

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: P837483

Luminaire Tested: HCSQ435D010-HM43040835-41SQC

Issue Date: 5/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P837483
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: HCSQ435D010-HM43040835-41SQC
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, SPECULAR CLEAR TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 3500K CCT
Ballast/Driver: -

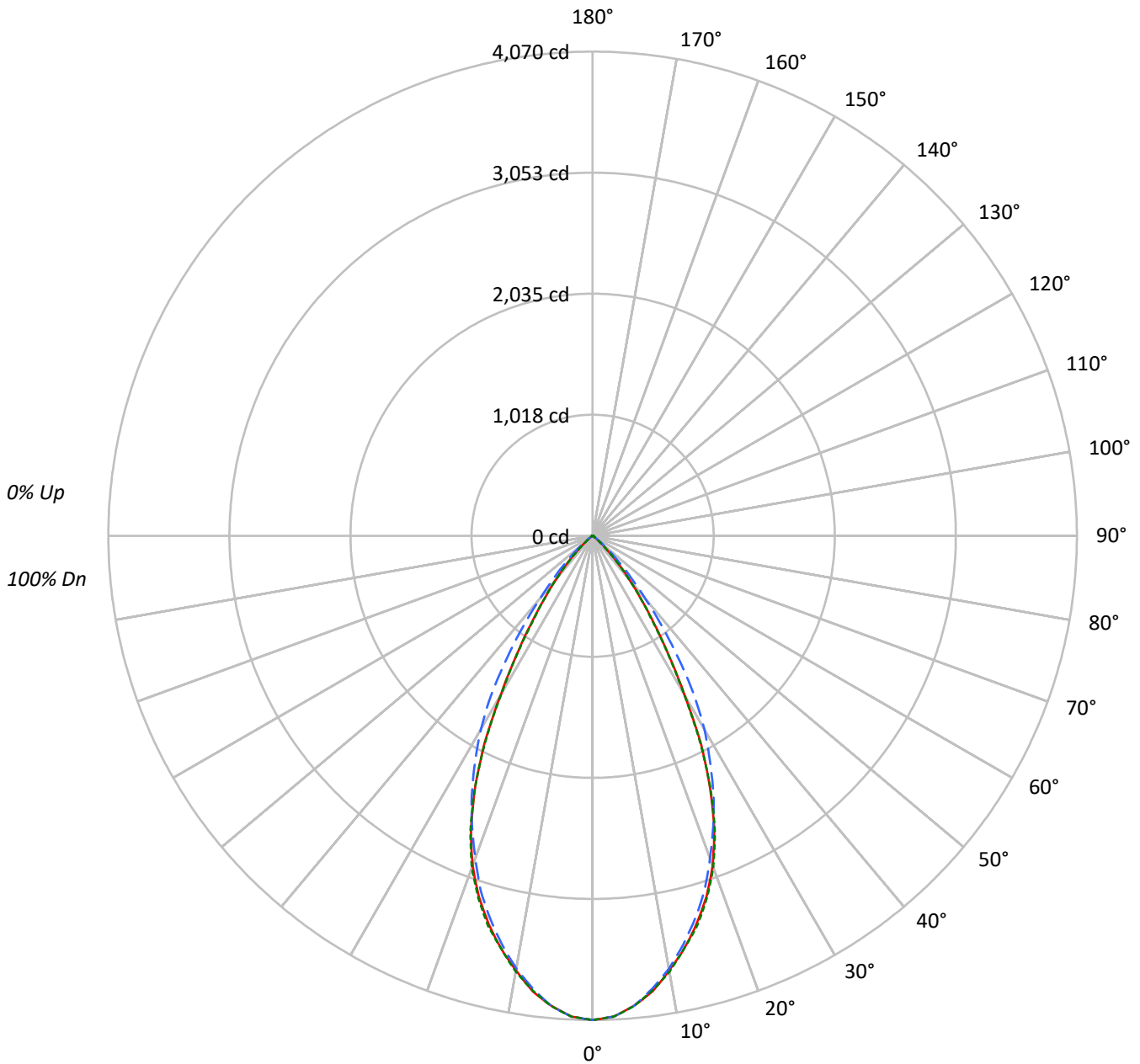
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3289.2 lumens
Efficiency: N/A
Efficacy: 96.7 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): 34
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					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								
1	114	111	108	106	111	109	106	104	105	103	101	101	99	98	97	96	95	94								
2	108	103	99	96	106	101	98	95	98	95	93	95	93	91	93	91	89	87								
3	103	96	91	87	101	95	90	87	92	89	85	90	87	84	88	85	83	81								
4	98	90	85	80	96	89	84	80	87	82	79	85	81	78	83	80	77	76								
5	93	84	79	74	91	83	78	74	82	77	73	80	76	73	78	75	72	71								
6	88	79	73	69	87	79	73	69	77	72	68	76	71	68	74	70	68	66								
7	84	75	69	65	82	74	68	64	73	68	64	71	67	64	70	66	63	62								
8	80	70	64	60	79	70	64	60	69	64	60	68	63	60	67	63	60	58								
9	76	67	61	57	75	66	60	57	65	60	56	64	60	56	63	59	56	55								
10	73	63	57	53	72	63	57	53	62	57	53	61	56	53	60	56	53	52								

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	394302	394302	394302
5°	385851	386016	386016
10°	364962	363339	365936
15°	338629	333995	340454
20°	303979	297165	305855
25°	249674	256911	250551
30°	172592	209909	171294
35°	106271	148278	103729
40°	59956	86690	59538
45°	27387	43457	26250
50°	6978	17422	7219
55°	3344	5303	3074
60°	2248	1918	2558
65°	1903	1513	1903
70°	1416	1416	1869
75°	1235	1235	1871
80°	1841	1841	1841
85°	1890	3668	3668

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 43457 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	370.3	11.3
10°-20°	935.1	28.4
20°-30°	1069.0	32.5
30°-40°	663.6	20.2
40°-50°	209.1	6.4
50°-60°	27.1	0.8
60°-70°	8.0	0.2
70°-80°	4.3	0.1
80°-90°	2.9	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°	2374.3	72.2
0°-40°	3037.9	92.4
0°-60°	3274.0	99.5
0°-90°	3289.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3289.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4070	4070	4070	4070	4070	
5°	3968	3964	3970	3966	3970	371
15°	3376	3352	3330	3352	3395	942
25°	2336	2369	2404	2369	2344	1048
35°	899	1037	1254	1013	877	578
45°	200	240	317	241	192	169
55°	20	20	31	20	18	20
65°	8	8	7	8	8	8
75°	3	3	3	3	5	4
85°	2	3	3	3	3	2
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4070.2	4070.2	4070.2	4070.2	4070.2
2.5°	4045.4	4048.7	4045.4	4052.0	4045.4
5°	3967.8	3964.5	3969.5	3966.2	3969.5
7.5°	3862.1	3842.3	3840.6	3853.8	3855.5
10°	3710.1	3705.2	3693.6	3705.2	3720.0
12.5°	3554.8	3535.0	3518.5	3541.6	3554.8
15°	3376.4	3351.7	3330.2	3351.7	3394.6
17.5°	3179.9	3145.2	3127.0	3151.8	3193.1
20°	2948.6	2912.3	2882.5	2904.0	2966.8
22.5°	2671.1	2667.8	2648.0	2659.5	2682.6
25°	2335.8	2368.8	2403.5	2368.8	2344.0
27.5°	1967.4	2056.6	2135.9	2031.8	1952.5
30°	1542.9	1678.3	1876.5	1668.4	1531.3
32.5°	1192.7	1334.7	1587.5	1316.5	1182.7
35°	898.6	1037.4	1253.8	1012.6	877.1
37.5°	660.7	764.8	953.1	758.2	660.7
40°	474.1	541.8	685.5	540.2	470.8
42.5°	328.7	373.3	479.0	370.0	318.8
45°	199.9	239.5	317.2	241.2	191.6
47.5°	105.7	152.0	199.9	145.4	105.7
50°	46.3	80.9	115.6	79.3	47.9
52.5°	24.8	34.7	62.8	34.7	24.8
55°	19.8	19.8	31.4	19.8	18.2
57.5°	14.9	14.9	16.5	14.9	14.9
60°	11.6	11.6	9.9	11.6	13.2
62.5°	9.9	9.9	8.3	9.9	9.9
65°	8.3	8.3	6.6	8.3	8.3
67.5°	6.6	6.6	6.6	6.6	6.6
70°	5.0	5.0	5.0	6.6	6.6
72.5°	5.0	5.0	5.0	5.0	5.0
75°	3.3	3.3	3.3	3.3	5.0
77.5°	3.3	3.3	3.3	3.3	3.3
80°	3.3	3.3	3.3	3.3	3.3
82.5°	1.7	3.3	3.3	3.3	3.3
85°	1.7	3.3	3.3	3.3	3.3
87.5°	1.7	1.7	3.3	3.3	3.3
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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