

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: P837444

Luminaire Tested: HCSQ430D010-HM43040835-41SQH

Issue Date: 5/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P837444
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-HM43040835-41SQH
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, HAZE TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 3500K CCT
Ballast/Driver: -

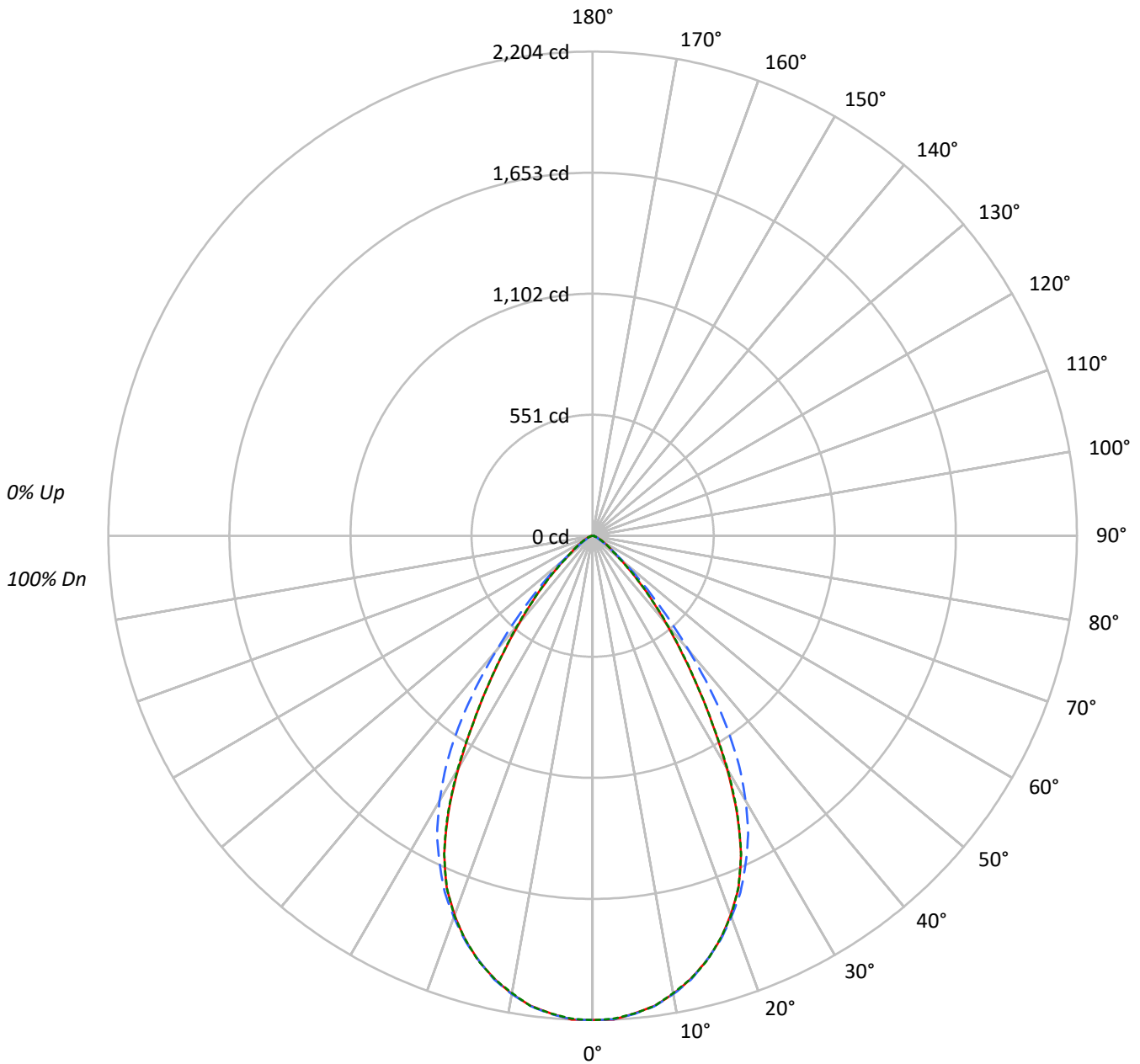
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2477.8 lumens
Efficiency: N/A
Efficacy: 87.9 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	100	98	97	96	95	94	92
	1	113	110	107	105	110	108	105	103	104	102	100	100	98	97	96	95	94	92	92	92	90	88	85	85	85	85
	2	107	101	97	93	104	100	95	92	96	93	90	93	90	88	90	88	86	85	85	85	82	80	85	82	79	77
	3	101	93	88	84	98	92	87	83	89	85	82	87	83	80	85	82	79	77	77	77	74	74	79	76	73	71
	4	95	87	80	76	93	85	80	75	83	78	74	81	77	74	79	76	73	71	71	71	68	68	74	70	67	65
	5	89	80	74	69	88	79	73	69	77	72	68	76	71	68	74	70	67	65	65	65	62	62	69	65	62	60
	6	84	75	68	63	83	74	68	63	72	67	63	71	66	62	69	65	62	60	60	60	62	62	69	65	62	60
	7	80	70	63	59	78	69	63	58	68	62	58	66	61	58	65	61	57	56	56	56	58	58	65	61	57	56
	8	75	65	59	54	74	65	58	54	63	58	54	62	57	54	61	57	53	52	52	52	54	54	61	57	53	52
	9	72	61	55	50	70	61	54	50	60	54	50	59	54	50	58	53	50	48	48	48	50	50	58	53	50	48
	10	68	57	51	47	67	57	51	47	56	51	47	55	50	47	55	50	46	45	45	45	47	47	55	50	46	45

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	213543	213543	213543
5°	212238	212501	212238
10°	208269	208397	207865
15°	200866	200726	201007
20°	189350	190330	189773
25°	170853	176091	170853
30°	136461	155802	137534
35°	97413	126080	97579
40°	65773	85741	66810
45°	41786	50732	41964
50°	23797	27083	22983
55°	15640	13106	15403
60°	10811	7653	10559
65°	7496	5616	7496
70°	5410	4249	5410
75°	3556	3556	3556
80°	2287	3013	3013
85°	3001	3001	3001

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 50732 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	206.5	8.3
10°-20°	561.5	22.7
20°-30°	735.2	29.7
30°-40°	577.8	23.3
40°-50°	269.9	10.9
50°-60°	83.6	3.4
60°-70°	29.9	1.2
70°-80°	10.5	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°	1503.2	60.7
0°-40°	2081.0	84.0
0°-60°	2434.6	98.3
0°-90°	2477.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2477.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2204	2204	2204	2204	2204	
5°	2182	2184	2185	2188	2182	206
15°	2003	2003	2001	2003	2004	561
25°	1598	1620	1647	1622	1598	719
35°	824	899	1066	910	825	519
45°	305	342	370	335	306	243
55°	93	87	78	86	91	87
65°	33	30	24	29	33	34
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°	2204.3	2204.3	2204.3	2204.3	2204.3
2.5°	2204.3	2201.6	2202.9	2200.2	2200.2
5°	2182.5	2183.9	2185.2	2188.0	2182.5
7.5°	2158.0	2160.7	2159.4	2159.4	2159.4
10°	2117.2	2118.5	2118.5	2118.5	2113.1
12.5°	2065.4	2068.2	2069.5	2065.4	2065.4
15°	2002.8	2002.8	2001.4	2002.8	2004.2
17.5°	1927.9	1932.0	1932.0	1927.9	1926.6
20°	1836.7	1843.5	1846.2	1840.8	1840.8
22.5°	1734.6	1741.4	1757.7	1744.1	1733.2
25°	1598.4	1620.2	1647.4	1621.6	1598.4
27.5°	1422.8	1470.4	1533.1	1478.6	1426.9
30°	1219.9	1297.5	1392.8	1301.6	1229.5
32.5°	1013.0	1100.1	1240.3	1106.9	1013.0
35°	823.7	898.6	1066.1	909.5	825.1
37.5°	654.9	727.1	874.1	735.2	664.4
40°	520.1	578.6	678.0	577.3	528.3
42.5°	405.7	447.9	513.3	446.6	404.4
45°	305.0	341.7	370.3	334.9	306.3
47.5°	224.7	249.2	265.5	245.1	219.2
50°	157.9	175.6	179.7	171.6	152.5
52.5°	118.5	118.5	119.8	117.1	115.7
55°	92.6	87.1	77.6	85.8	91.2
57.5°	72.2	66.7	54.5	64.0	70.8
60°	55.8	50.4	39.5	49.0	54.5
62.5°	43.6	38.1	31.3	38.1	42.2
65°	32.7	30.0	24.5	28.6	32.7
67.5°	24.5	21.8	19.1	21.8	24.5
70°	19.1	17.7	15.0	16.3	19.1
72.5°	13.6	12.3	12.3	12.3	13.6
75°	9.5	9.5	9.5	9.5	9.5
77.5°	6.8	6.8	6.8	6.8	6.8
80°	4.1	4.1	5.4	5.4	5.4
82.5°	2.7	2.7	4.1	4.1	4.1
85°	2.7	2.7	2.7	2.7	2.7
87.5°	1.4	1.4	1.4	2.7	2.7
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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