

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: P837505

Luminaire Tested: HCSQ435D010-HM43040935-41SQLWW

Issue Date: 5/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P837505
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-HM43040935-41SQLWW
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, LENSED WALLWASH TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 3500K CCT
Ballast/Driver: -

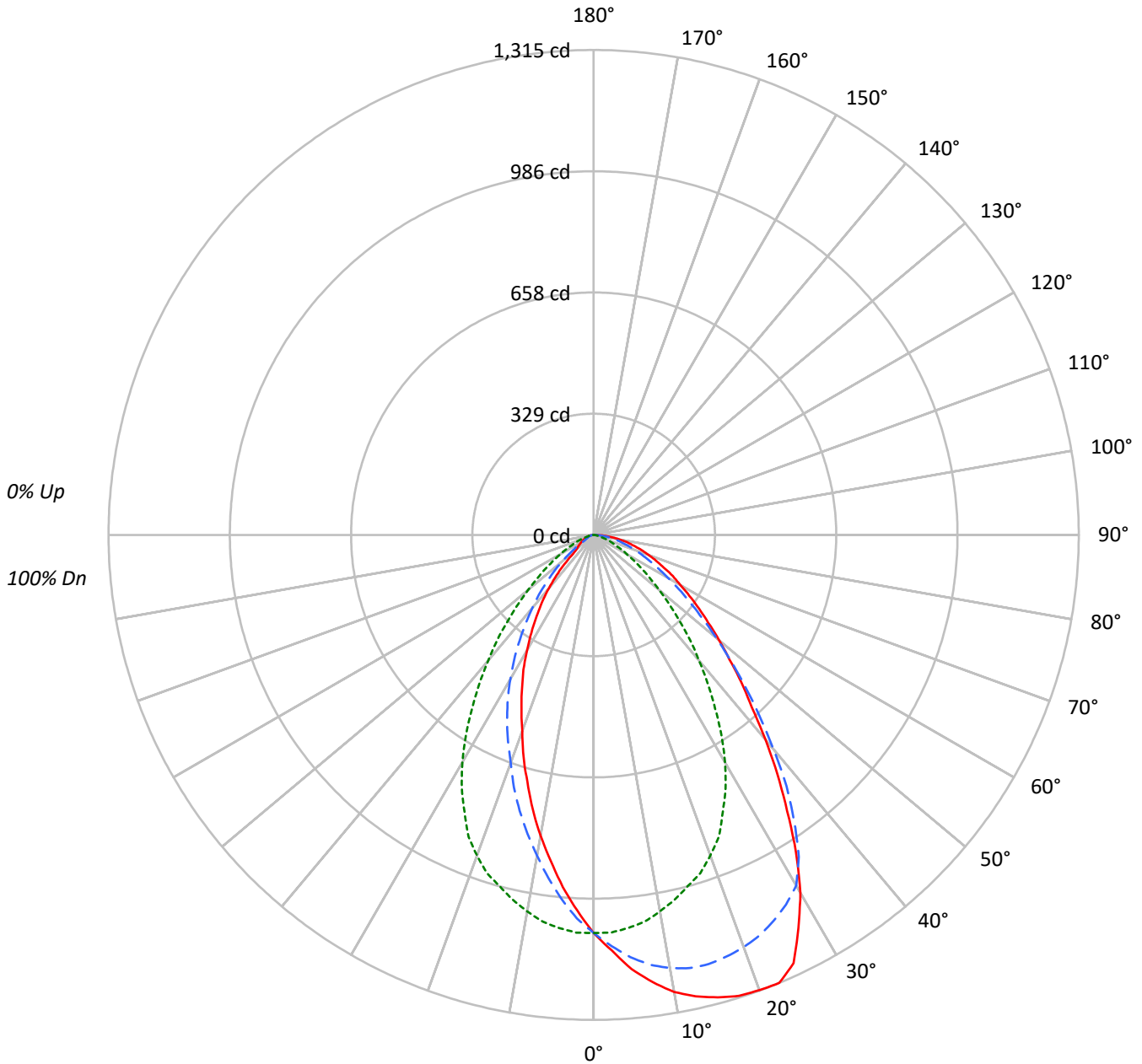
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1745.8 lumens
Efficiency: N/A
Efficacy: 51.3 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										
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	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°	104558	104558	104558	104558	104558
5°	114934	111803	104062	96468	93200
10°	123789	117316	101951	86890	81470
15°	130200	120833	98879	77687	69553
20°	135412	122629	95330	67711	58392
25°	136969	123383	88526	59399	49095
30°	125353	122791	79635	50517	40248
35°	108092	112066	67895	41463	31860
40°	91571	95833	56149	32716	23813
45°	77598	79489	44882	24332	15317
50°	66916	65303	34844	16382	9224
55°	58962	53777	26635	9053	8276
60°	52506	45086	19879	5038	7421
65°	48069	38602	14739	4562	6670
70°	44668	33395	10848	4334	6515
75°	41847	29233	7449	4005	5727
80°	40168	25607	5133	4296	5133
85°	39126	22119	3446	3446	3446

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 22.5°
 Vertical Angle: 45°
 Luminance: 80749 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	101.2	5.8
10°-20°	278.6	16.0
20°-30°	389.6	22.3
30°-40°	380.8	21.8
40°-50°	276.3	15.8
50°-60°	166.6	9.5
60°-70°	93.7	5.4
70°-80°	46.4	2.7
80°-90°	12.7	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°	769.4	44.1
0°-40°	1150.2	65.9
0°-60°	1593.1	91.3
0°-90°	1745.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1745.8	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1079	1079	1079	1079	1079	
5°	1182	1150	1070	992	958	115
15°	1298	1205	986	775	694	368
25°	1281	1154	828	556	459	578
35°	914	948	574	351	269	572
45°	566	580	328	178	112	439
55°	349	318	158	54	49	314
65°	210	168	64	20	29	210
75°	112	78	20	11	15	120
85°	35	20	3	3	3	39
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°	1079.3	1079.3	1079.3	1079.3	1079.3	1079.3	1079.3	1079.3	1079.3
2.5°	1128.3	1125.2	1116.0	1097.7	1079.3	1057.9	1041.0	1028.8	1019.6
5°	1181.9	1175.7	1149.7	1111.5	1070.1	1028.8	992.0	970.6	958.4
7.5°	1223.2	1212.5	1175.7	1122.2	1057.9	995.1	938.5	904.8	891.0
10°	1258.4	1240.0	1192.6	1120.6	1036.4	953.8	883.3	843.5	828.2
12.5°	1281.4	1261.5	1203.3	1119.1	1013.5	912.4	829.8	777.7	762.4
15°	1298.2	1273.7	1204.8	1106.9	985.9	869.6	774.6	713.4	693.5
17.5°	1310.5	1276.8	1198.7	1093.1	961.4	825.2	718.0	652.2	632.3
20°	1313.5	1276.8	1189.5	1073.2	924.7	780.8	656.8	590.9	566.4
22.5°	1315.1	1272.2	1175.7	1048.7	886.4	730.3	606.2	537.4	511.3
25°	1281.4	1256.9	1154.3	1007.3	828.2	675.1	555.7	480.7	459.3
27.5°	1201.8	1200.2	1129.8	952.2	774.6	615.4	503.7	431.7	411.8
30°	1120.6	1122.2	1097.7	891.0	711.9	558.8	451.6	381.2	359.8
32.5°	1021.1	1036.4	1034.9	822.1	644.5	505.2	401.1	335.3	313.8
35°	914.0	941.5	947.6	744.0	574.1	444.0	350.6	290.9	269.4
37.5°	817.5	845.1	858.8	675.1	508.3	390.4	303.1	251.1	229.6
40°	724.1	747.1	757.8	595.5	444.0	335.3	258.7	209.7	188.3
42.5°	633.8	667.5	664.4	528.2	387.3	290.9	218.9	169.9	148.5
45°	566.4	589.4	580.2	457.7	327.6	244.9	177.6	131.7	111.8
47.5°	499.1	515.9	502.1	398.0	277.1	202.1	143.9	96.4	75.0
50°	444.0	451.6	433.3	338.3	231.2	165.3	108.7	64.3	61.2
52.5°	391.9	396.5	370.5	287.8	191.4	133.2	79.6	50.5	53.6
55°	349.1	347.5	318.4	243.4	157.7	102.6	53.6	45.9	49.0
57.5°	307.7	303.1	274.0	202.1	128.6	79.6	32.1	39.8	42.9
60°	271.0	266.4	232.7	166.9	102.6	59.7	26.0	35.2	38.3
62.5°	241.9	231.2	197.5	137.8	82.7	42.9	23.0	30.6	33.7
65°	209.7	200.6	168.4	111.8	64.3	30.6	19.9	26.0	29.1
67.5°	183.7	173.0	142.4	91.9	52.1	21.4	18.4	23.0	26.0
70°	157.7	148.5	117.9	73.5	38.3	13.8	15.3	19.9	23.0
72.5°	136.3	125.5	98.0	58.2	29.1	10.7	13.8	16.8	18.4
75°	111.8	102.6	78.1	44.4	19.9	9.2	10.7	13.8	15.3
77.5°	93.4	84.2	61.2	33.7	13.8	7.7	9.2	12.2	12.2
80°	72.0	64.3	45.9	23.0	9.2	4.6	7.7	9.2	9.2
82.5°	52.1	45.9	32.1	15.3	4.6	4.6	4.6	6.1	6.1
85°	35.2	30.6	19.9	9.2	3.1	3.1	3.1	3.1	3.1
87.5°	19.9	15.3	9.2	3.1	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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— 0°-180° - - 45°-225° - - - - 90°-270°

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