

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: P837409

Luminaire Tested: HCSQ425D010-HM40525840-41SQH

Issue Date: 5/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P837409
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: HCSQ425D010-HM40525840-41SQH
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, HAZE TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 4000K CCT
Ballast/Driver: -

Summary

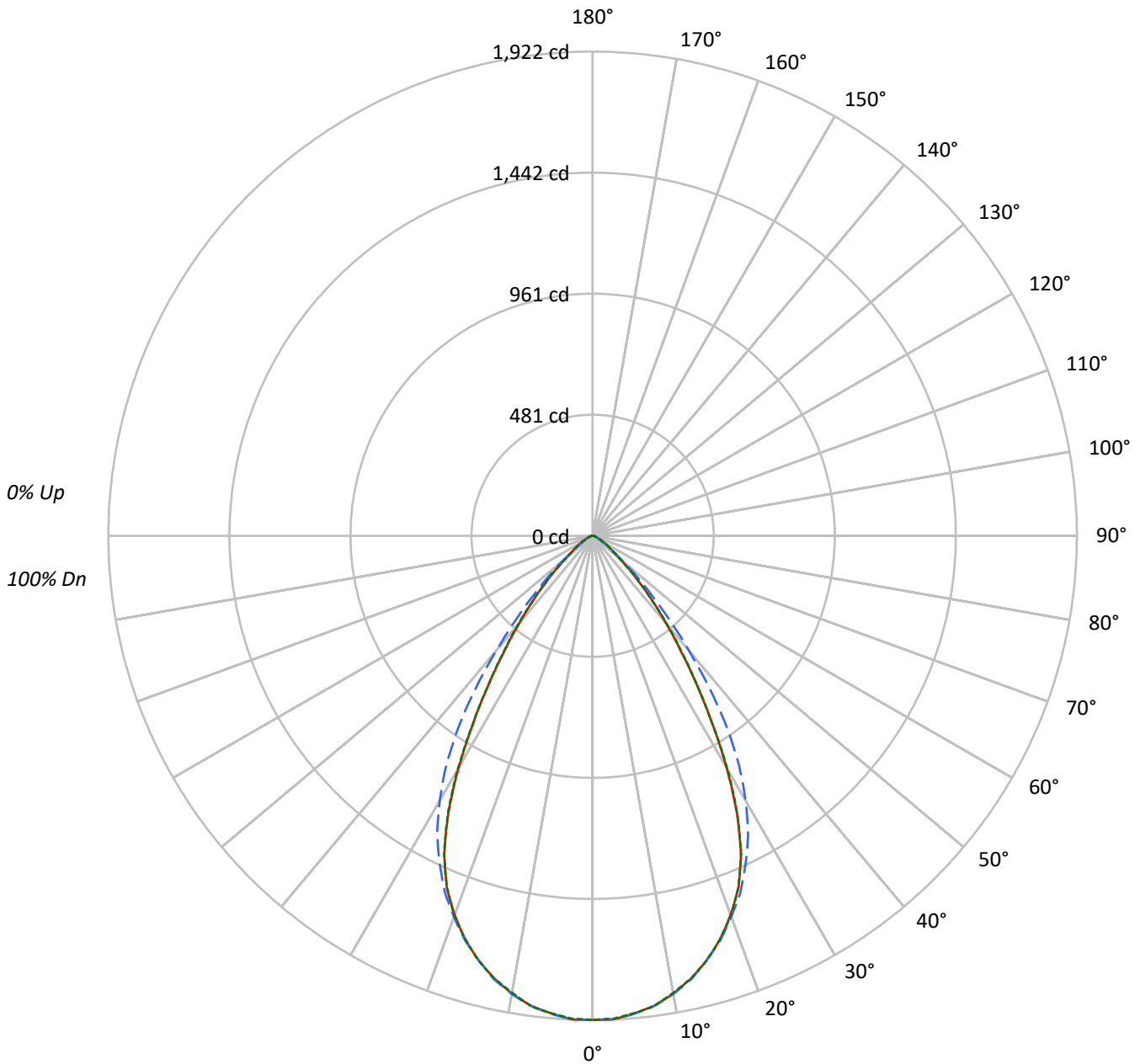
Lumens per Lamp: N/A
Luminaire Lumens: 2160.0 lumens
Efficiency: N/A
Efficacy: 78.0 lumens/watt
Spacing Criteria (0/90/45): 0.98 / 0.98 / 1.01
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 27.7
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°	186146	186146	186146
5°	185010	185243	185010
10°	181551	181670	181197
15°	175101	174981	175222
20°	165062	165917	165423
25°	148941	153505	148941
30°	118954	135823	119883
35°	84925	109902	85055
40°	57338	74752	58236
45°	36429	44224	36580
50°	20753	23616	20030
55°	13630	11434	13427
60°	9436	6665	9203
65°	6533	4905	6533
70°	4702	3711	4702
75°	3107	3107	3107
80°	2008	2622	2622
85°	2668	2668	2668

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 44224 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	180.0	8.3
10°-20°	489.5	22.7
20°-30°	640.9	29.7
30°-40°	503.7	23.3
40°-50°	235.3	10.9
50°-60°	72.9	3.4
60°-70°	26.0	1.2
70°-80°	9.2	0.4
80°-90°	2.5	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°	1310.4	60.7
0°-40°	1814.1	84.0
0°-60°	2122.3	98.3
0°-90°	2160.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2160.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1922	1922	1922	1922	1922	
5°	1902	1904	1905	1907	1902	180
15°	1746	1746	1745	1746	1747	489
25°	1393	1412	1436	1414	1393	627
35°	718	783	929	793	719	453
45°	266	298	323	292	267	212
55°	81	76	68	75	80	76
65°	28	26	21	25	28	30
75°	8	8	8	8	8	10
85°	2	2	2	2	2	2
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1921.5	1921.5	1921.5	1921.5	1921.5
2.5°	1921.5	1919.2	1920.3	1918.0	1918.0
5°	1902.5	1903.7	1904.9	1907.3	1902.5
7.5°	1881.2	1883.6	1882.4	1882.4	1882.4
10°	1845.6	1846.8	1846.8	1846.8	1842.0
12.5°	1800.5	1802.8	1804.0	1800.5	1800.5
15°	1745.9	1745.9	1744.7	1745.9	1747.1
17.5°	1680.6	1684.2	1684.2	1680.6	1679.4
20°	1601.1	1607.0	1609.4	1604.6	1604.6
22.5°	1512.1	1518.0	1532.2	1520.4	1510.9
25°	1393.4	1412.4	1436.1	1413.6	1393.4
27.5°	1240.3	1281.8	1336.4	1288.9	1243.8
30°	1063.4	1131.1	1214.2	1134.6	1071.7
32.5°	883.0	959.0	1081.2	964.9	883.0
35°	718.1	783.3	929.3	792.8	719.2
37.5°	570.9	633.8	762.0	640.9	579.2
40°	453.4	504.4	591.1	503.2	460.5
42.5°	353.7	390.5	447.4	389.3	352.5
45°	265.9	297.9	322.8	292.0	267.0
47.5°	195.8	217.2	231.4	213.6	191.1
50°	137.7	153.1	156.7	149.5	132.9
52.5°	103.3	103.3	104.4	102.1	100.9
55°	80.7	76.0	67.7	74.8	79.5
57.5°	62.9	58.2	47.5	55.8	61.7
60°	48.7	43.9	34.4	42.7	47.5
62.5°	38.0	33.2	27.3	33.2	36.8
65°	28.5	26.1	21.4	24.9	28.5
67.5°	21.4	19.0	16.6	19.0	21.4
70°	16.6	15.4	13.1	14.2	16.6
72.5°	11.9	10.7	10.7	10.7	11.9
75°	8.3	8.3	8.3	8.3	8.3
77.5°	5.9	5.9	5.9	5.9	5.9
80°	3.6	3.6	4.7	4.7	4.7
82.5°	2.4	2.4	3.6	3.6	3.6
85°	2.4	2.4	2.4	2.4	2.4
87.5°	1.2	1.2	1.2	2.4	2.4
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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