

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: P837255

Luminaire Tested: HCSQ407D010-HM40525927-41SQLWW

Issue Date: 5/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P837255
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2309-165-5)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 5/17/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCSQ407D010-HM40525927-41SQLWW
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, LENSED WALLWASH TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 2700K CCT
Ballast/Driver: -

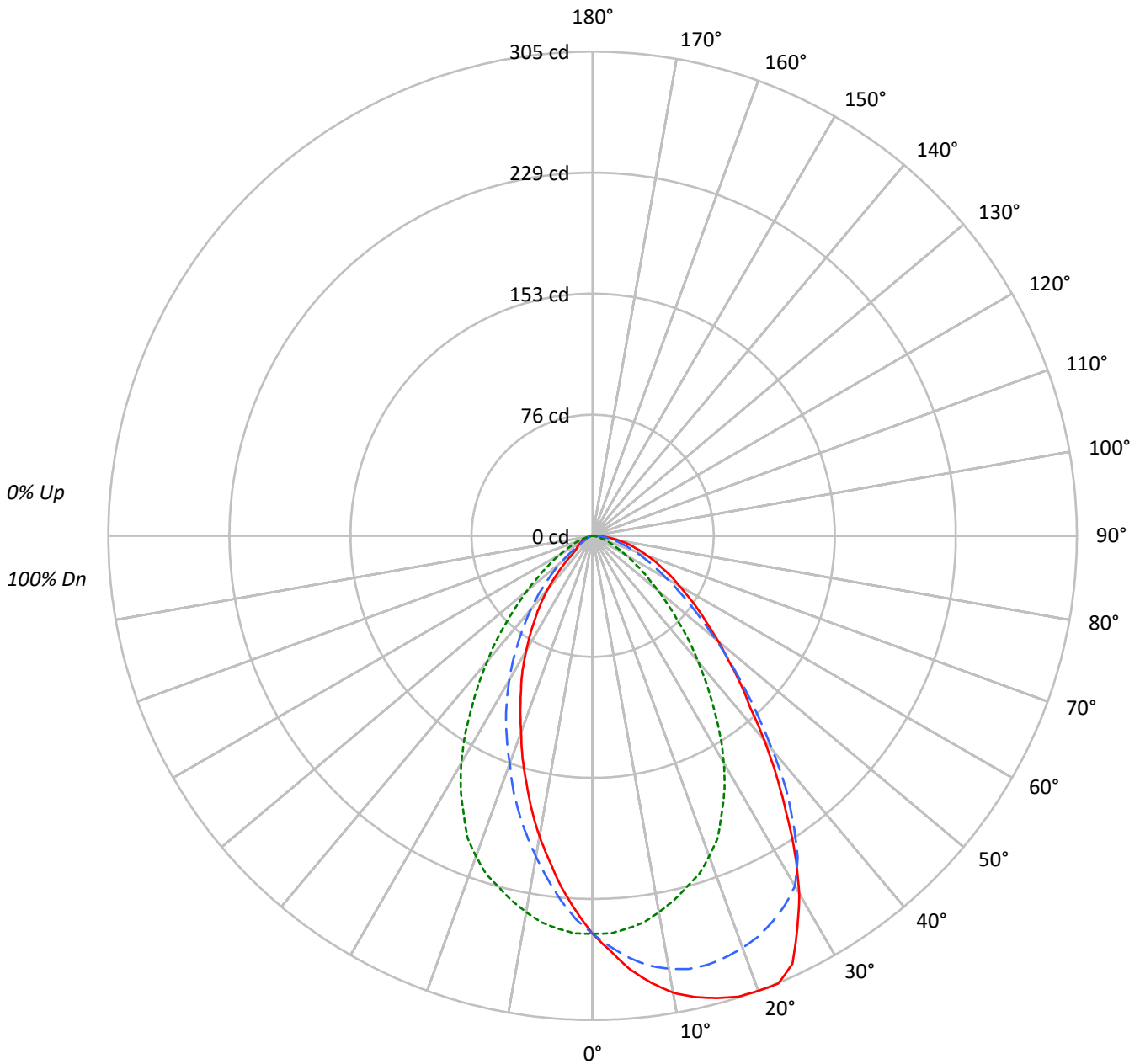
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 405.5 lumens
Efficiency: N/A
Efficacy: 50.7 lumens/watt
Spacing Criteria (0/90/45): 1.07 / 1.04 / 1.12
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 8
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																			
1	111	107	104	101	109	105	102	99	101	99	96	97	95	93	94	92	91	89																			
2	103	97	91	87	101	95	90	86	92	87	84	88	85	82	86	83	80	78																			
3	96	87	81	76	94	86	80	75	83	78	74	81	76	72	78	74	71	69																			
4	89	79	72	67	87	78	71	66	76	70	65	74	69	64	72	67	64	62																			
5	83	72	65	59	81	71	64	59	69	63	58	68	62	58	66	61	57	55																			
6	78	66	59	53	76	66	58	53	64	57	53	62	57	52	61	56	52	50																			
7	73	61	54	48	71	60	53	48	59	53	48	58	52	48	56	51	47	45																			
8	68	57	49	44	67	56	49	44	55	48	44	54	48	43	52	47	43	42																			
9	64	53	45	40	63	52	45	40	51	45	40	50	44	40	49	44	40	38																			
10	61	49	42	37	60	48	42	37	48	41	37	47	41	37	46	41	37	35																			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	24287	24287	24287	24287	24287
5°	26694	25965	24166	22405	21647
10°	28754	27248	23678	20186	18926
15°	30238	28062	22967	18043	16157
20°	31454	28485	22144	15722	13567
25°	31811	28657	20566	13800	11405
30°	29118	28514	18491	11734	9352
35°	25107	26030	15764	9627	7403
40°	21271	22257	13038	7600	5526
45°	18030	18468	10426	5645	3562
50°	15538	15162	8093	3798	2140
55°	13698	12498	6182	2094	1925
60°	12187	10463	4611	1163	1724
65°	11163	8963	3415	1054	1559
70°	10367	7761	2521	1020	1501
75°	9732	6775	1722	936	1347
80°	9317	5969	1172	1004	1172
85°	9114	5113	778	778	778

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 22.5°
 Vertical Angle: 45°
 Luminance: 18756 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	23.5	5.8
10°-20°	64.7	16.0
20°-30°	90.5	22.3
30°-40°	88.4	21.8
40°-50°	64.2	15.8
50°-60°	38.7	9.5
60°-70°	21.8	5.4
70°-80°	10.8	2.7
80°-90°	2.9	0.7
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°	178.7	44.1
0°-40°	267.1	65.9
0°-60°	370.0	91.3
0°-90°	405.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	405.5	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	251	251	251	251	251	
5°	274	267	248	230	223	27
15°	302	280	229	180	161	85
25°	298	268	192	129	107	134
35°	212	220	133	81	63	133
45°	132	135	76	41	26	102
55°	81	74	37	12	11	73
65°	49	39	15	5	7	49
75°	26	18	5	2	4	28
85°	8	5	1	1	1	9
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	250.7	250.7	250.7	250.7	250.7	250.7	250.7	250.7	250.7
2.5°	262.0	261.3	259.2	254.9	250.7	245.7	241.8	238.9	236.8
5°	274.5	273.1	267.0	258.1	248.5	238.9	230.4	225.4	222.6
7.5°	284.1	281.6	273.1	260.6	245.7	231.1	218.0	210.1	206.9
10°	292.3	288.0	277.0	260.3	240.7	221.5	205.2	195.9	192.4
12.5°	297.6	293.0	279.5	259.9	235.4	211.9	192.7	180.6	177.1
15°	301.5	295.8	279.8	257.1	229.0	202.0	179.9	165.7	161.1
17.5°	304.4	296.5	278.4	253.9	223.3	191.6	166.8	151.5	146.8
20°	305.1	296.5	276.3	249.2	214.8	181.3	152.5	137.2	131.6
22.5°	305.4	295.5	273.1	243.6	205.9	169.6	140.8	124.8	118.8
25°	297.6	291.9	268.1	234.0	192.4	156.8	129.1	111.6	106.7
27.5°	279.1	278.8	262.4	221.2	179.9	142.9	117.0	100.3	95.6
30°	260.3	260.6	254.9	206.9	165.3	129.8	104.9	88.5	83.6
32.5°	237.2	240.7	240.4	190.9	149.7	117.3	93.2	77.9	72.9
35°	212.3	218.7	220.1	172.8	133.3	103.1	81.4	67.6	62.6
37.5°	189.9	196.3	199.5	156.8	118.0	90.7	70.4	58.3	53.3
40°	168.2	173.5	176.0	138.3	103.1	77.9	60.1	48.7	43.7
42.5°	147.2	155.0	154.3	122.7	90.0	67.6	50.8	39.5	34.5
45°	131.6	136.9	134.8	106.3	76.1	56.9	41.2	30.6	26.0
47.5°	115.9	119.8	116.6	92.4	64.4	46.9	33.4	22.4	17.4
50°	103.1	104.9	100.6	78.6	53.7	38.4	25.2	14.9	14.2
52.5°	91.0	92.1	86.0	66.8	44.4	30.9	18.5	11.7	12.4
55°	81.1	80.7	74.0	56.5	36.6	23.8	12.4	10.7	11.4
57.5°	71.5	70.4	63.6	46.9	29.9	18.5	7.5	9.2	10.0
60°	62.9	61.9	54.0	38.8	23.8	13.9	6.0	8.2	8.9
62.5°	56.2	53.7	45.9	32.0	19.2	10.0	5.3	7.1	7.8
65°	48.7	46.6	39.1	26.0	14.9	7.1	4.6	6.0	6.8
67.5°	42.7	40.2	33.1	21.3	12.1	5.0	4.3	5.3	6.0
70°	36.6	34.5	27.4	17.1	8.9	3.2	3.6	4.6	5.3
72.5°	31.6	29.2	22.8	13.5	6.8	2.5	3.2	3.9	4.3
75°	26.0	23.8	18.1	10.3	4.6	2.1	2.5	3.2	3.6
77.5°	21.7	19.6	14.2	7.8	3.2	1.8	2.1	2.8	2.8
80°	16.7	14.9	10.7	5.3	2.1	1.1	1.8	2.1	2.1
82.5°	12.1	10.7	7.5	3.6	1.1	1.1	1.1	1.4	1.4
85°	8.2	7.1	4.6	2.1	0.7	0.7	0.7	0.7	0.7
87.5°	4.6	3.6	2.1	0.7	0.0	0.0	0.0	0.0	0.0
90°	0.0	0.0	0.0	0.0	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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