

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: P837275

Luminaire Tested: HCSQ410D010-HM40525827-41SQLWW

Issue Date: 5/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P837275
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: HCSQ410D010-HM40525827-41SQLWW
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, LENSED WALLWASH TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 2700K CCT
Ballast/Driver: -

Summary

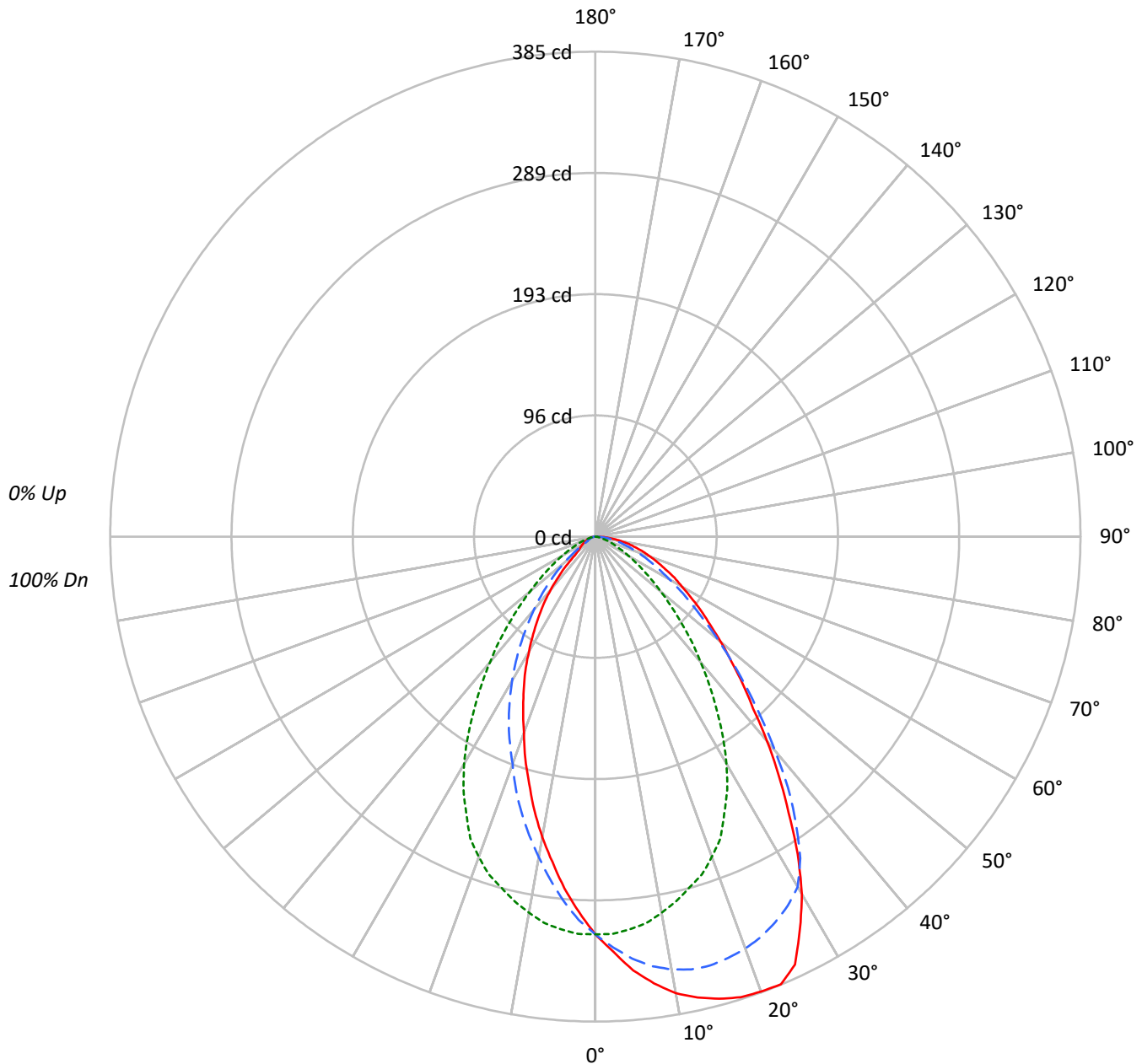
Lumens per Lamp: N/A
Luminaire Lumens: 510.7 lumens
Efficiency: N/A
Efficacy: 51.6 lumens/watt
Spacing Criteria (0/90/45): 1.07 / 1.04 / 1.12
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 9.9
Input Voltage (V): NR
Input Current (Ain): 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					20
RC	80				70					50					30					10
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10
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°	30584	30584	30584	30584	30584
5°	33618	32704	30438	28221	27268
10°	36210	34321	29826	25419	23835
15°	38091	35353	28924	22726	20349
20°	39619	35876	27887	19804	17082
25°	40062	36097	25899	17380	14366
30°	36668	35919	23290	14777	11768
35°	31624	32783	19856	12134	9319
40°	26785	28037	16427	9573	6968
45°	22701	23249	13125	7124	4480
50°	19577	19095	10188	4793	2698
55°	17244	15741	7786	2652	2415
60°	15364	13194	5813	1473	2170
65°	14075	11301	4309	1330	1948
70°	13058	9772	3172	1275	1898
75°	12240	8534	2171	1160	1684
80°	11716	7476	1506	1227	1506
85°	11449	6447	1000	1000	1000

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 22.5°

Vertical Angle: 45°

Luminance: 23619 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	29.6	5.8
10°-20°	81.5	16.0
20°-30°	114.0	22.3
30°-40°	111.4	21.8
40°-50°	80.8	15.8
50°-60°	48.7	9.5
60°-70°	27.4	5.4
70°-80°	13.6	2.7
80°-90°	3.7	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°	225.1	44.1
0°-40°	336.5	65.9
0°-60°	466.0	91.3
0°-90°	510.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	510.7	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	316	316	316	316	316	
5°	346	336	313	290	280	34
15°	380	352	288	227	203	108
25°	375	338	242	163	134	169
35°	267	277	168	103	79	167
45°	166	170	96	52	33	128
55°	102	93	46	16	14	92
65°	61	49	19	6	8	61
75°	33	23	6	3	4	35
85°	10	6	1	1	1	11
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°	315.7	315.7	315.7	315.7	315.7	315.7	315.7	315.7	315.7
2.5°	330.1	329.2	326.5	321.1	315.7	309.5	304.5	301.0	298.3
5°	345.7	343.9	336.3	325.1	313.0	301.0	290.2	283.9	280.4
7.5°	357.8	354.7	343.9	328.3	309.5	291.1	274.5	264.7	260.6
10°	368.1	362.8	348.9	327.8	303.2	279.0	258.4	246.8	242.3
12.5°	374.8	369.0	352.0	327.4	296.5	266.9	242.7	227.5	223.0
15°	379.8	372.6	352.5	323.8	288.4	254.4	226.6	208.7	202.9
17.5°	383.4	373.5	350.7	319.8	281.2	241.4	210.0	190.8	185.0
20°	384.3	373.5	348.0	313.9	270.5	228.4	192.1	172.9	165.7
22.5°	384.7	372.2	343.9	306.8	259.3	213.6	177.3	157.2	149.6
25°	374.8	367.7	337.7	294.7	242.3	197.5	162.6	140.6	134.4
27.5°	351.6	351.1	330.5	278.6	226.6	180.0	147.3	126.3	120.5
30°	327.8	328.3	321.1	260.6	208.2	163.5	132.1	111.5	105.2
32.5°	298.7	303.2	302.7	240.5	188.5	147.8	117.3	98.1	91.8
35°	267.4	275.4	277.2	217.7	167.9	129.9	102.6	85.1	78.8
37.5°	239.2	247.2	251.2	197.5	148.7	114.2	88.7	73.4	67.2
40°	211.8	218.6	221.7	174.2	129.9	98.1	75.7	61.4	55.1
42.5°	185.4	195.3	194.4	154.5	113.3	85.1	64.0	49.7	43.4
45°	165.7	172.4	169.7	133.9	95.8	71.7	52.0	38.5	32.7
47.5°	146.0	150.9	146.9	116.4	81.1	59.1	42.1	28.2	21.9
50°	129.9	132.1	126.7	99.0	67.6	48.4	31.8	18.8	17.9
52.5°	114.6	116.0	108.4	84.2	56.0	39.0	23.3	14.8	15.7
55°	102.1	101.7	93.2	71.2	46.1	30.0	15.7	13.4	14.3
57.5°	90.0	88.7	80.2	59.1	37.6	23.3	9.4	11.6	12.5
60°	79.3	77.9	68.1	48.8	30.0	17.5	7.6	10.3	11.2
62.5°	70.8	67.6	57.8	40.3	24.2	12.5	6.7	9.0	9.9
65°	61.4	58.7	49.3	32.7	18.8	9.0	5.8	7.6	8.5
67.5°	53.7	50.6	41.6	26.9	15.2	6.3	5.4	6.7	7.6
70°	46.1	43.4	34.5	21.5	11.2	4.0	4.5	5.8	6.7
72.5°	39.9	36.7	28.7	17.0	8.5	3.1	4.0	4.9	5.4
75°	32.7	30.0	22.8	13.0	5.8	2.7	3.1	4.0	4.5
77.5°	27.3	24.6	17.9	9.9	4.0	2.2	2.7	3.6	3.6
80°	21.0	18.8	13.4	6.7	2.7	1.3	2.2	2.7	2.7
82.5°	15.2	13.4	9.4	4.5	1.3	1.3	1.3	1.8	1.8
85°	10.3	9.0	5.8	2.7	0.9	0.9	0.9	0.9	0.9
87.5°	5.8	4.5	2.7	0.9	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



Report Generated By 670245859 / DESKTOP-T8S5UU9





— 0°-180° - - 45°-225° - - - 90°-270°







(END OF REPORT)