

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: P837459

Luminaire Tested: HCSQ430D010-HM43040930-41SQH

Issue Date: 5/17/2024



Test Information

Test Method: LM-79-2019
Report Number: P837459
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-HM43040930-41SQH
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, HAZE TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 3000K CCT
Ballast/Driver: -

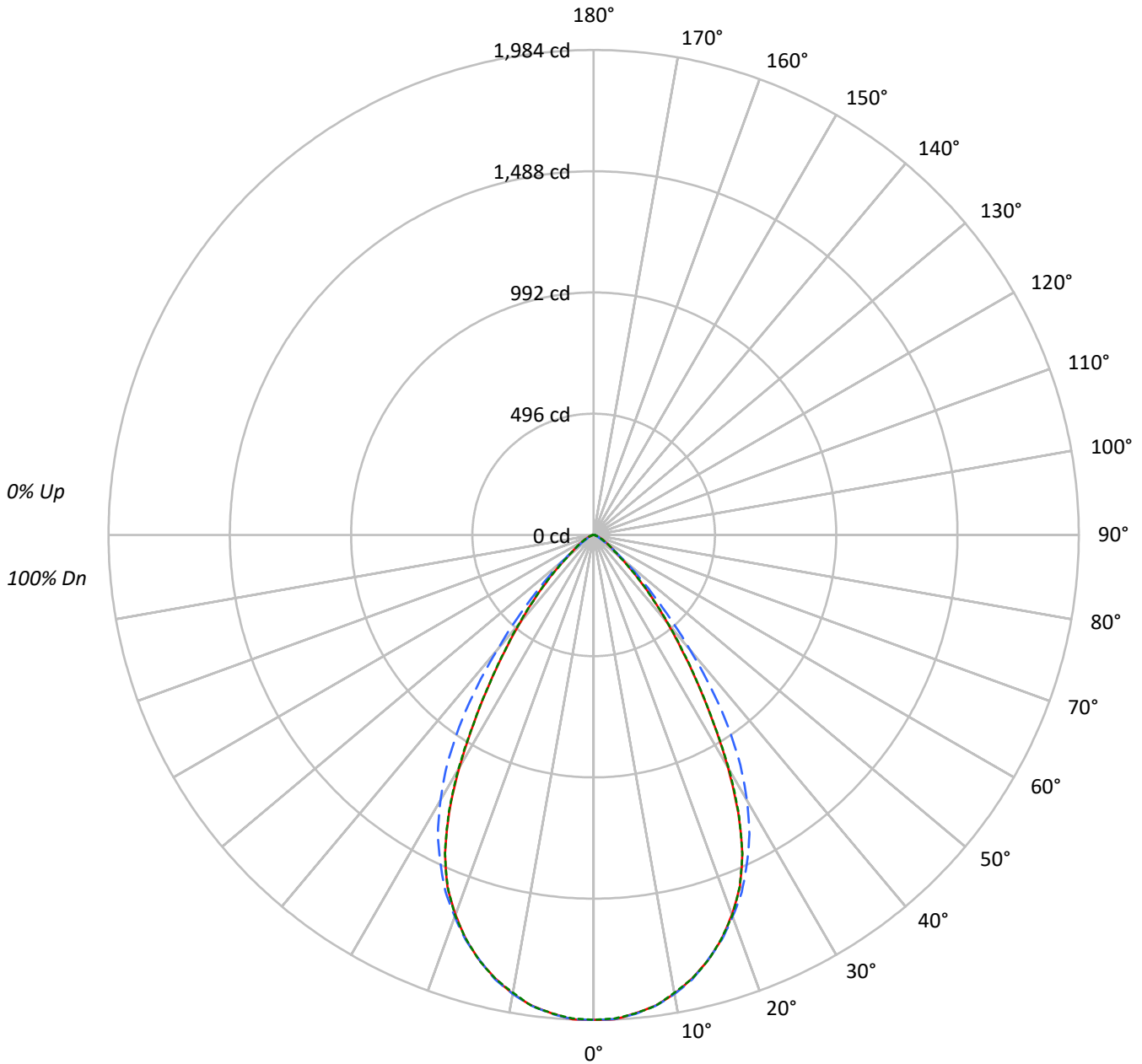
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2230.1 lumens
Efficiency: N/A
Efficacy: 79.1 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					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	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°	192191	192191	192191
5°	191019	191253	191019
10°	187444	187562	187080
15°	180778	180657	180898
20°	170412	171299	170794
25°	153772	158486	153772
30°	122813	140230	123775
35°	87668	113473	87822
40°	59197	77167	60120
45°	37607	45663	37772
50°	21416	24370	20678
55°	14069	11789	13866
60°	9726	6878	9494
65°	6739	5066	6739
70°	4872	3824	4872
75°	3219	3219	3219
80°	2064	2734	2734
85°	2779	2779	2779

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°

Vertical Angle: 45°

Luminance: 45663 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	185.9	8.3
10°-20°	505.4	22.7
20°-30°	661.7	29.7
30°-40°	520.1	23.3
40°-50°	242.9	10.9
50°-60°	75.3	3.4
60°-70°	26.9	1.2
70°-80°	9.5	0.4
80°-90°	2.6	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°	1352.9	60.7
0°-40°	1873.0	84.0
0°-60°	2191.1	98.3
0°-90°	2230.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2230.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1984	1984	1984	1984	1984	
5°	1964	1966	1967	1969	1964	186
15°	1802	1802	1801	1802	1804	505
25°	1439	1458	1483	1459	1439	647
35°	741	809	960	818	743	467
45°	274	308	333	301	276	219
55°	83	78	70	77	82	78
65°	29	27	22	26	29	31
75°	9	9	9	9	9	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°	1983.9	1983.9	1983.9	1983.9	1983.9
2.5°	1983.9	1981.4	1982.7	1980.2	1980.2
5°	1964.3	1965.5	1966.7	1969.2	1964.3
7.5°	1942.2	1944.7	1943.4	1943.4	1943.4
10°	1905.5	1906.7	1906.7	1906.7	1901.8
12.5°	1858.9	1861.3	1862.6	1858.9	1858.9
15°	1802.5	1802.5	1801.3	1802.5	1803.7
17.5°	1735.1	1738.8	1738.8	1735.1	1733.9
20°	1653.0	1659.2	1661.6	1656.7	1656.7
22.5°	1561.1	1567.2	1582.0	1569.7	1559.9
25°	1438.6	1458.2	1482.7	1459.4	1438.6
27.5°	1280.5	1323.4	1379.8	1330.8	1284.2
30°	1097.9	1167.8	1253.6	1171.5	1106.5
32.5°	911.7	990.1	1116.3	996.2	911.7
35°	741.3	808.7	959.5	818.5	742.6
37.5°	589.4	654.3	786.7	661.7	598.0
40°	468.1	520.8	610.2	519.6	475.4
42.5°	365.2	403.1	462.0	401.9	363.9
45°	274.5	307.6	333.3	301.4	275.7
47.5°	202.2	224.2	238.9	220.6	197.3
50°	142.1	158.1	161.7	154.4	137.2
52.5°	106.6	106.6	107.8	105.4	104.2
55°	83.3	78.4	69.8	77.2	82.1
57.5°	64.9	60.0	49.0	57.6	63.7
60°	50.2	45.3	35.5	44.1	49.0
62.5°	39.2	34.3	28.2	34.3	38.0
65°	29.4	27.0	22.1	25.7	29.4
67.5°	22.1	19.6	17.2	19.6	22.1
70°	17.2	15.9	13.5	14.7	17.2
72.5°	12.3	11.0	11.0	11.0	12.3
75°	8.6	8.6	8.6	8.6	8.6
77.5°	6.1	6.1	6.1	6.1	6.1
80°	3.7	3.7	4.9	4.9	4.9
82.5°	2.5	2.5	3.7	3.7	3.7
85°	2.5	2.5	2.5	2.5	2.5
87.5°	1.2	1.2	1.2	2.5	2.5
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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