

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: P837225

Luminaire Tested: HCSQ405D010-HM40525935-41SQLWW

Issue Date: 5/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P837225
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-HM40525935-41SQLWW
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, LENSED WALLWASH TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 3500K CCT
Ballast/Driver: -

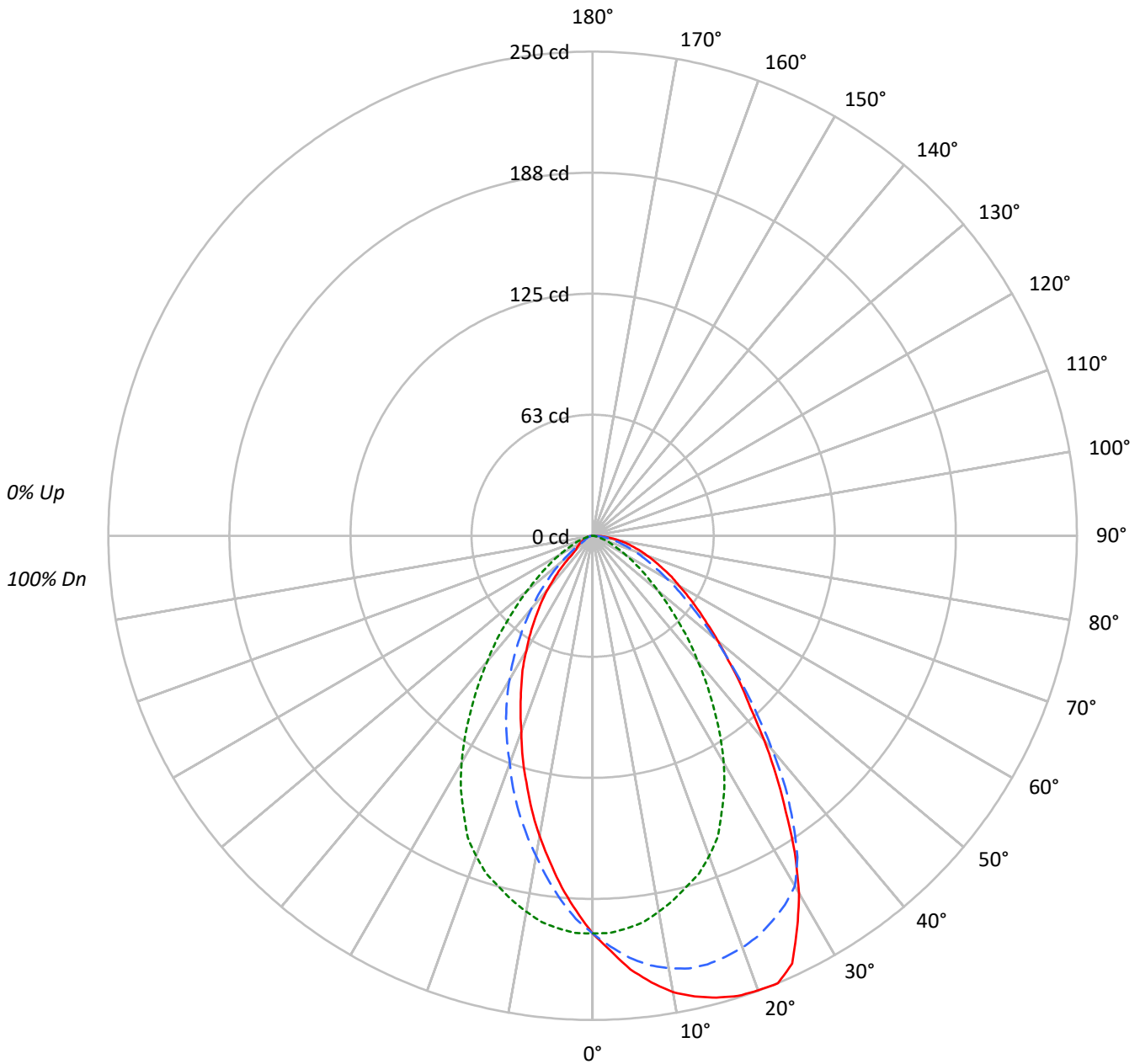
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 332.0 lumens
Efficiency: N/A
Efficacy: 55.3 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									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°	19889	19889	19889	19889	19889
5°	21861	21268	19789	18350	17728
10°	23540	22310	19389	16526	15493
15°	24762	22977	18805	14773	13229
20°	25753	23320	18134	12876	11103
25°	26049	23462	16835	11298	9332
30°	23838	23357	15146	9609	7651
35°	20554	21311	12914	7888	6055
40°	17414	18223	10673	6222	4527
45°	14755	15111	8535	4631	2918
50°	12720	12419	6631	3120	1748
55°	11215	10235	5067	1723	1571
60°	9978	8583	3778	949	1414
65°	9146	7335	2797	871	1261
70°	8497	6345	2068	821	1246
75°	7973	5540	1422	749	1085
80°	7643	4854	948	837	948
85°	7447	4224	667	667	667

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 22.5°
 Vertical Angle: 45°
 Luminance: 15358 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	19.2	5.8
10°-20°	53.0	16.0
20°-30°	74.1	22.3
30°-40°	72.4	21.8
40°-50°	52.5	15.8
50°-60°	31.7	9.5
60°-70°	17.8	5.4
70°-80°	8.8	2.7
80°-90°	2.4	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°	146.3	44.1
0°-40°	218.7	65.9
0°-60°	303.0	91.3
0°-90°	332.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	332.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	205	205	205	205	205	
5°	225	219	204	189	182	22
15°	247	229	188	147	132	70
25°	244	220	158	106	87	110
35°	174	180	109	67	51	109
45°	108	110	62	34	21	84
55°	66	61	30	10	9	60
65°	40	32	12	4	6	40
75°	21	15	4	2	3	23
85°	7	4	1	1	1	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°	205.3	205.3	205.3	205.3	205.3	205.3	205.3	205.3	205.3
2.5°	214.6	214.0	212.3	208.8	205.3	201.2	198.0	195.7	193.9
5°	224.8	223.6	218.7	211.4	203.5	195.7	188.7	184.6	182.3
7.5°	232.6	230.6	223.6	213.4	201.2	189.3	178.5	172.1	169.5
10°	239.3	235.8	226.8	213.1	197.1	181.4	168.0	160.4	157.5
12.5°	243.7	239.9	228.9	212.8	192.7	173.5	157.8	147.9	145.0
15°	246.9	242.2	229.1	210.5	187.5	165.4	147.3	135.7	131.9
17.5°	249.2	242.8	228.0	207.9	182.8	156.9	136.6	124.0	120.2
20°	249.8	242.8	226.2	204.1	175.9	148.5	124.9	112.4	107.7
22.5°	250.1	242.0	223.6	199.4	168.6	138.9	115.3	102.2	97.2
25°	243.7	239.0	219.5	191.6	157.5	128.4	105.7	91.4	87.3
27.5°	228.6	228.3	214.9	181.1	147.3	117.0	95.8	82.1	78.3
30°	213.1	213.4	208.8	169.5	135.4	106.3	85.9	72.5	68.4
32.5°	194.2	197.1	196.8	156.4	122.6	96.1	76.3	63.8	59.7
35°	173.8	179.1	180.2	141.5	109.2	84.4	66.7	55.3	51.2
37.5°	155.5	160.7	163.3	128.4	96.7	74.2	57.6	47.7	43.7
40°	137.7	142.1	144.1	113.3	84.4	63.8	49.2	39.9	35.8
42.5°	120.5	126.9	126.4	100.4	73.7	55.3	41.6	32.3	28.2
45°	107.7	112.1	110.3	87.1	62.3	46.6	33.8	25.0	21.3
47.5°	94.9	98.1	95.5	75.7	52.7	38.4	27.4	18.3	14.3
50°	84.4	85.9	82.4	64.3	44.0	31.4	20.7	12.2	11.6
52.5°	74.5	75.4	70.5	54.7	36.4	25.3	15.1	9.6	10.2
55°	66.4	66.1	60.6	46.3	30.0	19.5	10.2	8.7	9.3
57.5°	58.5	57.6	52.1	38.4	24.5	15.1	6.1	7.6	8.2
60°	51.5	50.7	44.3	31.7	19.5	11.4	4.9	6.7	7.3
62.5°	46.0	44.0	37.6	26.2	15.7	8.2	4.4	5.8	6.4
65°	39.9	38.1	32.0	21.3	12.2	5.8	3.8	4.9	5.5
67.5°	34.9	32.9	27.1	17.5	9.9	4.1	3.5	4.4	4.9
70°	30.0	28.2	22.4	14.0	7.3	2.6	2.9	3.8	4.4
72.5°	25.9	23.9	18.6	11.1	5.5	2.0	2.6	3.2	3.5
75°	21.3	19.5	14.8	8.4	3.8	1.7	2.0	2.6	2.9
77.5°	17.8	16.0	11.6	6.4	2.6	1.5	1.7	2.3	2.3
80°	13.7	12.2	8.7	4.4	1.7	0.9	1.5	1.7	1.7
82.5°	9.9	8.7	6.1	2.9	0.9	0.9	0.9	1.2	1.2
85°	6.7	5.8	3.8	1.7	0.6	0.6	0.6	0.6	0.6
87.5°	3.8	2.9	1.7	0.6	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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