

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: P837247

Luminaire Tested: HCSQ407D010-HM40525835-41SQMW

Issue Date: 5/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P837247
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2309-165-3)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 5/17/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCSQ407D010-HM40525835-41SQMW
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, MATTE WHITE TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 3500K CCT
Ballast/Driver: -

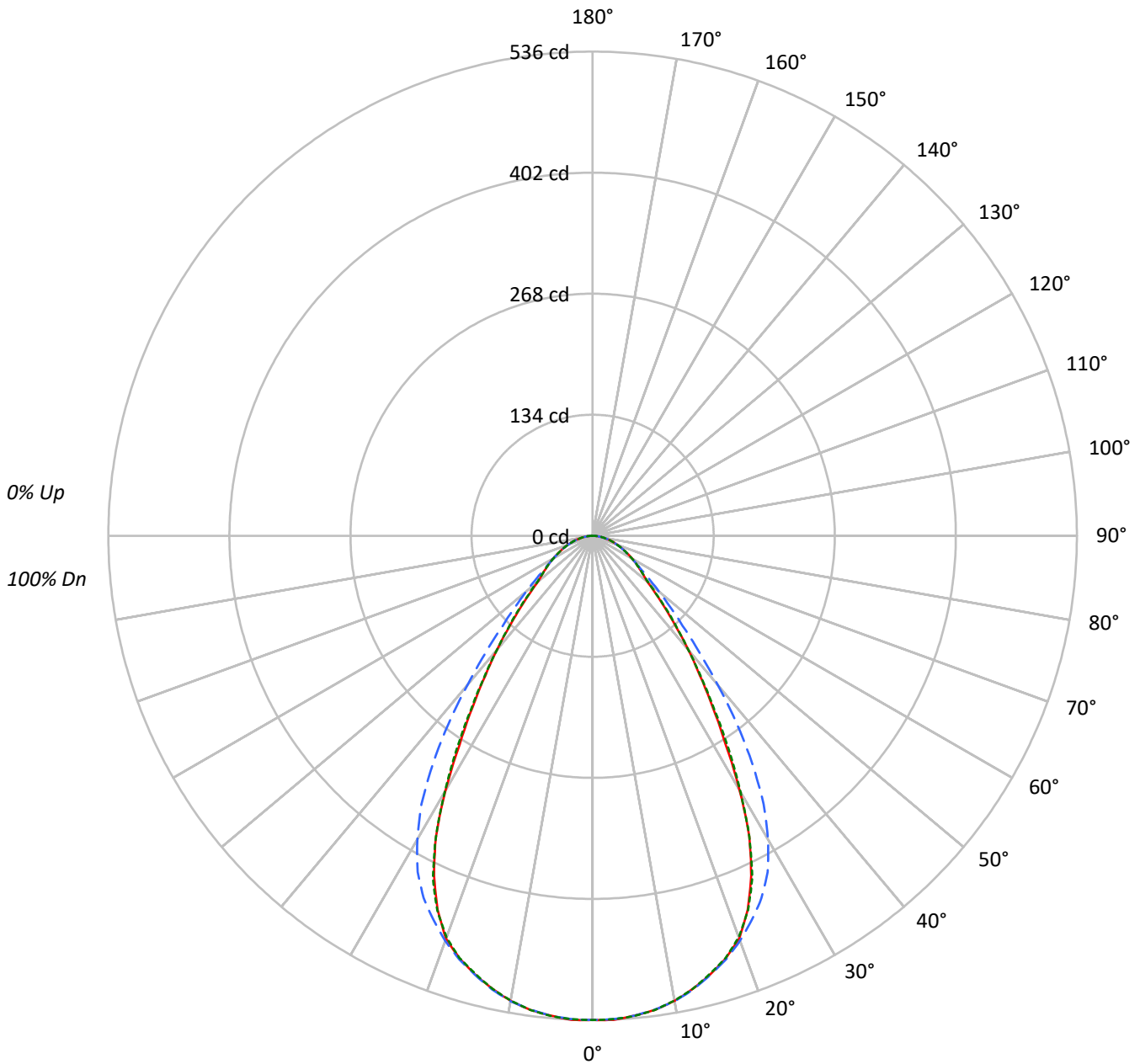
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 778.0 lumens
Efficiency: N/A
Efficacy: 97.2 lumens/watt
Spacing Criteria (0/90/45): 1.03 / 1.03 / 1.07
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	108	105	102	109	106	103	100	101	99	97	98	96	94	94	93	91	89					89			
2	104	98	92	88	102	96	91	87	92	88	85	89	86	83	86	84	81	79					79			
3	97	89	82	77	95	87	81	76	84	79	75	82	78	74	79	76	73	71					71			
4	91	81	74	69	89	80	73	68	77	72	67	75	70	66	73	69	66	64					64			
5	85	74	67	62	83	73	66	61	71	65	61	70	64	60	68	63	60	58					58			
6	79	69	61	56	78	68	61	56	66	60	55	64	59	55	63	58	54	53					53			
7	75	63	56	51	73	63	56	51	61	55	50	60	54	50	59	54	50	48					48			
8	70	59	52	47	69	58	51	47	57	51	46	56	50	46	55	50	46	44					44			
9	66	55	48	43	65	54	48	43	53	47	43	52	47	43	51	46	43	41					41			
10	63	51	45	40	62	51	44	40	50	44	40	49	44	40	48	43	40	38					38			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	51935	51935	51935
5°	51851	51851	51890
10°	51428	51467	51388
15°	50427	50467	50337
20°	48917	49175	48742
25°	44392	47288	44701
30°	36433	43425	36579
35°	27390	36449	27780
40°	20866	27177	20803
45°	15577	19290	15865
50°	11861	14378	12117
55°	10691	11249	10691
60°	9765	9688	9688
65°	8871	8871	8871
70°	8271	8129	8129
75°	7636	7486	7636
80°	6974	6750	6974
85°	6002	6002	6002

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 19290 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	50.6	6.5
10°-20°	141.5	18.2
20°-30°	194.7	25.0
30°-40°	165.7	21.3
40°-50°	100.1	12.9
50°-60°	59.0	7.6
60°-70°	38.7	5.0
70°-80°	21.5	2.8
80°-90°	6.3	0.8
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°	386.8	49.7
0°-40°	552.5	71.0
0°-60°	711.6	91.5
0°-90°	778.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	778.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	536	536	536	536	536	
5°	533	534	533	533	534	51
15°	503	504	503	503	502	141
25°	415	428	442	429	418	188
35°	232	255	308	262	235	147
45°	114	126	141	127	116	89
55°	63	65	67	65	63	57
65°	39	39	39	39	39	39
75°	20	20	20	20	20	22
85°	5	5	5	5	5	6
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	536.1	536.1	536.1	536.1	536.1
2.5°	536.5	535.3	535.7	535.3	535.7
5°	533.2	533.6	533.2	532.8	533.6
7.5°	529.4	529.0	529.0	528.6	529.4
10°	522.8	521.9	523.2	522.4	522.4
12.5°	513.6	514.9	514.4	514.4	513.6
15°	502.8	504.0	503.2	502.8	501.9
17.5°	490.3	491.1	491.5	489.9	489.9
20°	474.5	476.1	477.0	474.0	472.8
22.5°	448.2	455.7	460.3	455.3	449.0
25°	415.3	428.2	442.4	429.1	418.2
27.5°	375.7	394.1	419.5	397.0	375.7
30°	325.7	352.8	388.2	355.7	327.0
32.5°	274.1	302.8	352.4	307.8	279.9
35°	231.6	254.9	308.2	262.0	234.9
37.5°	194.9	214.9	262.0	219.5	197.0
40°	165.0	180.8	214.9	182.9	164.5
42.5°	136.2	151.2	174.1	153.3	137.9
45°	113.7	125.8	140.8	127.0	115.8
47.5°	94.6	104.6	115.4	104.6	95.8
50°	78.7	86.6	95.4	86.6	80.4
52.5°	70.4	72.9	78.7	73.3	70.4
55°	63.3	64.6	66.6	64.6	63.3
57.5°	56.7	57.5	57.1	57.1	56.7
60°	50.4	50.8	50.0	50.4	50.0
62.5°	44.6	44.6	43.7	44.6	44.2
65°	38.7	39.2	38.7	38.7	38.7
67.5°	33.7	33.7	33.3	33.7	33.7
70°	29.2	29.2	28.7	29.2	28.7
72.5°	24.6	24.6	24.2	24.2	24.2
75°	20.4	20.4	20.0	20.0	20.4
77.5°	16.2	16.2	15.8	16.2	16.2
80°	12.5	12.5	12.1	12.5	12.5
82.5°	8.7	8.7	8.7	9.2	9.2
85°	5.4	5.4	5.4	5.4	5.4
87.5°	2.5	2.5	2.5	2.5	2.9
90°	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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