

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: P837485

Luminaire Tested: HCSQ435D010-HM43040835-41SQLWW

Issue Date: 5/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P837485
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2309-165-5)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 5/17/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCSQ435D010-HM43040835-41SQLWW
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, LENSED WALLWASH TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 3500K CCT
Ballast/Driver: -

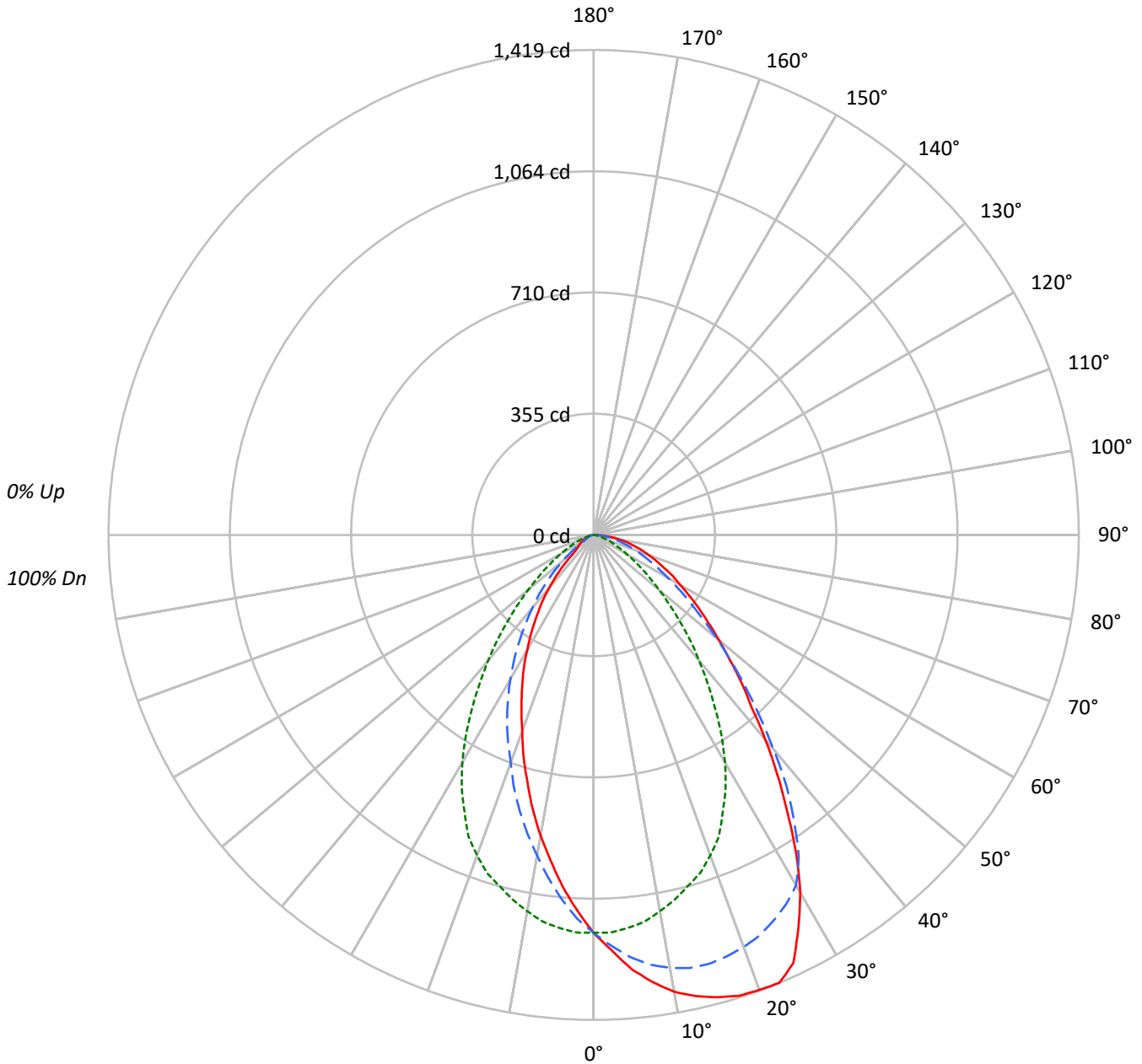
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1883.3 lumens
Efficiency: N/A
Efficacy: 55.4 lumens/watt
Spacing Criteria (0/90/45): 1.07 / 1.04 / 1.12
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					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	107	104	101	109	105	102	99	101	99	96	97	95	93	94	92	91	89								
2	103	97	91	87	101	95	90	86	92	87	84	88	85	82	86	83	80	78								
3	96	87	81	76	94	86	80	75	83	78	74	81	76	72	78	74	71	69								
4	89	79	72	67	87	78	71	66	76	70	65	74	69	64	72	67	64	62								
5	83	72	65	59	81	71	64	59	69	63	58	68	62	58	66	61	57	55								
6	78	66	59	53	76	66	58	53	64	57	53	62	57	52	61	56	52	50								
7	73	61	54	48	71	60	53	48	59	53	48	58	52	48	56	51	47	45								
8	68	57	49	44	67	56	49	44	55	48	44	54	48	43	52	47	43	42								
9	64	53	45	40	63	52	45	40	51	45	40	50	44	40	49	44	40	38								
10	61	49	42	37	60	48	42	37	48	41	37	47	41	37	46	41	37	35								

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	112792	112792	112792	112792	112792
5°	123988	120614	112260	104072	100532
10°	133537	126553	109987	93737	87893
15°	140460	130351	106671	83815	75029
20°	146082	132289	102835	73041	63000
25°	147754	133100	95506	64081	52964
30°	135230	132456	85910	54499	43414
35°	116607	120900	73240	44727	34379
40°	98792	103383	60563	35296	25684
45°	83722	85750	48417	26250	16523
50°	72176	70443	37587	17678	9962
55°	63590	58016	28729	9762	8918
60°	56633	48631	21448	5444	8002
65°	51874	41651	15908	4928	7198
70°	48180	36029	11698	4674	7024
75°	45140	31516	8047	4342	6176
80°	43292	27615	5523	4630	5523
85°	42238	23898	3668	3668	3668

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 22.5°

Vertical Angle: 45°

Luminance: 87106 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	109.2	5.8
10°-20°	300.6	16.0
20°-30°	420.3	22.3
30°-40°	410.8	21.8
40°-50°	298.1	15.8
50°-60°	179.7	9.5
60°-70°	101.0	5.4
70°-80°	50.0	2.7
80°-90°	13.7	0.7
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°	830.0	44.1
0°-40°	1240.8	65.9
0°-60°	1718.6	91.3
0°-90°	1883.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1883.3	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1164	1164	1164	1164	1164	
5°	1275	1240	1154	1070	1034	124
15°	1400	1300	1064	836	748	397
25°	1382	1245	894	600	496	623
35°	986	1022	619	378	291	617
45°	611	626	353	192	121	474
55°	376	344	170	58	53	339
65°	226	182	69	22	31	227
75°	121	84	22	12	16	130
85°	38	22	3	3	3	42
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	1164.3	1164.3	1164.3	1164.3	1164.3	1164.3	1164.3	1164.3	1164.3
2.5°	1217.2	1213.9	1204.0	1184.1	1164.3	1141.2	1123.0	1109.8	1099.9
5°	1275.0	1268.4	1240.3	1199.0	1154.4	1109.8	1070.2	1047.1	1033.8
7.5°	1319.6	1308.0	1268.4	1210.6	1141.2	1073.5	1012.4	976.0	961.2
10°	1357.5	1337.7	1286.5	1208.9	1118.1	1028.9	952.9	910.0	893.5
12.5°	1382.3	1360.8	1298.1	1207.3	1093.3	984.3	895.1	839.0	822.5
15°	1400.5	1374.1	1299.7	1194.0	1063.6	938.1	835.7	769.6	748.1
17.5°	1413.7	1377.4	1293.1	1179.2	1037.1	890.2	774.6	703.5	682.1
20°	1417.0	1377.4	1283.2	1157.7	997.5	842.3	708.5	637.5	611.1
22.5°	1418.6	1372.4	1268.4	1131.3	956.2	787.8	654.0	579.7	551.6
25°	1382.3	1355.9	1245.2	1086.7	893.5	728.3	599.5	518.6	495.5
27.5°	1296.4	1294.8	1218.8	1027.2	835.7	663.9	543.3	465.7	444.3
30°	1208.9	1210.6	1184.1	961.2	768.0	602.8	487.2	411.2	388.1
32.5°	1101.6	1118.1	1116.4	886.9	695.3	545.0	432.7	361.7	338.6
35°	986.0	1015.7	1022.3	802.6	619.3	478.9	378.2	313.8	290.7
37.5°	881.9	911.6	926.5	728.3	548.3	421.1	327.0	270.8	247.7
40°	781.2	805.9	817.5	642.4	478.9	361.7	279.1	226.3	203.1
42.5°	683.7	720.1	716.8	569.8	417.8	313.8	236.2	183.3	160.2
45°	611.1	635.8	625.9	493.8	353.4	264.2	191.6	142.0	120.6
47.5°	538.4	556.6	541.7	429.4	298.9	218.0	155.2	104.0	80.9
50°	478.9	487.2	467.4	365.0	249.4	178.4	117.3	69.4	66.1
52.5°	422.8	427.7	399.7	310.5	206.4	143.7	85.9	54.5	57.8
55°	376.5	374.9	343.5	262.6	170.1	110.7	57.8	49.5	52.8
57.5°	332.0	327.0	295.6	218.0	138.7	85.9	34.7	42.9	46.2
60°	292.3	287.4	251.0	180.0	110.7	64.4	28.1	38.0	41.3
62.5°	260.9	249.4	213.0	148.6	89.2	46.2	24.8	33.0	36.3
65°	226.3	216.3	181.7	120.6	69.4	33.0	21.5	28.1	31.4
67.5°	198.2	186.6	153.6	99.1	56.2	23.1	19.8	24.8	28.1
70°	170.1	160.2	127.2	79.3	41.3	14.9	16.5	21.5	24.8
72.5°	147.0	135.4	105.7	62.8	31.4	11.6	14.9	18.2	19.8
75°	120.6	110.7	84.2	47.9	21.5	9.9	11.6	14.9	16.5
77.5°	100.7	90.8	66.1	36.3	14.9	8.3	9.9	13.2	13.2
80°	77.6	69.4	49.5	24.8	9.9	5.0	8.3	9.9	9.9
82.5°	56.2	49.5	34.7	16.5	5.0	5.0	5.0	6.6	6.6
85°	38.0	33.0	21.5	9.9	3.3	3.3	3.3	3.3	3.3
87.5°	21.5	16.5	9.9	3.3	0.0	0.0	0.0	0.0	0.0
90°	0.0	0.0	0.0	0.0	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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