

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: P837633

Luminaire Tested: HCSQ455D010-HM44560827-41SQC

Issue Date: 5/17/2024



Test Information

Test Method: LM-79-2019
Report Number: P837633
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: HCSQ455D010-HM44560827-41SQC
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, SPECULAR CLEAR TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 2700K CCT
Ballast/Driver: -

Summary

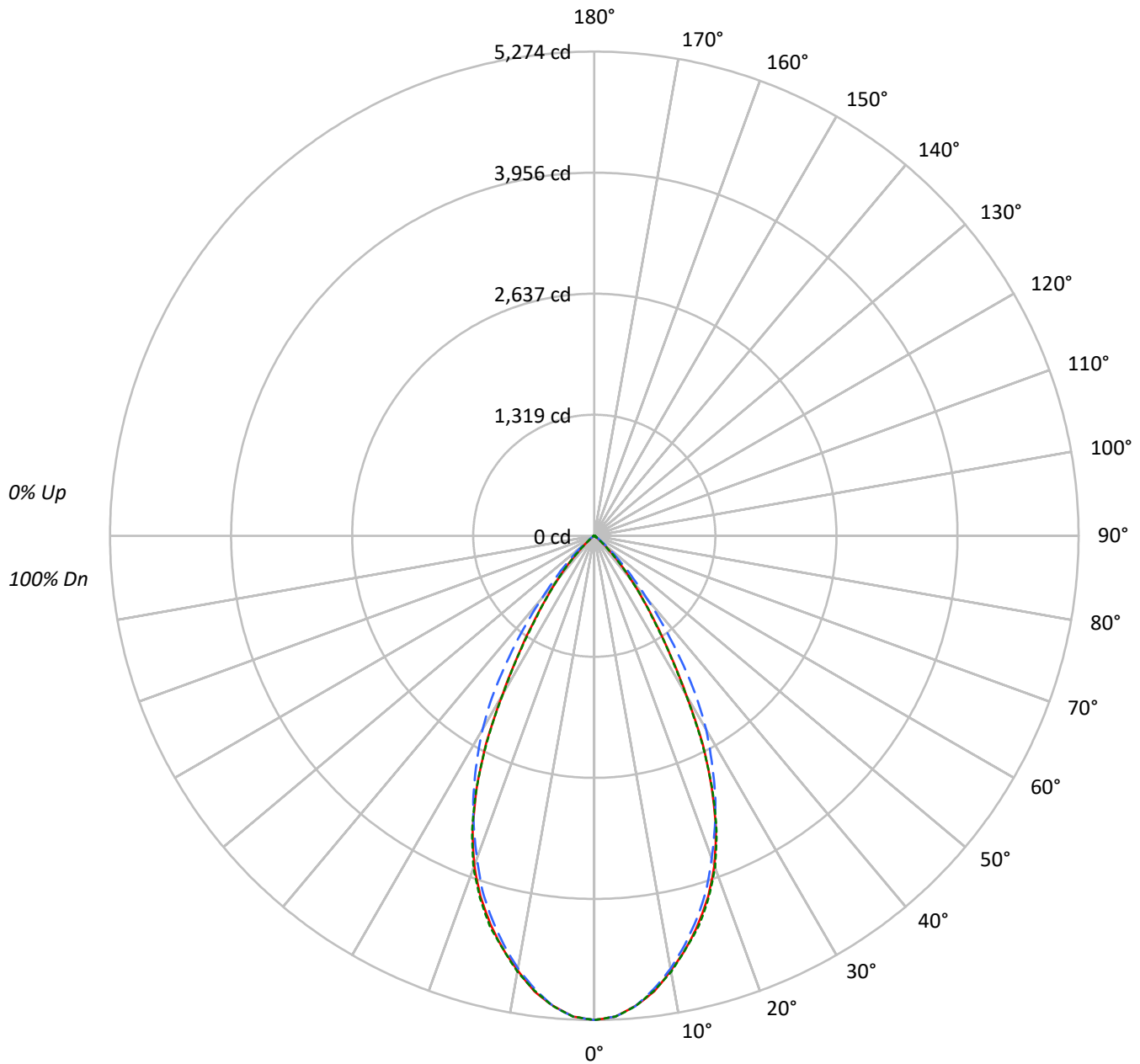
Lumens per Lamp: N/A
Luminaire Lumens: 4262.3 lumens
Efficiency: N/A
Efficacy: 78.9 lumens/watt
Spacing Criteria (0/90/45): 0.85 / 0.85 / 0.87
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 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: P837633

CATALOG NUMBER: HCSQ455D010-HM44560827-41SQC

Luminous Intensity Polar Plot



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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
RCR																				
0	119	119	119	119	116	116	116	116		111	111	111			106	106	106			102
1	114	111	108	106	111	109	106	104		105	103	101			101	99	98			97
2	108	103	99	96	106	101	98	95		98	95	93			95	93	91			93
3	103	96	91	87	101	95	90	87		92	89	85			90	87	84			88
4	98	90	85	80	96	89	84	80		87	82	79			85	81	78			83
5	93	84	79	74	91	83	78	74		82	77	73			80	76	73			78
6	88	79	73	69	87	79	73	69		77	72	68			76	71	68			74
7	84	75	69	65	82	74	68	64		73	68	64			71	67	64			70
8	80	70	64	60	79	70	64	60		69	64	60			68	63	60			67
9	76	67	61	57	75	66	60	57		65	60	56			64	60	56			63
10	73	63	57	53	72	63	57	53		62	57	53			61	56	53			60

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	510960	510960	510960
5°	500007	500211	500211
10°	472943	470838	474202
15°	438821	432804	441178
20°	393917	385082	396340
25°	323535	332920	324679
30°	223646	272015	221968
35°	137717	192142	134430
40°	77698	112336	77154
45°	35484	56308	34018
50°	9028	22577	9359
55°	4341	6874	3969
60°	2906	2480	3313
65°	2453	1971	2453
70°	1813	1813	2436
75°	1609	1609	2396
80°	2399	2399	2399
85°	2334	4780	4780

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°

Vertical Angle: 45°

Luminance: 56308 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	479.8	11.3
10°-20°	1211.7	28.4
20°-30°	1385.2	32.5
30°-40°	859.9	20.2
40°-50°	271.0	6.4
50°-60°	35.1	0.8
60°-70°	10.4	0.2
70°-80°	5.5	0.1
80°-90°	3.7	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°	3076.8	72.2
0°-40°	3936.6	92.4
0°-60°	4242.7	99.5
0°-90°	4262.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4262.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5274	5274	5274	5274	5274	
5°	5142	5137	5144	5140	5144	481
15°	4375	4343	4315	4343	4399	1220
25°	3027	3070	3115	3070	3038	1358
35°	1164	1344	1625	1312	1137	748
45°	259	310	411	312	248	218
55°	26	26	41	26	24	25
65°	11	11	9	11	11	11
75°	4	4	4	4	6	5
85°	2	4	4	4	4	2
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5274.4	5274.4	5274.4	5274.4	5274.4
2.5°	5242.3	5246.6	5242.3	5250.9	5242.3
5°	5141.7	5137.4	5143.8	5139.6	5143.8
7.5°	5004.7	4979.0	4976.9	4994.0	4996.1
10°	4807.8	4801.4	4786.4	4801.4	4820.6
12.5°	4606.6	4580.9	4559.5	4589.4	4606.6
15°	4375.4	4343.3	4315.4	4343.3	4398.9
17.5°	4120.6	4075.7	4052.1	4084.3	4137.8
20°	3821.0	3773.9	3735.3	3763.2	3844.5
22.5°	3461.3	3457.1	3431.4	3446.4	3476.3
25°	3026.8	3069.6	3114.6	3069.6	3037.5
27.5°	2549.4	2665.0	2767.8	2632.9	2530.2
30°	1999.3	2174.8	2431.7	2162.0	1984.3
32.5°	1545.5	1729.6	2057.1	1706.1	1532.7
35°	1164.5	1344.3	1624.7	1312.2	1136.7
37.5°	856.2	991.1	1235.1	982.5	856.2
40°	614.4	702.1	888.3	700.0	610.1
42.5°	426.0	483.8	620.8	479.5	413.1
45°	259.0	310.4	411.0	312.5	248.3
47.5°	137.0	196.9	259.0	188.4	137.0
50°	59.9	104.9	149.8	102.7	62.1
52.5°	32.1	45.0	81.3	45.0	32.1
55°	25.7	25.7	40.7	25.7	23.5
57.5°	19.3	19.3	21.4	19.3	19.3
60°	15.0	15.0	12.8	15.0	17.1
62.5°	12.8	12.8	10.7	12.8	12.8
65°	10.7	10.7	8.6	10.7	10.7
67.5°	8.6	8.6	8.6	8.6	8.6
70°	6.4	6.4	6.4	8.6	8.6
72.5°	6.4	6.4	6.4	6.4	6.4
75°	4.3	4.3	4.3	4.3	6.4
77.5°	4.3	4.3	4.3	4.3	4.3
80°	4.3	4.3	4.3	4.3	4.3
82.5°	2.1	4.3	4.3	4.3	4.3
85°	2.1	4.3	4.3	4.3	4.3
87.5°	2.1	2.1	4.3	4.3	4.3
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)