

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: P837642

Luminaire Tested: HCSQ455D010-HM44560830-41SQMW

Issue Date: 5/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P837642
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-HM44560830-41SQMW
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, MATTE WHITE TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 3000K CCT
Ballast/Driver: -

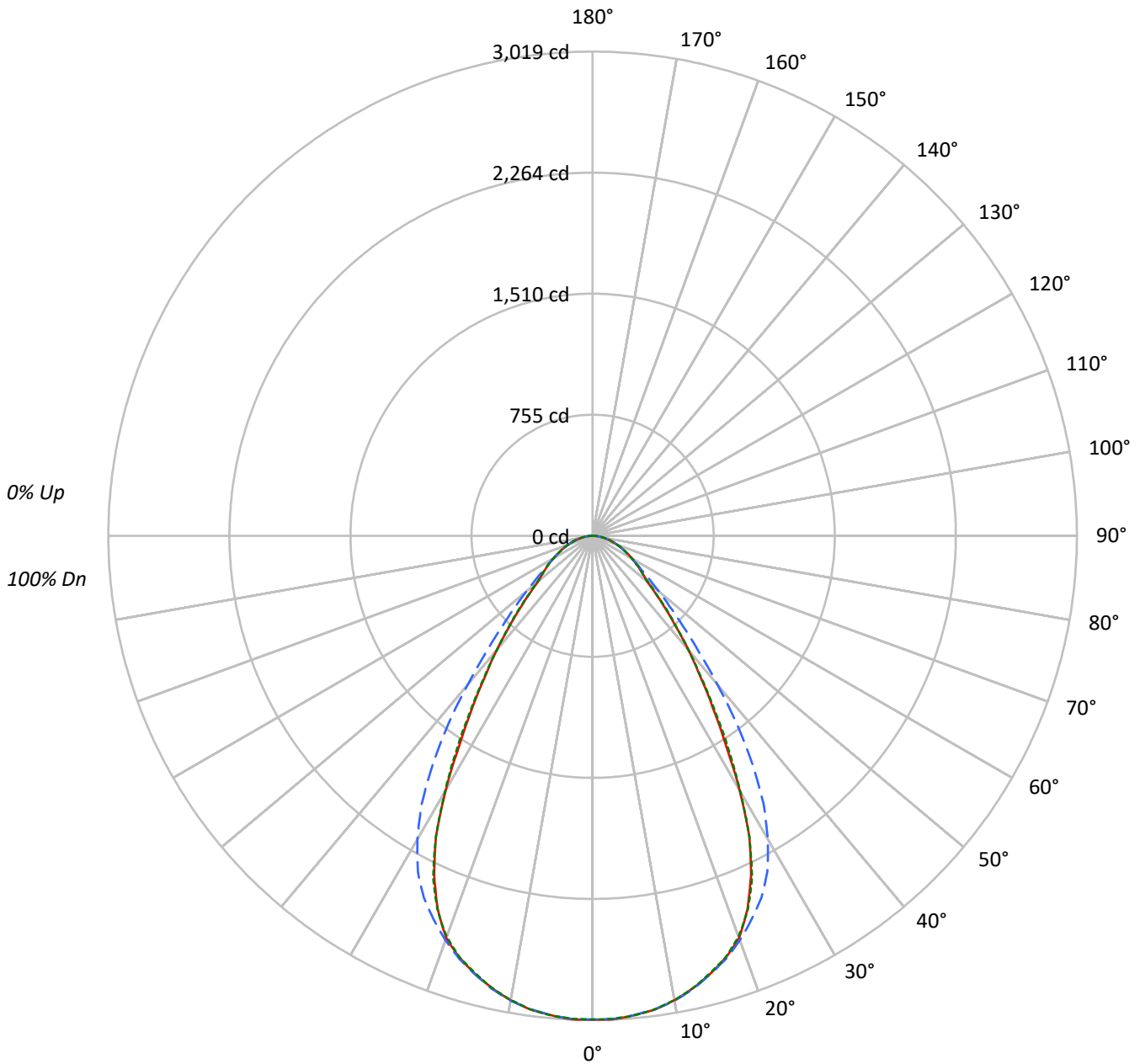
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4377.5 lumens
Efficiency: N/A
Efficacy: 81.1 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 (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					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	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°	292215	292215	292215
5°	291736	291736	291970
10°	289345	289581	289119
15°	283718	283959	283247
20°	275206	276660	274247
25°	249770	266060	251523
30°	205021	244352	205815
35°	154109	205115	156332
40°	117369	152943	117078
45°	87654	108533	89271
50°	66765	80887	68167
55°	60178	63336	60178
60°	54948	54502	54502
65°	49971	49971	49971
70°	46480	45801	45801
75°	42969	42109	42969
80°	39219	37936	39219
85°	33901	33901	33901

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 108533 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	284.5	6.5
10°-20°	796.4	18.2
20°-30°	1095.3	25.0
30°-40°	932.4	21.3
40°-50°	563.2	12.9
50°-60°	331.9	7.6
60°-70°	217.7	5.0
70°-80°	120.7	2.8
80°-90°	35.3	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°	2176.2	49.7
0°-40°	3108.6	71.0
0°-60°	4003.8	91.5
0°-90°	4377.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4377.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3016	3016	3016	3016	3016	
5°	3000	3002	3000	2998	3002	285
15°	2829	2836	2831	2829	2824	796
25°	2337	2409	2489	2414	2353	1056
35°	1303	1434	1734	1474	1322	825
45°	640	708	792	715	652	503
55°	356	363	375	363	356	320
65°	218	220	218	218	218	218
75°	115	115	112	112	115	122
85°	30	30	30	30	30	35
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3016.4	3016.4	3016.4	3016.4	3016.4
2.5°	3018.8	3011.7	3014.1	3011.7	3014.1
5°	3000.0	3002.4	3000.0	2997.7	3002.4
7.5°	2978.9	2976.6	2976.6	2974.2	2978.9
10°	2941.4	2936.7	2943.8	2939.1	2939.1
12.5°	2889.9	2896.9	2894.5	2894.5	2889.9
15°	2828.9	2836.0	2831.3	2828.9	2824.2
17.5°	2758.6	2763.3	2765.6	2756.3	2756.3
20°	2669.5	2678.9	2683.6	2667.2	2660.2
22.5°	2521.9	2564.1	2589.9	2561.7	2526.6
25°	2336.7	2409.4	2489.1	2414.1	2353.1
27.5°	2114.1	2217.2	2360.2	2233.6	2114.1
30°	1832.8	1985.2	2184.4	2001.6	1839.9
32.5°	1542.2	1703.9	1982.8	1732.0	1575.0
35°	1303.1	1434.4	1734.4	1474.2	1321.9
37.5°	1096.9	1209.4	1474.2	1235.2	1108.6
40°	928.1	1017.2	1209.4	1028.9	925.8
42.5°	766.4	850.8	979.7	862.5	775.8
45°	639.8	707.8	792.2	714.8	651.6
47.5°	532.0	588.3	649.2	588.3	539.1
50°	443.0	487.5	536.7	487.5	452.3
52.5°	396.1	410.2	443.0	412.5	396.1
55°	356.3	363.3	375.0	363.3	356.3
57.5°	318.8	323.4	321.1	321.1	318.8
60°	283.6	285.9	281.3	283.6	281.3
62.5°	250.8	250.8	246.1	250.8	248.4
65°	218.0	220.3	218.0	218.0	218.0
67.5°	189.8	189.8	187.5	189.8	189.8
70°	164.1	164.1	161.7	164.1	161.7
72.5°	138.3	138.3	135.9	135.9	135.9
75°	114.8	114.8	112.5	112.5	114.8
77.5°	91.4	91.4	89.1	91.4	91.4
80°	70.3	70.3	68.0	70.3	70.3
82.5°	49.2	49.2	49.2	51.6	51.6
85°	30.5	30.5	30.5	30.5	30.5
87.5°	14.1	14.1	14.1	14.1	16.4
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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