

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: P837637

Luminaire Tested: HCSQ455D010-HM44560827-41SQMW

Issue Date: 5/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P837637
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2309-165-3)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 5/17/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCSQ455D010-HM44560827-41SQMW
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, MATTE WHITE TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 2700K CCT
Ballast/Driver: -

Summary

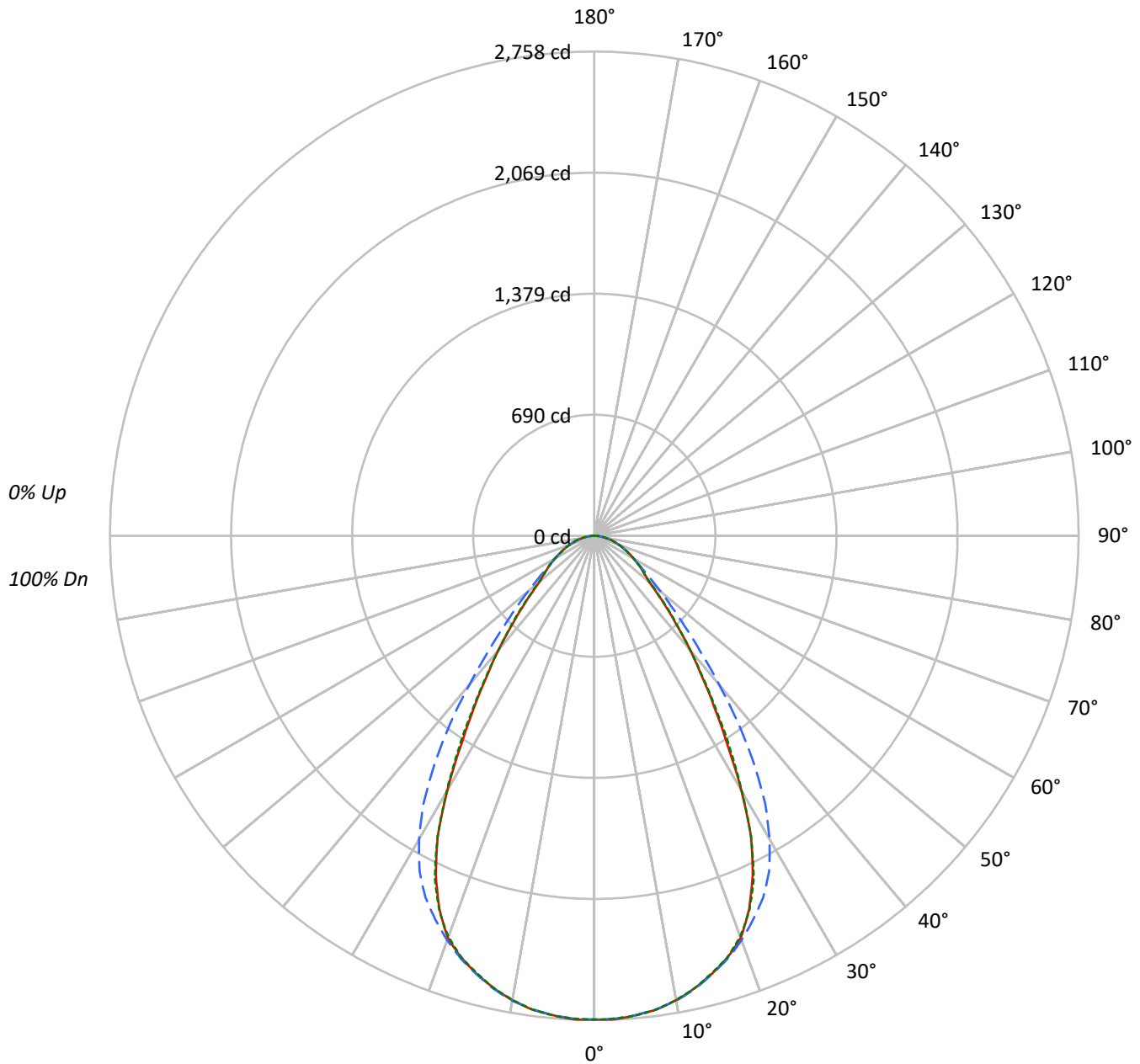
Lumens per Lamp: N/A
Luminaire Lumens: 3999.0 lumens
Efficiency: N/A
Efficacy: 74.1 lumens/watt
Spacing Criteria (0/90/45): 1.03 / 1.03 / 1.07
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 54
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

TEST NUMBER: P837637

CATALOG NUMBER: HCSQ455D010-HM44560827-41SQMW

Luminous Intensity Polar Plot



TEST NUMBER: P837637

CATALOG NUMBER: HCSQ455D010-HM44560827-41SQMW

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20					20					20					20
RC	80				70					50					30					10
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10
RCR																				
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100		
1	111	108	105	102	109	106	103	100	101	99	97	98	96	94	94	93	91	89		
2	104	98	92	88	102	96	91	87	92	88	85	89	86	83	86	84	81	79		
3	97	89	82	77	95	87	81	76	84	79	75	82	78	74	79	76	73	71		
4	91	81	74	69	89	80	73	68	77	72	67	75	70	66	73	69	66	64		
5	85	74	67	62	83	73	66	61	71	65	61	70	64	60	68	63	60	58		
6	79	69	61	56	78	68	61	56	66	60	55	64	59	55	63	58	54	53		
7	75	63	56	51	73	63	56	51	61	55	50	60	54	50	59	54	50	48		
8	70	59	52	47	69	58	51	47	57	51	46	56	50	46	55	50	46	44		
9	66	55	48	43	65	54	48	43	53	47	43	52	47	43	51	46	43	41		
10	63	51	45	40	62	51	44	40	50	44	40	49	44	40	48	43	40	38		

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	266950	266950	266950
5°	266511	266511	266725
10°	264330	264536	264123
15°	259187	259407	258766
20°	251412	252742	250536
25°	228179	243058	229782
30°	187302	223221	188018
35°	140792	187376	142814
40°	107227	139715	106949
45°	80078	99149	81544
50°	60993	73894	62274
55°	54976	57864	54976
60°	50201	49775	49775
65°	45639	45639	45639
70°	42458	41835	41835
75°	39264	38478	39264
80°	35816	34645	35816
85°	30900	30900	30900

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°

Vertical Angle: 45°

Luminance: 99149 cd/sqm

TEST NUMBER: P837637

CATALOG NUMBER: HCSQ455D010-HM44560827-41SQMW

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	259.9	6.5
10°-20°	727.5	18.2
20°-30°	1000.6	25.0
30°-40°	851.8	21.3
40°-50°	514.5	12.9
50°-60°	303.2	7.6
60°-70°	198.9	5.0
70°-80°	110.3	2.8
80°-90°	32.2	0.8
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°	1988.0	49.7
0°-40°	2839.9	71.0
0°-60°	3657.6	91.5
0°-90°	3999.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3999.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2756	2756	2756	2756	2756	
5°	2741	2743	2741	2738	2743	260
15°	2584	2591	2586	2584	2580	727
25°	2135	2201	2274	2205	2150	965
35°	1190	1310	1584	1347	1208	754
45°	584	647	724	653	595	459
55°	326	332	343	332	326	293
65°	199	201	199	199	199	199
75°	105	105	103	103	105	111
85°	28	28	28	28	28	32
90°	0	0	0	0	0	

TEST NUMBER: P837637

CATALOG NUMBER: HCSQ455D010-HM44560827-41SQMW

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2755.6	2755.6	2755.6	2755.6	2755.6
2.5°	2757.8	2751.3	2753.5	2751.3	2753.5
5°	2740.6	2742.8	2740.6	2738.5	2742.8
7.5°	2721.4	2719.2	2719.2	2717.1	2721.4
10°	2687.1	2682.8	2689.2	2685.0	2685.0
12.5°	2640.0	2646.4	2644.3	2644.3	2640.0
15°	2584.3	2590.8	2586.5	2584.3	2580.1
17.5°	2520.1	2524.4	2526.5	2518.0	2518.0
20°	2438.7	2447.3	2451.6	2436.6	2430.2
22.5°	2303.8	2342.4	2365.9	2340.2	2308.1
25°	2134.7	2201.1	2273.9	2205.4	2149.7
27.5°	1931.3	2025.5	2156.1	2040.5	1931.3
30°	1674.4	1813.5	1995.5	1828.5	1680.8
32.5°	1408.9	1556.6	1811.4	1582.3	1438.8
35°	1190.5	1310.4	1584.4	1346.8	1207.6
37.5°	1002.0	1104.8	1346.8	1128.4	1012.8
40°	847.9	929.2	1104.8	940.0	845.7
42.5°	700.1	777.2	895.0	787.9	708.7
45°	584.5	646.6	723.7	653.0	595.2
47.5°	486.0	537.4	593.1	537.4	492.5
50°	404.7	445.4	490.3	445.4	413.2
52.5°	361.8	374.7	404.7	376.8	361.8
55°	325.5	331.9	342.6	331.9	325.5
57.5°	291.2	295.5	293.3	293.3	291.2
60°	259.1	261.2	256.9	259.1	256.9
62.5°	229.1	229.1	224.8	229.1	227.0
65°	199.1	201.3	199.1	199.1	199.1
67.5°	173.4	173.4	171.3	173.4	173.4
70°	149.9	149.9	147.7	149.9	147.7
72.5°	126.3	126.3	124.2	124.2	124.2
75°	104.9	104.9	102.8	102.8	104.9
77.5°	83.5	83.5	81.4	83.5	83.5
80°	64.2	64.2	62.1	64.2	64.2
82.5°	45.0	45.0	45.0	47.1	47.1
85°	27.8	27.8	27.8	27.8	27.8
87.5°	12.8	12.8	12.8	12.8	15.0
90°	0.0	0.0	0.0	0.0	0.0



Report Generated By 670245859 / DESKTOP-T8S5UU9





— 0°-180° - - 45°-225° - - - 90°-270°







(END OF REPORT)