

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: P837324

Luminaire Tested: HCSQ415D010-HM40525835-41SQH

Issue Date: 5/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P837324
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: HCSQ415D010-HM40525835-41SQH
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, HAZE TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 3500K CCT
Ballast/Driver: -

Summary

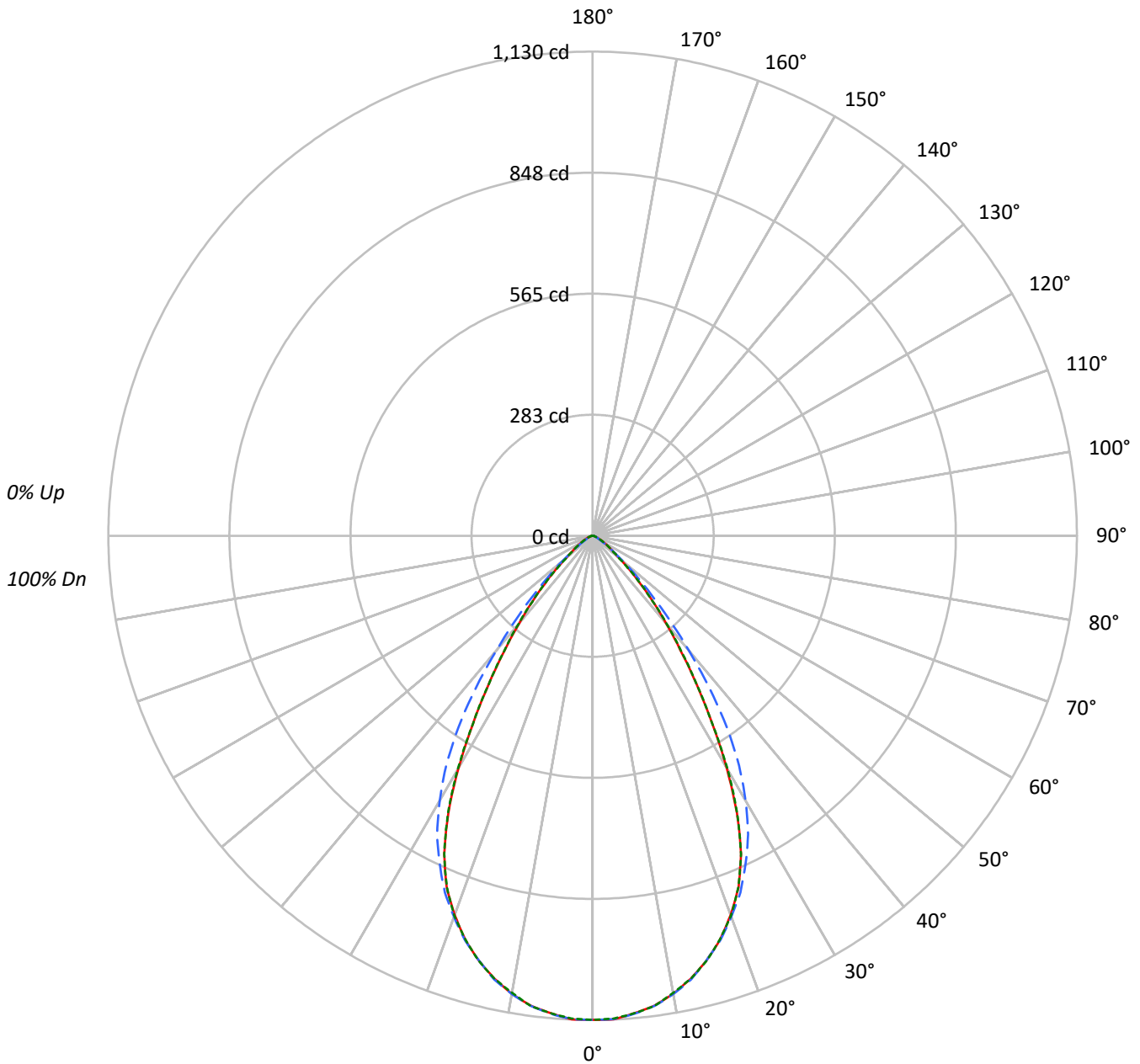
Lumens per Lamp: N/A
Luminaire Lumens: 1270.1 lumens
Efficiency: N/A
Efficacy: 90.7 lumens/watt
Spacing Criteria (0/90/45): 0.98 / 0.98 / 1.01
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 14
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	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	54	50	46	45								

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	109450	109450	109450
5°	108789	108915	108789
10°	106751	106820	106544
15°	102951	102880	103021
20°	97051	97557	97268
25°	87575	90258	87575
30°	69947	79858	70496
35°	49931	64619	50013
40°	33715	43946	34246
45°	21413	26003	21509
50°	12208	13881	11786
55°	8023	6722	7904
60°	5541	3914	5406
65°	3828	2888	3828
70°	2776	2181	2776
75°	1834	1834	1834
80°	1172	1562	1562
85°	1556	1556	1556

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 26003 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	105.8	8.3
10°-20°	287.8	22.7
20°-30°	376.8	29.7
30°-40°	296.2	23.3
40°-50°	138.3	10.9
50°-60°	42.9	3.4
60°-70°	15.3	1.2
70°-80°	5.4	0.4
80°-90°	1.5	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°	770.5	60.7
0°-40°	1066.6	84.0
0°-60°	1247.9	98.3
0°-90°	1270.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1270.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1130	1130	1130	1130	1130	
5°	1119	1119	1120	1121	1119	106
15°	1026	1026	1026	1026	1027	288
25°	819	830	844	831	819	368
35°	422	461	546	466	423	266
45°	156	175	190	172	157	125
55°	48	45	40	44	47	44
65°	17	15	13	15	17	17
75°	5	5	5	5	5	6
85°	1	1	1	1	1	1
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1129.8	1129.8	1129.8	1129.8	1129.8
2.5°	1129.8	1128.4	1129.1	1127.7	1127.7
5°	1118.7	1119.3	1120.0	1121.4	1118.7
7.5°	1106.1	1107.5	1106.8	1106.8	1106.8
10°	1085.2	1085.9	1085.9	1085.9	1083.1
12.5°	1058.6	1060.0	1060.7	1058.6	1058.6
15°	1026.5	1026.5	1025.8	1026.5	1027.2
17.5°	988.2	990.2	990.2	988.2	987.5
20°	941.4	944.9	946.3	943.5	943.5
22.5°	889.1	892.5	900.9	893.9	888.4
25°	819.3	830.4	844.4	831.1	819.3
27.5°	729.3	753.7	785.8	757.9	731.3
30°	625.3	665.0	713.9	667.1	630.2
32.5°	519.2	563.9	635.7	567.4	519.2
35°	422.2	460.6	546.4	466.2	422.9
37.5°	335.7	372.7	448.0	376.8	340.6
40°	266.6	296.6	347.5	295.9	270.8
42.5°	208.0	229.6	263.1	228.9	207.3
45°	156.3	175.2	189.8	171.7	157.0
47.5°	115.1	127.7	136.1	125.6	112.4
50°	81.0	90.0	92.1	87.9	78.2
52.5°	60.7	60.7	61.4	60.0	59.3
55°	47.5	44.7	39.8	44.0	46.8
57.5°	37.0	34.2	27.9	32.8	36.3
60°	28.6	25.8	20.2	25.1	27.9
62.5°	22.3	19.5	16.1	19.5	21.6
65°	16.7	15.4	12.6	14.7	16.7
67.5°	12.6	11.2	9.8	11.2	12.6
70°	9.8	9.1	7.7	8.4	9.8
72.5°	7.0	6.3	6.3	6.3	7.0
75°	4.9	4.9	4.9	4.9	4.9
77.5°	3.5	3.5	3.5	3.5	3.5
80°	2.1	2.1	2.8	2.8	2.8
82.5°	1.4	1.4	2.1	2.1	2.1
85°	1.4	1.4	1.4	1.4	1.4
87.5°	0.7	0.7	0.7	1.4	1.4
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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