

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: P837372

Luminaire Tested: HCSQ420D010-HM40525840-41SQMW

Issue Date: 5/17/2024



Test Information

Test Method: LM-79-2019
Report Number: P837372
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2309-165-3)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 5/17/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCSQ420D010-HM40525840-41SQMW
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, MATTE WHITE TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 4000K CCT
Ballast/Driver: -

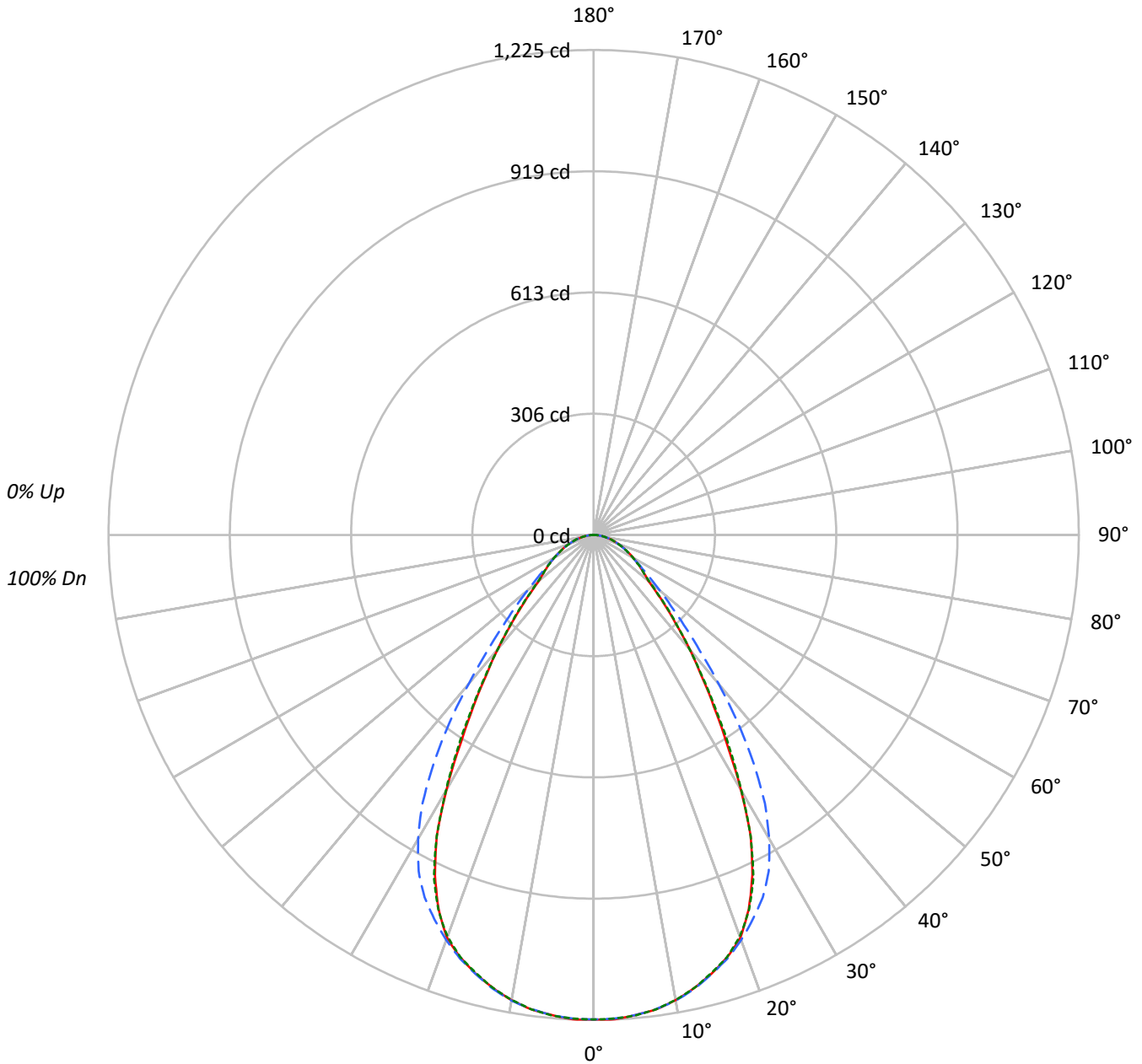
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1776.2 lumens
Efficiency: N/A
Efficacy: 88.8 lumens/watt
Spacing Criteria (0/90/45): 1.03 / 1.03 / 1.07
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 20
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	0					
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100								
1	111	108	105	102	109	106	103	100	101	99	97	98	96	94	94	93	91	89								
2	104	98	92	88	102	96	91	87	92	88	85	89	86	83	86	84	81	79								
3	97	89	82	77	95	87	81	76	84	79	75	82	78	74	79	76	73	71								
4	91	81	74	69	89	80	73	68	77	72	67	75	70	66	73	69	66	64								
5	85	74	67	62	83	73	66	61	71	65	61	70	64	60	68	63	60	58								
6	79	69	61	56	78	68	61	56	66	60	55	64	59	55	63	58	54	53								
7	75	63	56	51	73	63	56	51	61	55	50	60	54	50	59	54	50	48								
8	70	59	52	47	69	58	51	47	57	51	46	56	50	46	55	50	46	44								
9	66	55	48	43	65	54	48	43	53	47	43	52	47	43	51	46	43	41								
10	63	51	45	40	62	51	44	40	50	44	40	49	44	40	48	43	40	38								

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	118576	118576	118576
5°	118377	118377	118474
10°	117404	117503	117316
15°	115126	115216	114936
20°	111670	112258	111278
25°	101353	107959	102059
30°	83192	99155	83516
35°	62538	83234	63436
40°	47626	62055	47512
45°	35566	44033	36223
50°	27083	32825	27656
55°	24423	25706	24423
60°	22301	22107	22107
65°	20264	20264	20264
70°	18864	18581	18581
75°	17442	17068	17442
80°	15900	15398	15900
85°	13783	13783	13783

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 44033 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	115.4	6.5
10°-20°	323.1	18.2
20°-30°	444.4	25.0
30°-40°	378.3	21.3
40°-50°	228.5	12.9
50°-60°	134.7	7.6
60°-70°	88.3	5.0
70°-80°	49.0	2.8
80°-90°	14.3	0.8
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°	883.0	49.7
0°-40°	1261.4	71.0
0°-60°	1624.6	91.5
0°-90°	1776.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1776.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1224	1224	1224	1224	1224	
5°	1217	1218	1217	1216	1218	116
15°	1148	1151	1149	1148	1146	323
25°	948	978	1010	980	955	429
35°	529	582	704	598	536	335
45°	260	287	321	290	264	204
55°	145	147	152	147	145	130
65°	88	89	88	88	88	89
75°	47	47	46	46	47	49
85°	12	12	12	12	12	14
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1224.0	1224.0	1224.0	1224.0	1224.0
2.5°	1224.9	1222.1	1223.0	1222.1	1223.0
5°	1217.3	1218.3	1217.3	1216.4	1218.3
7.5°	1208.7	1207.8	1207.8	1206.8	1208.7
10°	1193.5	1191.6	1194.5	1192.6	1192.6
12.5°	1172.6	1175.5	1174.5	1174.5	1172.6
15°	1147.9	1150.7	1148.8	1147.9	1146.0
17.5°	1119.4	1121.3	1122.2	1118.4	1118.4
20°	1083.2	1087.0	1088.9	1082.3	1079.4
22.5°	1023.3	1040.4	1050.9	1039.5	1025.2
25°	948.2	977.7	1010.0	979.6	954.8
27.5°	857.8	899.7	957.7	906.3	857.8
30°	743.7	805.5	886.4	812.2	746.6
32.5°	625.8	691.4	804.6	702.8	639.1
35°	528.8	582.0	703.8	598.2	536.4
37.5°	445.1	490.7	598.2	501.2	449.8
40°	376.6	412.7	490.7	417.5	375.7
42.5°	311.0	345.2	397.5	350.0	314.8
45°	259.6	287.2	321.4	290.1	264.4
47.5°	215.9	238.7	263.4	238.7	218.7
50°	179.7	197.8	217.8	197.8	183.5
52.5°	160.7	166.4	179.7	167.4	160.7
55°	144.6	147.4	152.2	147.4	144.6
57.5°	129.3	131.2	130.3	130.3	129.3
60°	115.1	116.0	114.1	115.1	114.1
62.5°	101.8	101.8	99.9	101.8	100.8
65°	88.4	89.4	88.4	88.4	88.4
67.5°	77.0	77.0	76.1	77.0	77.0
70°	66.6	66.6	65.6	66.6	65.6
72.5°	56.1	56.1	55.2	55.2	55.2
75°	46.6	46.6	45.6	45.6	46.6
77.5°	37.1	37.1	36.1	37.1	37.1
80°	28.5	28.5	27.6	28.5	28.5
82.5°	20.0	20.0	20.0	20.9	20.9
85°	12.4	12.4	12.4	12.4	12.4
87.5°	5.7	5.7	5.7	5.7	6.7
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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