

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: P837504

Luminaire Tested: HCSQ435D010-HM43040935-41SQH

Issue Date: 5/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P837504
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: HCSQ435D010-HM43040935-41SQH
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, HAZE TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 3500K CCT
Ballast/Driver: -

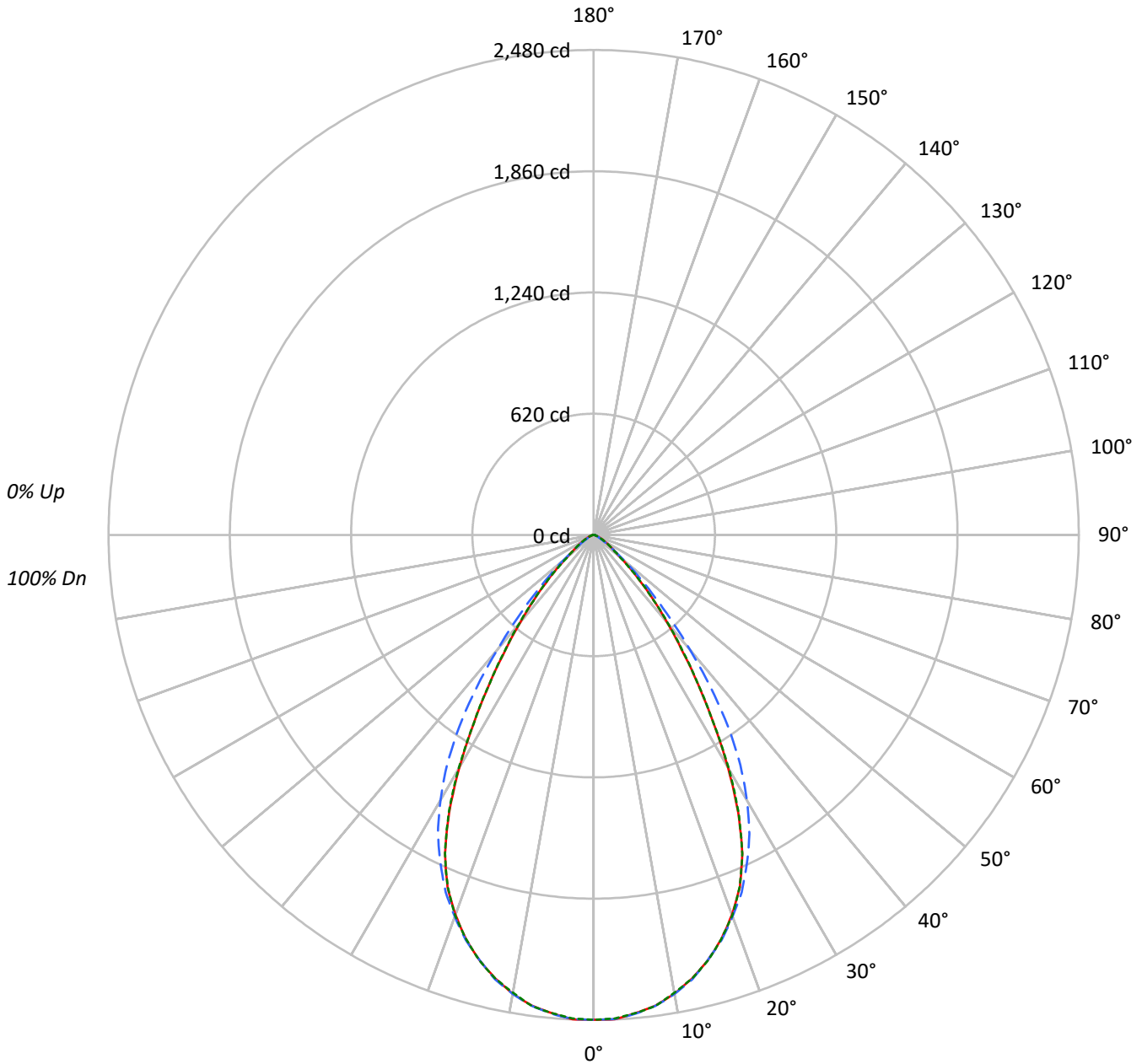
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2787.2 lumens
Efficiency: N/A
Efficacy: 82.0 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): 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									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°	240203	240203	240203
5°	238738	239029	238738
10°	234268	234415	233815
15°	225940	225789	226090
20°	212989	214093	213464
25°	192189	198078	192189
30°	153497	175254	154694
35°	109571	141821	109760
40°	73980	96452	75144
45°	47006	57075	47211
50°	26781	30474	25847
55°	17582	14745	17329
60°	12168	8603	11877
65°	8436	6327	8436
70°	6061	4759	6061
75°	4005	4005	4005
80°	2566	3403	3403
85°	3446	3446	3446

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 57075 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	232.3	8.3
10°-20°	631.6	22.7
20°-30°	827.0	29.7
30°-40°	650.0	23.3
40°-50°	303.6	10.9
50°-60°	94.1	3.4
60°-70°	33.6	1.2
70°-80°	11.8	0.4
80°-90°	3.3	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°	1690.9	60.7
0°-40°	2340.8	84.0
0°-60°	2738.5	98.3
0°-90°	2787.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2787.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2480	2480	2480	2480	2480	
5°	2455	2456	2458	2461	2455	232
15°	2253	2253	2251	2253	2254	631
25°	1798	1822	1853	1824	1798	809
35°	926	1011	1199	1023	928	584
45°	343	384	417	377	345	273
55°	104	98	87	96	103	97
65°	37	34	28	32	37	38
75°	11	11	11	11	11	12
85°	3	3	3	3	3	3
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2479.5	2479.5	2479.5	2479.5	2479.5
2.5°	2479.5	2476.4	2477.9	2474.9	2474.9
5°	2455.0	2456.5	2458.0	2461.1	2455.0
7.5°	2427.4	2430.5	2428.9	2428.9	2428.9
10°	2381.5	2383.0	2383.0	2383.0	2376.9
12.5°	2323.3	2326.3	2327.9	2323.3	2323.3
15°	2252.8	2252.8	2251.3	2252.8	2254.3
17.5°	2168.6	2173.2	2173.2	2168.6	2167.0
20°	2066.0	2073.6	2076.7	2070.6	2070.6
22.5°	1951.1	1958.8	1977.1	1961.8	1949.6
25°	1798.0	1822.5	1853.1	1824.0	1798.0
27.5°	1600.4	1654.0	1724.4	1663.2	1605.0
30°	1372.2	1459.5	1566.7	1464.1	1382.9
32.5°	1139.4	1237.4	1395.2	1245.1	1139.4
35°	926.5	1010.8	1199.2	1023.0	928.1
37.5°	736.6	817.8	983.2	827.0	747.4
40°	585.0	650.9	762.7	649.3	594.2
42.5°	456.4	503.9	577.4	502.3	454.9
45°	343.1	384.4	416.6	376.7	344.6
47.5°	252.7	280.3	298.6	275.7	246.6
50°	177.7	197.6	202.2	193.0	171.5
52.5°	133.2	133.2	134.8	131.7	130.2
55°	104.1	98.0	87.3	96.5	102.6
57.5°	81.2	75.0	61.3	72.0	79.6
60°	62.8	56.7	44.4	55.1	61.3
62.5°	49.0	42.9	35.2	42.9	47.5
65°	36.8	33.7	27.6	32.2	36.8
67.5°	27.6	24.5	21.4	24.5	27.6
70°	21.4	19.9	16.8	18.4	21.4
72.5°	15.3	13.8	13.8	13.8	15.3
75°	10.7	10.7	10.7	10.7	10.7
77.5°	7.7	7.7	7.7	7.7	7.7
80°	4.6	4.6	6.1	6.1	6.1
82.5°	3.1	3.1	4.6	4.6	4.6
85°	3.1	3.1	3.1	3.1	3.1
87.5°	1.5	1.5	1.5	3.1	3.1
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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