

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: P837449

Luminaire Tested: HCSQ430D010-HM43040840-41SQH

Issue Date: 5/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P837449
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: HCSQ430D010-HM43040840-41SQH
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, HAZE TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 4000K CCT
Ballast/Driver: -

Summary

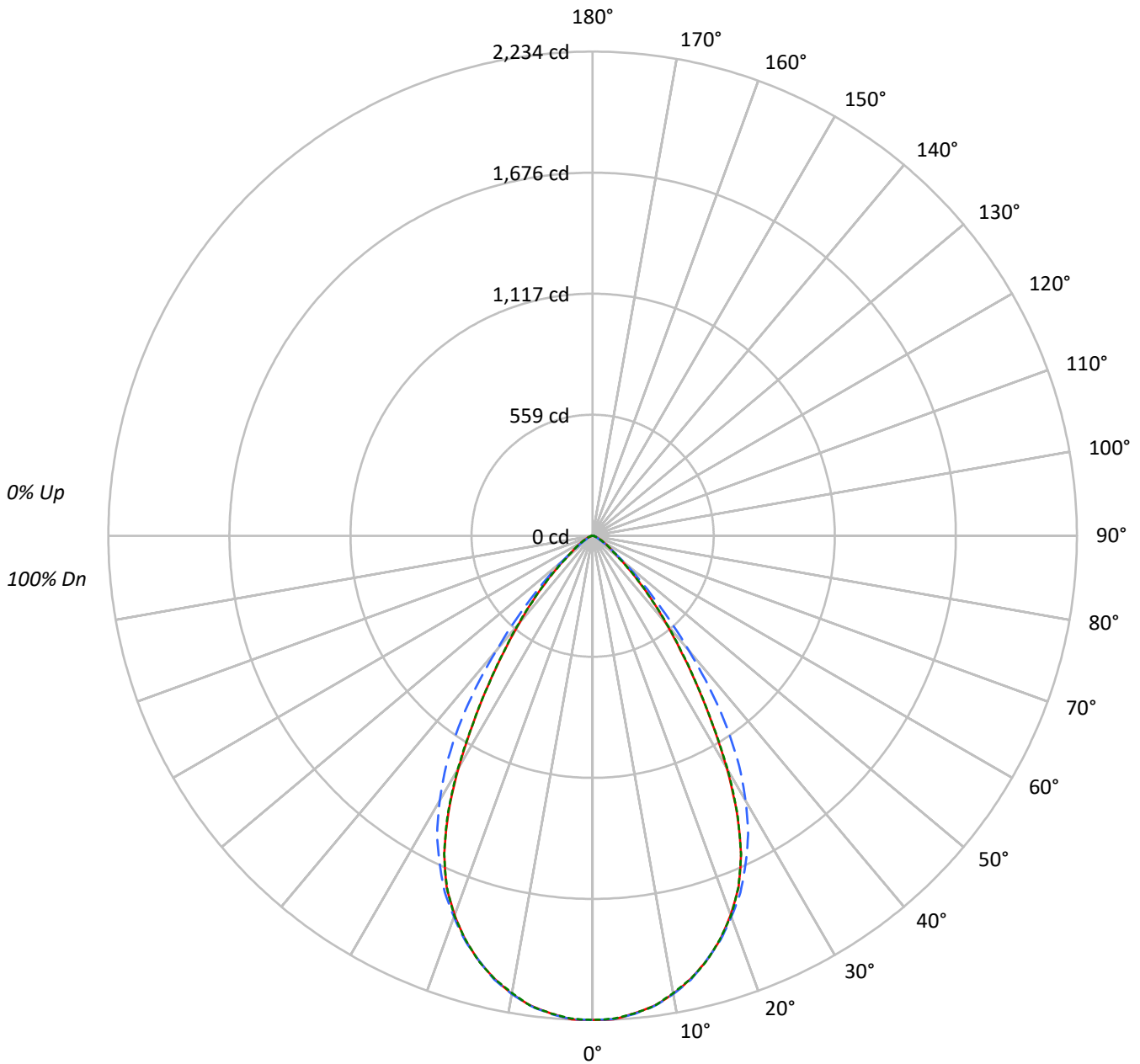
Lumens per Lamp: N/A
Luminaire Lumens: 2511.3 lumens
Efficiency: N/A
Efficacy: 89.1 lumens/watt
Spacing Criteria (0/90/45): 0.98 / 0.98 / 1.01
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 28.2
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°	216420	216420	216420
5°	215107	215370	215107
10°	211072	211210	210669
15°	203574	203434	203715
20°	191907	192897	192330
25°	173162	178475	173162
30°	138306	157905	139380
35°	98726	127783	98892
40°	66658	86905	67708
45°	42347	51417	42539
50°	24129	27445	23285
55°	15843	13292	15623
60°	10966	7750	10695
65°	7587	5685	7587
70°	5467	4305	5467
75°	3631	3631	3631
80°	2287	3068	3068
85°	3112	3112	3112

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°

Vertical Angle: 45°

Luminance: 51417 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	209.3	8.3
10°-20°	569.1	22.7
20°-30°	745.1	29.7
30°-40°	585.6	23.3
40°-50°	273.5	10.9
50°-60°	84.8	3.4
60°-70°	30.2	1.2
70°-80°	10.7	0.4
80°-90°	2.9	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°	1523.5	60.7
0°-40°	2109.1	84.0
0°-60°	2467.5	98.3
0°-90°	2511.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2511.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2234	2234	2234	2234	2234	
5°	2212	2213	2215	2218	2212	209
15°	2030	2030	2028	2030	2031	569
25°	1620	1642	1670	1644	1620	728
35°	835	911	1080	922	836	526
45°	309	346	375	340	310	246
55°	94	88	79	87	92	88
65°	33	30	25	29	33	35
75°	10	10	10	10	10	11
85°	3	3	3	3	3	2
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2234.0	2234.0	2234.0	2234.0	2234.0
2.5°	2234.0	2231.3	2232.7	2229.9	2229.9
5°	2212.0	2213.3	2214.7	2217.5	2212.0
7.5°	2187.1	2189.9	2188.5	2188.5	2188.5
10°	2145.7	2147.1	2147.1	2147.1	2141.6
12.5°	2093.3	2096.1	2097.4	2093.3	2093.3
15°	2029.8	2029.8	2028.4	2029.8	2031.2
17.5°	1953.9	1958.1	1958.1	1953.9	1952.5
20°	1861.5	1868.4	1871.1	1865.6	1865.6
22.5°	1758.0	1764.9	1781.4	1767.6	1756.6
25°	1620.0	1642.1	1669.7	1643.5	1620.0
27.5°	1442.0	1490.3	1553.8	1498.6	1446.1
30°	1236.4	1315.0	1411.6	1319.2	1246.0
32.5°	1026.6	1115.0	1257.1	1121.9	1026.6
35°	834.8	910.7	1080.5	921.8	836.2
37.5°	663.7	736.9	885.9	745.1	673.4
40°	527.1	586.5	687.2	585.1	535.4
42.5°	411.2	454.0	520.2	452.6	409.8
45°	309.1	346.4	375.3	339.5	310.5
47.5°	227.7	252.5	269.1	248.4	222.2
50°	160.1	178.0	182.1	173.9	154.5
52.5°	120.1	120.1	121.4	118.7	117.3
55°	93.8	88.3	78.7	86.9	92.5
57.5°	73.1	67.6	55.2	64.9	71.8
60°	56.6	51.1	40.0	49.7	55.2
62.5°	44.2	38.6	31.7	38.6	42.8
65°	33.1	30.4	24.8	29.0	33.1
67.5°	24.8	22.1	19.3	22.1	24.8
70°	19.3	17.9	15.2	16.6	19.3
72.5°	13.8	12.4	12.4	12.4	13.8
75°	9.7	9.7	9.7	9.7	9.7
77.5°	6.9	6.9	6.9	6.9	6.9
80°	4.1	4.1	5.5	5.5	5.5
82.5°	2.8	2.8	4.1	4.1	4.1
85°	2.8	2.8	2.8	2.8	2.8
87.5°	1.4	1.4	1.4	2.8	2.8
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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