

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: P837199

Luminaire Tested: HCSQ405D010-HM40525830-41SQH

Issue Date: 5/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P837199
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: HCSQ405D010-HM40525830-41SQH
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, HAZE TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 3000K CCT
Ballast/Driver: -

Summary

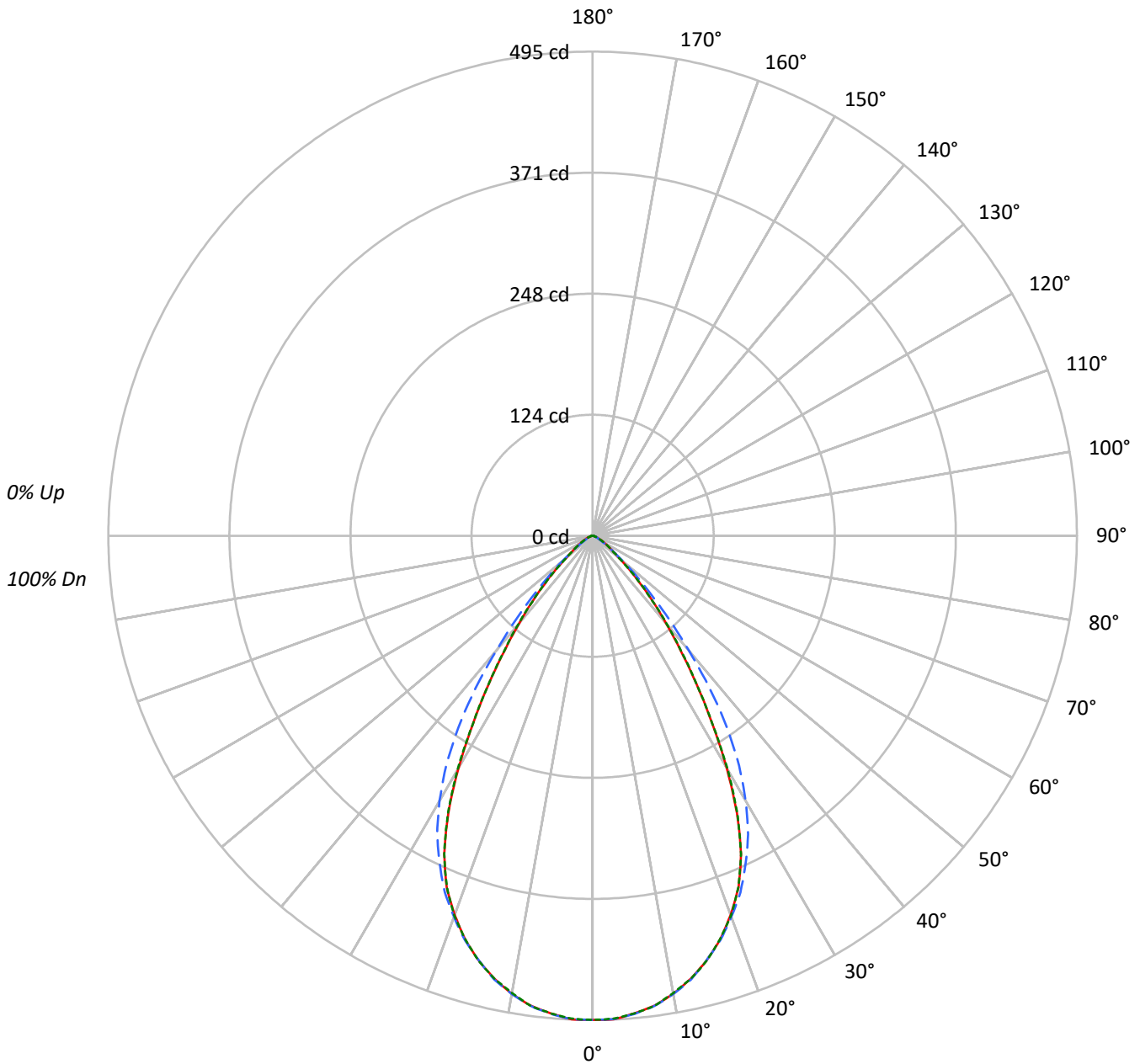
Lumens per Lamp: N/A
Luminaire Lumens: 556.4 lumens
Efficiency: N/A
Efficacy: 92.7 lumens/watt
Spacing Criteria (0/90/45): 0.98 / 0.98 / 1.01
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 6
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	0					
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100								
1	113	110	107	105	110	108	105	103	104	102	100	100	98	97	96	95	94	92								
2	107	101	97	93	104	100	95	92	96	93	90	93	90	88	90	88	86	85								
3	101	93	88	84	98	92	87	83	89	85	82	87	83	80	85	82	79	77								
4	95	87	80	76	93	85	80	75	83	78	74	81	77	74	79	76	73	71								
5	89	80	74	69	88	79	73	69	77	72	68	76	71	68	74	70	67	65								
6	84	75	68	63	83	74	68	63	72	67	63	71	66	62	69	65	62	60								
7	80	70	63	59	78	69	63	58	68	62	58	66	61	58	65	61	57	56								
8	75	65	59	54	74	65	58	54	63	58	54	62	57	54	61	57	53	52								
9	72	61	55	50	70	61	54	50	60	54	50	59	54	50	58	53	50	48								
10	68	57	51	47	67	57	51	47	56	51	47	55	50	47	55	50	46	45								

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	47953	47953	47953
5°	47660	47718	47660
10°	46765	46795	46677
15°	45102	45072	45132
20°	42515	42742	42608
25°	38363	39539	38363
30°	30639	34990	30885
35°	21879	28312	21914
40°	14771	19260	14998
45°	9385	11399	9426
50°	5350	6089	5154
55°	3513	2939	3462
60°	2422	1724	2364
65°	1673	1261	1673
70°	1218	963	1218
75°	786	786	786
80°	502	669	669
85°	667	667	667

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 11399 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	46.4	8.3
10°-20°	126.1	22.7
20°-30°	165.1	29.7
30°-40°	129.8	23.3
40°-50°	60.6	10.9
50°-60°	18.8	3.4
60°-70°	6.7	1.2
70°-80°	2.4	0.4
80°-90°	0.6	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°	337.5	60.7
0°-40°	467.3	84.0
0°-60°	546.7	98.3
0°-90°	556.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	556.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	495	495	495	495	495	
5°	490	490	491	491	490	46
15°	450	450	449	450	450	126
25°	359	364	370	364	359	161
35°	185	202	239	204	185	117
45°	68	77	83	75	69	55
55°	21	20	17	19	20	19
65°	7	7	6	6	7	8
75°	2	2	2	2	2	2
85°	1	1	1	1	1	1
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	495.0	495.0	495.0	495.0	495.0
2.5°	495.0	494.4	494.7	494.1	494.1
5°	490.1	490.4	490.7	491.3	490.1
7.5°	484.6	485.2	484.9	484.9	484.9
10°	475.4	475.7	475.7	475.7	474.5
12.5°	463.8	464.4	464.7	463.8	463.8
15°	449.7	449.7	449.4	449.7	450.0
17.5°	432.9	433.8	433.8	432.9	432.6
20°	412.4	414.0	414.6	413.3	413.3
22.5°	389.5	391.0	394.7	391.6	389.2
25°	358.9	363.8	369.9	364.1	358.9
27.5°	319.5	330.2	344.2	332.0	320.4
30°	273.9	291.4	312.8	292.3	276.1
32.5°	227.5	247.0	278.5	248.6	227.5
35°	185.0	201.8	239.4	204.2	185.3
37.5°	147.1	163.3	196.3	165.1	149.2
40°	116.8	129.9	152.3	129.6	118.6
42.5°	91.1	100.6	115.3	100.3	90.8
45°	68.5	76.7	83.2	75.2	68.8
47.5°	50.4	55.9	59.6	55.0	49.2
50°	35.5	39.4	40.4	38.5	34.2
52.5°	26.6	26.6	26.9	26.3	26.0
55°	20.8	19.6	17.4	19.3	20.5
57.5°	16.2	15.0	12.2	14.4	15.9
60°	12.5	11.3	8.9	11.0	12.2
62.5°	9.8	8.6	7.0	8.6	9.5
65°	7.3	6.7	5.5	6.4	7.3
67.5°	5.5	4.9	4.3	4.9	5.5
70°	4.3	4.0	3.4	3.7	4.3
72.5°	3.1	2.8	2.8	2.8	3.1
75°	2.1	2.1	2.1	2.1	2.1
77.5°	1.5	1.5	1.5	1.5	1.5
80°	0.9	0.9	1.2	1.2	1.2
82.5°	0.6	0.6	0.9	0.9	0.9
85°	0.6	0.6	0.6	0.6	0.6
87.5°	0.3	0.3	0.3	0.6	0.6
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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