

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: P837529

Luminaire Tested: HCSQ440D010-HM43040840-41SQH

Issue Date: 5/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P837529
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2309-165-2)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 5/17/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCSQ440D010-HM43040840-41SQH
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, HAZE TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 4000K CCT
Ballast/Driver: -

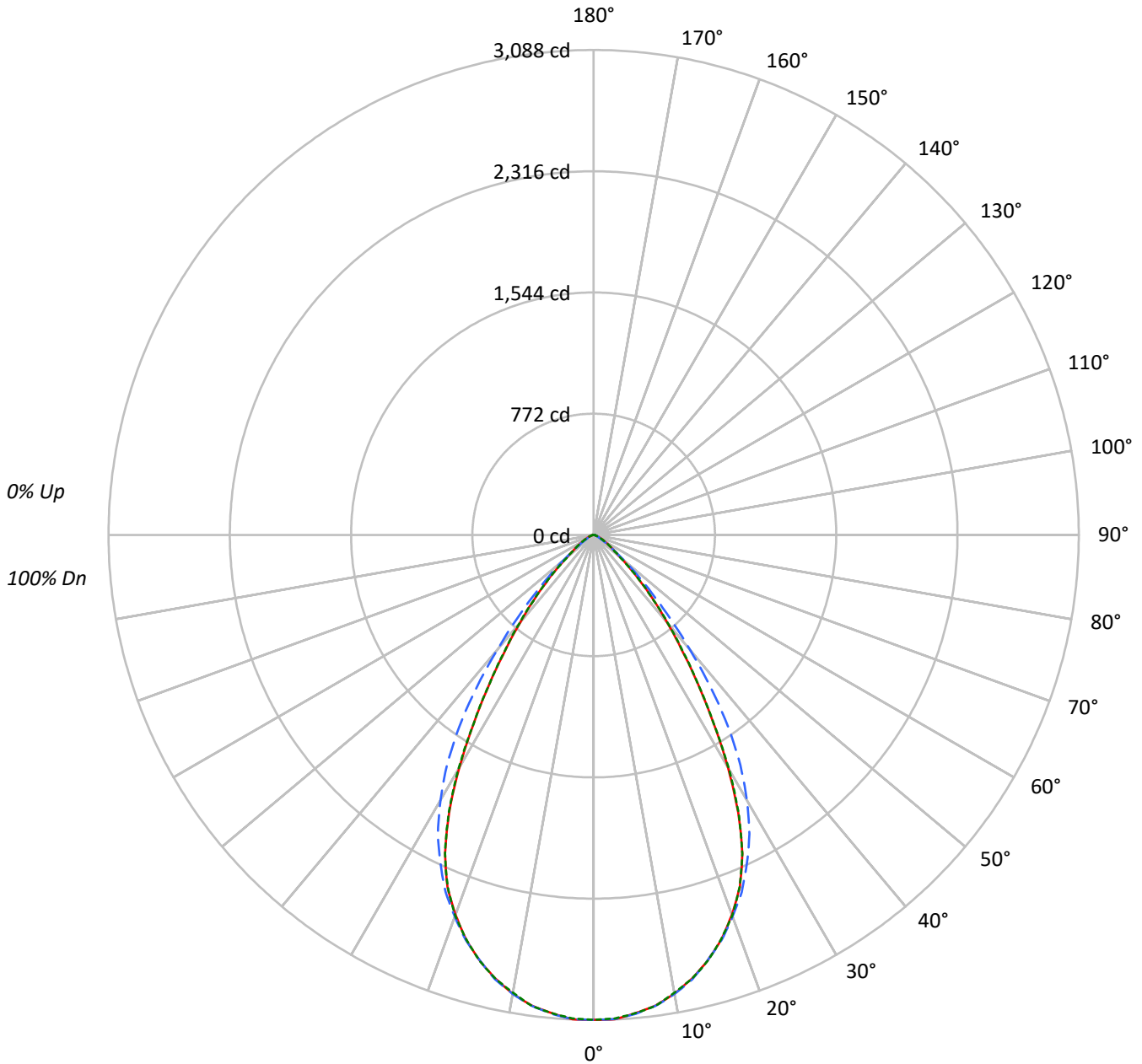
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3470.8 lumens
Efficiency: N/A
Efficacy: 84.7 lumens/watt
Spacing Criteria (0/90/45): 0.98 / 0.98 / 1.01
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 41
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				100															
1	113	110	107	105	110	108	105	103	104	102	100	100	98	97	96	95	94	92				92															
2	107	101	97	93	104	100	95	92	96	93	90	93	90	88	90	88	86	85				85															
3	101	93	88	84	98	92	87	83	89	85	82	87	83	80	85	82	79	77				77															
4	95	87	80	76	93	85	80	75	83	78	74	81	77	74	79	76	73	71				71															
5	89	80	74	69	88	79	73	69	77	72	68	76	71	68	74	70	67	65				65															
6	84	75	68	63	83	74	68	63	72	67	63	71	66	62	69	65	62	60				60															
7	80	70	63	59	78	69	63	58	68	62	58	66	61	58	65	61	57	56				56															
8	75	65	59	54	74	65	58	54	63	58	54	62	57	54	61	57	53	52				52															
9	72	61	55	50	70	61	54	50	60	54	50	59	54	50	58	53	50	48				48															
10	68	57	51	47	67	57	51	47	56	51	47	55	50	47	55	50	46	45				45															

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	299122	299122	299122
5°	297289	297668	297289
10°	291726	291913	291165
15°	281361	281171	281552
20°	265227	266608	265824
25°	239327	246660	239327
30°	191150	218243	192638
35°	136452	176602	136677
40°	92127	120114	93582
45°	58527	71063	58788
50°	33337	37934	32192
55°	21906	18359	21585
60°	15151	10714	14783
65°	10499	7862	10499
70°	7563	5948	7563
75°	4978	4978	4978
80°	3180	4240	4240
85°	4224	4224	4224

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 71063 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	289.3	8.3
10°-20°	786.5	22.7
20°-30°	1029.8	29.7
30°-40°	809.4	23.3
40°-50°	378.0	10.9
50°-60°	117.2	3.4
60°-70°	41.8	1.2
70°-80°	14.7	0.4
80°-90°	4.0	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°	2105.6	60.7
0°-40°	2915.0	84.0
0°-60°	3410.2	98.3
0°-90°	3470.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3470.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3088	3088	3088	3088	3088	
5°	3057	3059	3061	3065	3057	289
15°	2805	2805	2804	2805	2807	786
25°	2239	2270	2308	2271	2239	1007
35°	1154	1259	1493	1274	1156	727
45°	427	479	519	469	429	340
55°	130	122	109	120	128	121
65°	46	42	34	40	46	48
75°	13	13	13	13	13	15
85°	4	4	4	4	4	3
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3087.7	3087.7	3087.7	3087.7	3087.7
2.5°	3087.7	3083.8	3085.8	3081.9	3081.9
5°	3057.1	3059.1	3061.0	3064.8	3057.1
7.5°	3022.8	3026.6	3024.7	3024.7	3024.7
10°	2965.6	2967.5	2967.5	2967.5	2959.9
12.5°	2893.1	2896.9	2898.9	2893.1	2893.1
15°	2805.4	2805.4	2803.5	2805.4	2807.3
17.5°	2700.5	2706.2	2706.2	2700.5	2698.6
20°	2572.7	2582.3	2586.1	2578.5	2578.5
22.5°	2429.7	2439.2	2462.1	2443.0	2427.8
25°	2239.0	2269.5	2307.6	2271.4	2239.0
27.5°	1993.0	2059.7	2147.4	2071.2	1998.7
30°	1708.8	1817.5	1951.0	1823.2	1722.1
32.5°	1418.9	1541.0	1737.4	1550.5	1418.9
35°	1153.8	1258.7	1493.3	1274.0	1155.7
37.5°	917.3	1018.4	1224.4	1029.9	930.7
40°	728.5	810.5	949.8	808.6	740.0
42.5°	568.3	627.4	719.0	625.5	566.4
45°	427.2	478.7	518.7	469.2	429.1
47.5°	314.7	349.0	371.9	343.3	307.0
50°	221.2	246.0	251.7	240.3	213.6
52.5°	165.9	165.9	167.8	164.0	162.1
55°	129.7	122.1	108.7	120.1	127.8
57.5°	101.1	93.4	76.3	89.6	99.2
60°	78.2	70.6	55.3	68.7	76.3
62.5°	61.0	53.4	43.9	53.4	59.1
65°	45.8	42.0	34.3	40.0	45.8
67.5°	34.3	30.5	26.7	30.5	34.3
70°	26.7	24.8	21.0	22.9	26.7
72.5°	19.1	17.2	17.2	17.2	19.1
75°	13.3	13.3	13.3	13.3	13.3
77.5°	9.5	9.5	9.5	9.5	9.5
80°	5.7	5.7	7.6	7.6	7.6
82.5°	3.8	3.8	5.7	5.7	5.7
85°	3.8	3.8	3.8	3.8	3.8
87.5°	1.9	1.9	1.9	3.8	3.8
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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