°	111	157	226	160	109	92
55°	3	3	15	3	3	4
65°	2	2	2	2	2	2
75°	2	2	2	2	2	2
85°	0	0	2	2	2	0
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1779.5	1779.5	1779.5	1779.5	1779.5
2.5°	1779.5	1779.5	1777.9	1777.9	1779.5
5°	1764.7	1766.3	1764.7	1764.7	1763.0
7.5°	1744.9	1744.9	1743.2	1743.2	1743.2
10°	1708.5	1710.2	1710.2	1710.2	1711.8
12.5°	1668.9	1668.9	1668.9	1668.9	1668.9
15°	1614.4	1619.4	1616.1	1619.4	1616.1
17.5°	1560.0	1560.0	1558.3	1561.6	1558.3
20°	1489.0	1489.0	1490.6	1493.9	1493.9
22.5°	1394.9	1411.4	1418.0	1414.7	1398.2
25°	1266.1	1299.2	1337.1	1305.8	1261.2
27.5°	1104.4	1167.1	1254.6	1177.0	1107.7
30°	912.9	1007.0	1132.4	1010.3	921.1
32.5°	714.8	823.7	990.5	832.0	721.4
35°	541.5	640.5	833.6	647.1	559.6
37.5°	399.5	490.3	662.0	493.6	411.0
40°	285.6	351.6	485.3	358.2	285.6
42.5°	183.2	249.3	341.7	250.9	191.5
45°	110.6	156.8	226.2	160.1	109.0
47.5°	49.5	89.1	140.3	92.4	49.5
50°	8.3	36.3	79.2	38.0	9.9
52.5°	5.0	6.6	38.0	6.6	5.0
55°	3.3	3.3	14.9	3.3	3.3
57.5°	3.3	3.3	3.3	3.3	3.3
60°	3.3	1.7	1.7	1.7	3.3
62.5°	1.7	1.7	1.7	1.7	1.7
65°	1.7	1.7	1.7	1.7	1.7
67.5°	1.7	1.7	1.7	1.7	1.7
70°	1.7	1.7	1.7	1.7	1.7
72.5°	1.7	1.7	1.7	1.7	1.7
75°	1.7	1.7	1.7	1.7	1.7
77.5°	1.7	1.7	1.7	1.7	1.7
80°	0.0	1.7	1.7	1.7	1.7
82.5°	0.0	1.7	1.7	1.7	1.7
85°	0.0	0.0	1.7	1.7	1.7
87.5°	0.0	0.0	1.7	1.7	1.7
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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