

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: P837250

Luminaire Tested: HCSQ407D010-HM40525840-41SQLWW

Issue Date: 5/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P837250
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-HM40525840-41SQLWW
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, LENSED WALLWASH TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 4000K CCT
Ballast/Driver: -

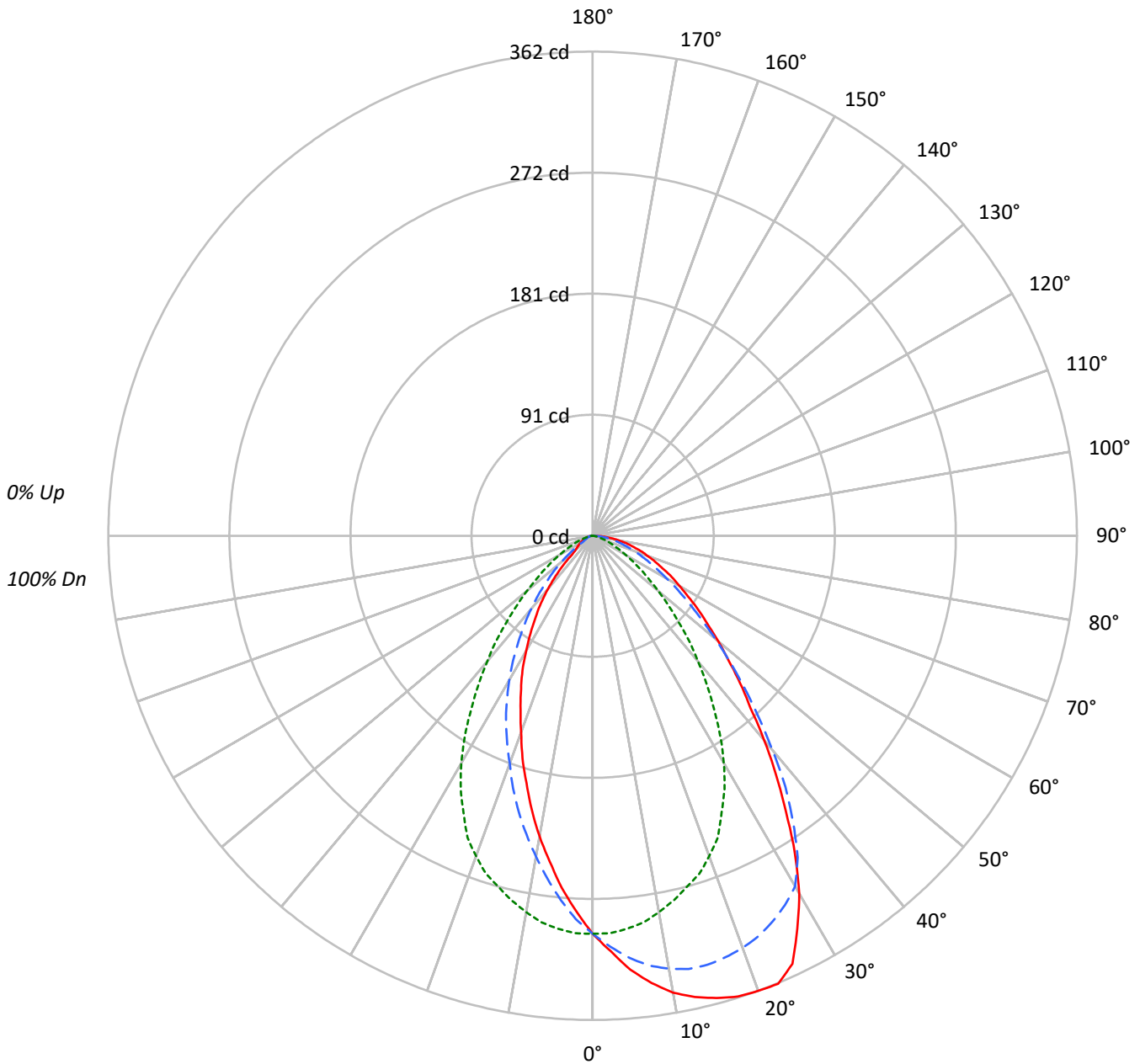
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 481.2 lumens
Efficiency: N/A
Efficacy: 60.1 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					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	50	30	10	0		
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100					100			
1	111	107	104	101	109	105	102	99	101	99	96	97	95	93	94	92	91	89					89			
2	103	97	91	87	101	95	90	86	92	87	84	88	85	82	86	83	80	78					78			
3	96	87	81	76	94	86	80	75	83	78	74	81	76	72	78	74	71	69					69			
4	89	79	72	67	87	78	71	66	76	70	65	74	69	64	72	67	64	62					62			
5	83	72	65	59	81	71	64	59	69	63	58	68	62	58	66	61	57	55					55			
6	78	66	59	53	76	66	58	53	64	57	53	62	57	52	61	56	52	50					50			
7	73	61	54	48	71	60	53	48	59	53	48	58	52	48	56	51	47	45					45			
8	68	57	49	44	67	56	49	44	55	48	44	54	48	43	52	47	43	42					42			
9	64	53	45	40	63	52	45	40	51	45	40	50	44	40	49	44	40	38					38			
10	61	49	42	37	60	48	42	37	48	41	37	47	41	37	46	41	37	35					35			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	28820	28820	28820	28820	28820
5°	31683	30817	28687	26587	25692
10°	34125	32334	28104	23953	22458
15°	35885	33307	27260	21413	19176
20°	37330	33804	26278	18660	16093
25°	37754	34012	24403	16376	13532
30°	34554	33849	21947	13927	11097
35°	29790	30890	18709	11424	8787
40°	25242	26418	15479	9017	6563
45°	21386	21907	12371	6699	4220
50°	18447	17995	9600	4521	2547
55°	16248	14829	7347	2500	2280
60°	14473	12419	5483	1395	2034
65°	13249	10636	4057	1261	1834
70°	12321	9205	2974	1190	1784
75°	11528	8047	2059	1123	1572
80°	11046	7085	1395	1172	1395
85°	10782	6113	889	889	889

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 22.5°
 Vertical Angle: 45°
 Luminance: 22263 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	27.9	5.8
10°-20°	76.8	16.0
20°-30°	107.4	22.3
30°-40°	105.0	21.8
40°-50°	76.2	15.8
50°-60°	45.9	9.5
60°-70°	25.8	5.4
70°-80°	12.8	2.7
80°-90°	3.5	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°	212.1	44.1
0°-40°	317.0	65.9
0°-60°	439.1	91.3
0°-90°	481.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	481.2	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	298	298	298	298	298	
5°	326	317	295	273	264	32
15°	358	332	272	214	191	101
25°	353	318	228	153	127	159
35°	252	261	158	97	74	158
45°	156	160	90	49	31	121
55°	96	88	44	15	14	87
65°	58	46	18	6	8	58
75°	31	22	6	3	4	33
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°	297.5	297.5	297.5	297.5	297.5	297.5	297.5	297.5	297.5
2.5°	311.0	310.2	307.6	302.6	297.5	291.6	286.9	283.6	281.0
5°	325.8	324.1	316.9	306.4	295.0	283.6	273.4	267.5	264.2
7.5°	337.2	334.2	324.1	309.3	291.6	274.3	258.7	249.4	245.6
10°	346.9	341.8	328.7	308.9	285.7	262.9	243.5	232.5	228.3
12.5°	353.2	347.7	331.7	308.5	279.3	251.5	228.7	214.4	210.1
15°	357.8	351.1	332.1	305.1	271.8	239.7	213.5	196.6	191.2
17.5°	361.2	351.9	330.4	301.3	265.0	227.4	197.9	179.8	174.3
20°	362.1	351.9	327.9	295.8	254.9	215.2	181.0	162.9	156.1
22.5°	362.5	350.7	324.1	289.1	244.3	201.3	167.1	148.1	140.9
25°	353.2	346.4	318.2	277.7	228.3	186.1	153.2	132.5	126.6
27.5°	331.3	330.8	311.4	262.5	213.5	169.6	138.8	119.0	113.5
30°	308.9	309.3	302.6	245.6	196.2	154.0	124.5	105.1	99.2
32.5°	281.5	285.7	285.3	226.6	177.7	139.3	110.6	92.4	86.5
35°	251.9	259.5	261.2	205.1	158.2	122.4	96.6	80.2	74.3
37.5°	225.3	232.9	236.7	186.1	140.1	107.6	83.6	69.2	63.3
40°	199.6	205.9	208.9	164.1	122.4	92.4	71.3	57.8	51.9
42.5°	174.7	184.0	183.1	145.6	106.8	80.2	60.3	46.8	40.9
45°	156.1	162.5	159.9	126.2	90.3	67.5	48.9	36.3	30.8
47.5°	137.6	142.2	138.4	109.7	76.4	55.7	39.7	26.6	20.7
50°	122.4	124.5	119.4	93.3	63.7	45.6	30.0	17.7	16.9
52.5°	108.0	109.3	102.1	79.3	52.7	36.7	21.9	13.9	14.8
55°	96.2	95.8	87.8	67.1	43.5	28.3	14.8	12.7	13.5
57.5°	84.8	83.6	75.5	55.7	35.4	21.9	8.9	11.0	11.8
60°	74.7	73.4	64.1	46.0	28.3	16.5	7.2	9.7	10.5
62.5°	66.7	63.7	54.4	38.0	22.8	11.8	6.3	8.4	9.3
65°	57.8	55.3	46.4	30.8	17.7	8.4	5.5	7.2	8.0
67.5°	50.6	47.7	39.2	25.3	14.3	5.9	5.1	6.3	7.2
70°	43.5	40.9	32.5	20.3	10.5	3.8	4.2	5.5	6.3
72.5°	37.6	34.6	27.0	16.0	8.0	3.0	3.8	4.6	5.1
75°	30.8	28.3	21.5	12.2	5.5	2.5	3.0	3.8	4.2
77.5°	25.7	23.2	16.9	9.3	3.8	2.1	2.5	3.4	3.4
80°	19.8	17.7	12.7	6.3	2.5	1.3	2.1	2.5	2.5
82.5°	14.3	12.7	8.9	4.2	1.3	1.3	1.3	1.7	1.7
85°	9.7	8.4	5.5	2.5	0.8	0.8	0.8	0.8	0.8
87.5°	5.5	4.2	2.5	0.8	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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