

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: P837215

Luminaire Tested: HCSQ405D010-HM40525927-41SQLWW

Issue Date: 5/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P837215
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: HCSQ405D010-HM40525927-41SQLWW
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, LENSED WALLWASH TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 2700K CCT
Ballast/Driver: -

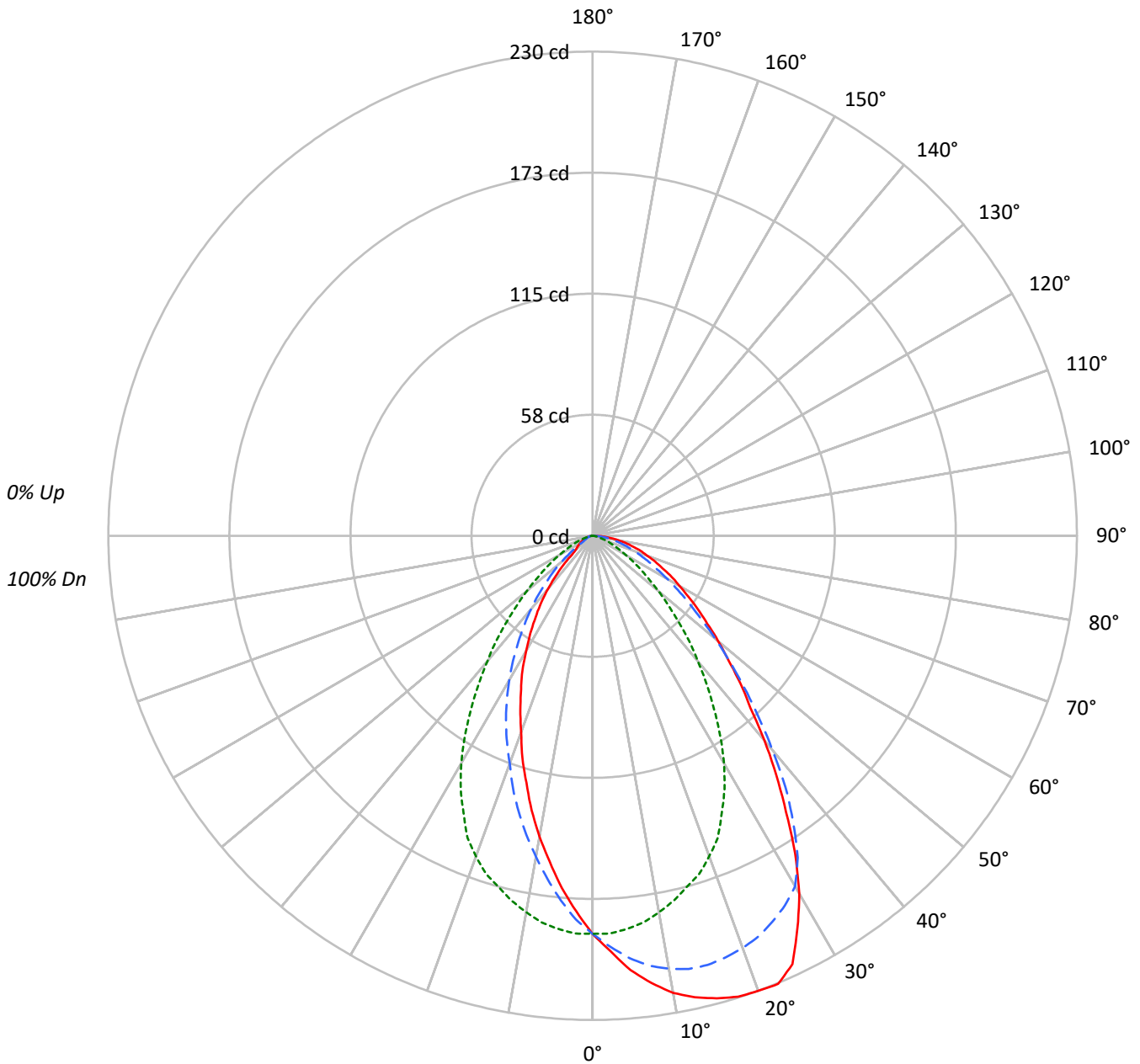
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 305.9 lumens
Efficiency: N/A
Efficacy: 51.0 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): 6
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	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°	18319	18319	18319	18319	18319
5°	20140	19585	18234	16901	16328
10°	21691	20549	17864	15228	14273
15°	22817	21172	17321	13610	12186
20°	23722	21485	16701	11866	10227
25°	23997	21613	15510	10411	8605
30°	21959	21511	13949	8848	7047
35°	18934	19632	11897	7261	5582
40°	16048	16794	9839	5729	4173
45°	13591	13933	7864	4261	2685
50°	11725	11439	6104	2864	1613
55°	10337	9424	4662	1588	1453
60°	9203	7905	3488	891	1298
65°	8413	6762	2590	802	1169
70°	7818	5863	1898	765	1133
75°	7336	5128	1310	711	1011
80°	7029	4463	893	725	893
85°	6891	3890	556	556	556

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 22.5°
 Vertical Angle: 45°
 Luminance: 14152 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	17.7	5.8
10°-20°	48.8	16.0
20°-30°	68.2	22.3
30°-40°	66.7	21.8
40°-50°	48.4	15.8
50°-60°	29.2	9.5
60°-70°	16.4	5.4
70°-80°	8.1	2.7
80°-90°	2.2	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°	134.8	44.1
0°-40°	201.5	65.9
0°-60°	279.1	91.3
0°-90°	305.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	305.9	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	189	189	189	189	189	
5°	207	201	188	174	168	20
15°	228	211	173	136	122	64
25°	224	202	145	97	80	101
35°	160	166	101	61	47	100
45°	99	102	57	31	20	77
55°	61	56	28	9	9	55
65°	37	30	11	4	5	37
75°	20	14	4	2	3	21
85°	6	4	0	0	0	7
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°	189.1	189.1	189.1	189.1	189.1	189.1	189.1	189.1	189.1
2.5°	197.7	197.1	195.5	192.3	189.1	185.3	182.4	180.2	178.6
5°	207.1	206.0	201.4	194.7	187.5	180.2	173.8	170.1	167.9
7.5°	214.3	212.4	206.0	196.6	185.3	174.3	164.4	158.5	156.1
10°	220.5	217.3	208.9	196.3	181.6	167.1	154.8	147.8	145.1
12.5°	224.5	221.0	210.8	196.1	177.6	159.9	145.4	136.3	133.6
15°	227.5	223.2	211.1	193.9	172.7	152.4	135.7	125.0	121.5
17.5°	229.6	223.7	210.0	191.5	168.4	144.6	125.8	114.3	110.8
20°	230.1	223.7	208.4	188.0	162.0	136.8	115.1	103.5	99.2
22.5°	230.4	222.9	206.0	183.7	155.3	127.9	106.2	94.1	89.6
25°	224.5	220.2	202.2	176.5	145.1	118.3	97.4	84.2	80.5
27.5°	210.6	210.3	197.9	166.8	135.7	107.8	88.2	75.6	72.2
30°	196.3	196.6	192.3	156.1	124.7	97.9	79.1	66.8	63.0
32.5°	178.9	181.6	181.3	144.0	112.9	88.5	70.3	58.7	55.0
35°	160.1	165.0	166.0	130.4	100.6	77.8	61.4	51.0	47.2
37.5°	143.2	148.1	150.5	118.3	89.1	68.4	53.1	44.0	40.2
40°	126.9	130.9	132.8	104.3	77.8	58.7	45.3	36.7	33.0
42.5°	111.0	116.9	116.4	92.5	67.9	51.0	38.4	29.8	26.0
45°	99.2	103.3	101.7	80.2	57.4	42.9	31.1	23.1	19.6
47.5°	87.4	90.4	88.0	69.7	48.5	35.4	25.2	16.9	13.1
50°	77.8	79.1	75.9	59.3	40.5	29.0	19.0	11.3	10.7
52.5°	68.7	69.5	64.9	50.4	33.5	23.3	13.9	8.9	9.4
55°	61.2	60.9	55.8	42.6	27.6	18.0	9.4	8.0	8.6
57.5°	53.9	53.1	48.0	35.4	22.5	13.9	5.6	7.0	7.5
60°	47.5	46.7	40.8	29.2	18.0	10.5	4.6	6.2	6.7
62.5°	42.4	40.5	34.6	24.1	14.5	7.5	4.0	5.4	5.9
65°	36.7	35.1	29.5	19.6	11.3	5.4	3.5	4.6	5.1
67.5°	32.2	30.3	24.9	16.1	9.1	3.8	3.2	4.0	4.6
70°	27.6	26.0	20.7	12.9	6.7	2.4	2.7	3.5	4.0
72.5°	23.9	22.0	17.2	10.2	5.1	1.9	2.4	3.0	3.2
75°	19.6	18.0	13.7	7.8	3.5	1.6	1.9	2.4	2.7
77.5°	16.4	14.8	10.7	5.9	2.4	1.3	1.6	2.1	2.1
80°	12.6	11.3	8.0	4.0	1.6	0.8	1.3	1.6	1.6
82.5°	9.1	8.0	5.6	2.7	0.8	0.8	0.8	1.1	1.1
85°	6.2	5.4	3.5	1.6	0.5	0.5	0.5	0.5	0.5
87.5°	3.5	2.7	1.6	0.5	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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