

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: P837673

Luminaire Tested: HCSQ460D010-HM44560827-41SQC

Issue Date: 5/17/2024



Test Information

Test Method: LM-79-2019
Report Number: P837673
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2309-165-1)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 5/17/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCSQ460D010-HM44560827-41SQC
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, SPECULAR CLEAR TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 2700K CCT
Ballast/Driver: -

Summary

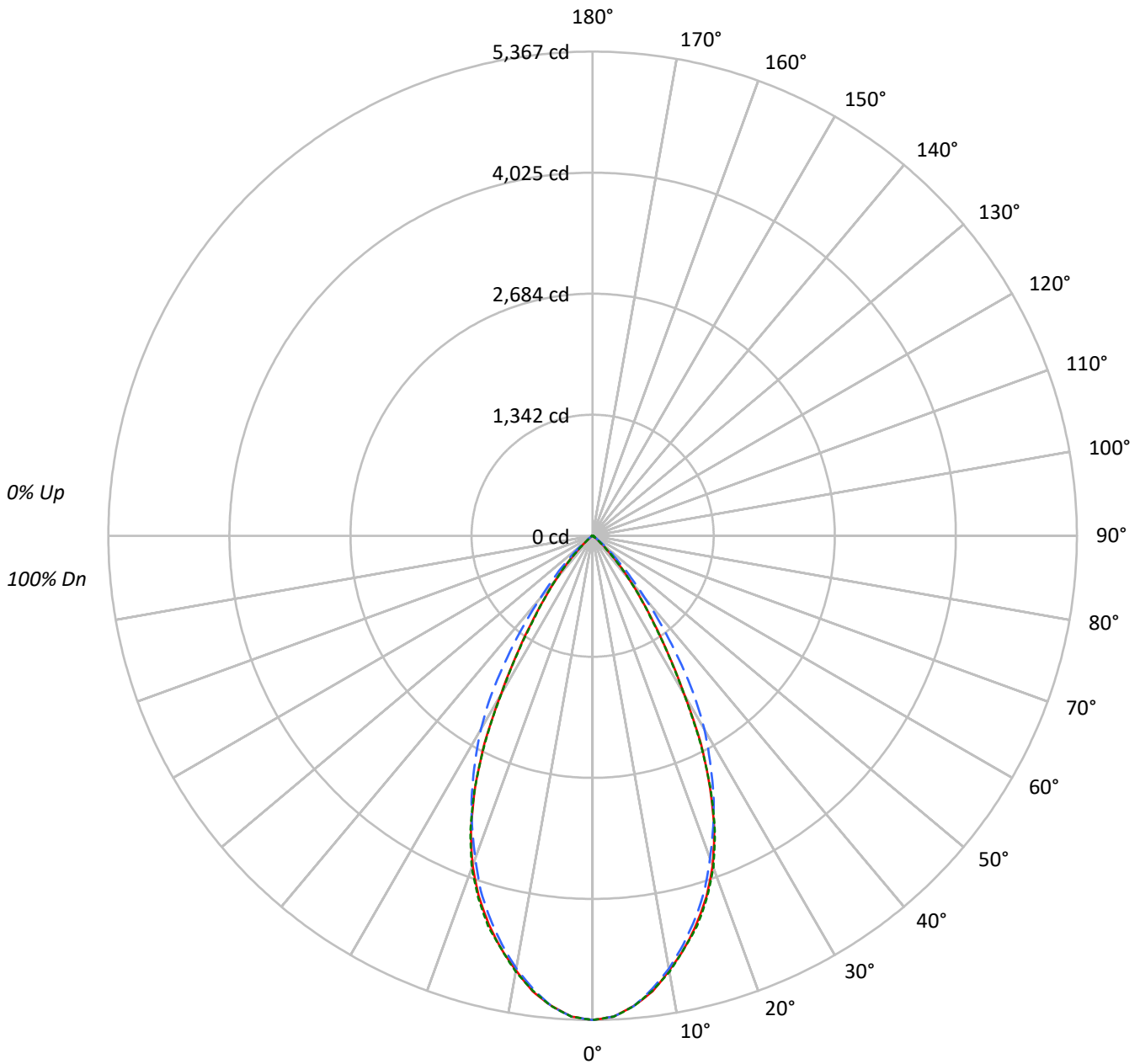
Lumens per Lamp: N/A
Luminaire Lumens: 4337.5 lumens
Efficiency: N/A
Efficacy: 77.5 lumens/watt
Spacing Criteria (0/90/45): 0.85 / 0.85 / 0.87
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 56
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										
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	100	100	100	100		
	1	114	111	108	106	111	109	106	104	105	103	101	101	99	98	97	96	95	94	94	94	94	94	94		
	2	108	103	99	96	106	101	98	95	98	95	93	95	93	91	93	91	89	87	87	87	87	87	87		
	3	103	96	91	87	101	95	90	87	92	89	85	90	87	84	88	85	83	81	81	81	81	81	81		
	4	98	90	85	80	96	89	84	80	87	82	79	85	81	78	83	80	77	76	76	76	76	76	76		
	5	93	84	79	74	91	83	78	74	82	77	73	80	76	73	78	75	72	71	71	71	71	71	71		
	6	88	79	73	69	87	79	73	69	77	72	68	76	71	68	74	70	68	66	66	66	66	66	66		
	7	84	75	69	65	82	74	68	64	73	68	64	71	67	64	70	66	63	62	62	62	62	62	62		
	8	80	70	64	60	79	70	64	60	69	64	60	68	63	60	67	63	60	58	58	58	58	58	58		
	9	76	67	61	57	75	66	60	57	65	60	56	64	60	56	63	59	56	55	55	55	55	55	55		
	10	73	63	57	53	72	63	57	53	62	57	53	61	56	53	60	56	53	52	52	52	52	52	52		

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	519969	519969	519969
5°	508818	509031	509031
10°	481275	479130	482563
15°	446554	440436	448951
20°	400855	391876	403329
25°	329233	338789	330398
30°	227583	276814	225883
35°	140142	195524	136795
40°	79064	114322	78508
45°	36114	57294	34621
50°	9193	22983	9525
55°	4408	6992	4054
60°	2945	2538	3371
65°	2499	1994	2499
70°	1841	1841	2464
75°	1647	1647	2433
80°	2455	2455	2455
85°	2445	4891	4891

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°

Vertical Angle: 45°

Luminance: 57294 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	488.3	11.3
10°-20°	1233.1	28.4
20°-30°	1409.6	32.5
30°-40°	875.0	20.2
40°-50°	275.7	6.4
50°-60°	35.7	0.8
60°-70°	10.6	0.2
70°-80°	5.7	0.1
80°-90°	3.8	0.1
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°	3131.0	72.2
0°-40°	4006.0	92.4
0°-60°	4317.4	99.5
0°-90°	4337.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4337.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5367	5367	5367	5367	5367	
5°	5232	5228	5234	5230	5234	489
15°	4452	4420	4392	4420	4476	1242
25°	3080	3124	3170	3124	3091	1382
35°	1185	1368	1653	1335	1157	762
45°	264	316	418	318	253	222
55°	26	26	41	26	24	26
65°	11	11	9	11	11	11
75°	4	4	4	4	6	5
85°	2	4	4	4	4	2
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5367.4	5367.4	5367.4	5367.4	5367.4
2.5°	5334.7	5339.1	5334.7	5343.4	5334.7
5°	5232.3	5228.0	5234.5	5230.1	5234.5
7.5°	5092.9	5066.8	5064.6	5082.0	5084.2
10°	4892.5	4886.0	4870.7	4886.0	4905.6
12.5°	4687.7	4661.6	4639.8	4670.3	4687.7
15°	4452.5	4419.8	4391.5	4419.8	4476.4
17.5°	4193.3	4147.5	4123.6	4156.2	4210.7
20°	3888.3	3840.4	3801.2	3829.5	3912.3
22.5°	3522.3	3518.0	3491.8	3507.1	3537.6
25°	3080.1	3123.7	3169.5	3123.7	3091.0
27.5°	2594.4	2712.0	2816.6	2679.3	2574.8
30°	2034.5	2213.2	2474.6	2200.1	2019.3
32.5°	1572.7	1760.1	2093.4	1736.1	1559.7
35°	1185.0	1368.0	1653.3	1335.3	1156.7
37.5°	871.3	1008.6	1256.9	999.8	871.3
40°	625.2	714.5	904.0	712.3	620.8
42.5°	433.5	492.3	631.7	487.9	420.4
45°	263.6	315.9	418.2	318.0	252.7
47.5°	139.4	200.4	263.6	191.7	139.4
50°	61.0	106.7	152.5	104.6	63.2
52.5°	32.7	45.7	82.8	45.7	32.7
55°	26.1	26.1	41.4	26.1	24.0
57.5°	19.6	19.6	21.8	19.6	19.6
60°	15.2	15.2	13.1	15.2	17.4
62.5°	13.1	13.1	10.9	13.1	13.1
65°	10.9	10.9	8.7	10.9	10.9
67.5°	8.7	8.7	8.7	8.7	8.7
70°	6.5	6.5	6.5	8.7	8.7
72.5°	6.5	6.5	6.5	6.5	6.5
75°	4.4	4.4	4.4	4.4	6.5
77.5°	4.4	4.4	4.4	4.4	4.4
80°	4.4	4.4	4.4	4.4	4.4
82.5°	2.2	4.4	4.4	4.4	4.4
85°	2.2	4.4	4.4	4.4	4.4
87.5°	2.2	2.2	4.4	4.4	4.4
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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