

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: P837515

Luminaire Tested: HCSQ440D010-HM43040827-41SQLWW

Issue Date: 5/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P837515
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: HCSQ440D010-HM43040827-41SQLWW
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, LENSED WALLWASH TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 2700K CCT
Ballast/Driver: -

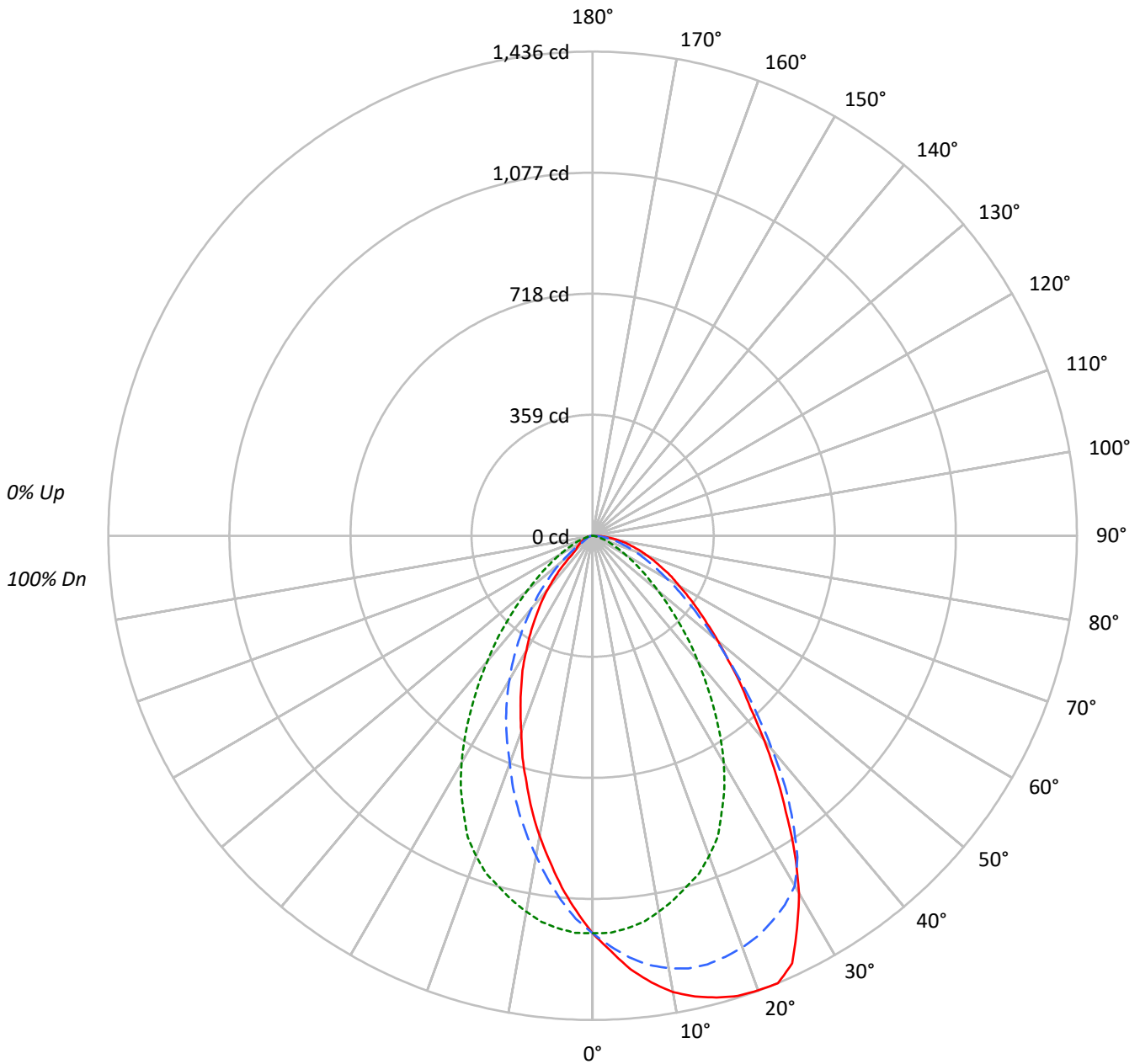
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1906.7 lumens
Efficiency: N/A
Efficacy: 46.5 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): 41
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

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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				100				
1	111	107	104	101	109	105	102	99	101	99	96	97	95	93	94	92	91	89				89				
2	103	97	91	87	101	95	90	86	92	87	84	88	85	82	86	83	80	78				78				
3	96	87	81	76	94	86	80	75	83	78	74	81	76	72	78	74	71	69				69				
4	89	79	72	67	87	78	71	66	76	70	65	74	69	64	72	67	64	62				62				
5	83	72	65	59	81	71	64	59	69	63	58	68	62	58	66	61	57	55				55				
6	78	66	59	53	76	66	58	53	64	57	53	62	57	52	61	56	52	50				50				
7	73	61	54	48	71	60	53	48	59	53	48	58	52	48	56	51	47	45				45				
8	68	57	49	44	67	56	49	44	55	48	44	54	48	43	52	47	43	42				42				
9	64	53	45	40	63	52	45	40	51	45	40	50	44	40	49	44	40	38				38				
10	61	49	42	37	60	48	42	37	48	41	37	47	41	37	46	41	37	35				35				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	114197	114197	114197	114197	114197
5°	125524	122111	113661	105365	101787
10°	135200	128127	111355	94907	88985
15°	142205	131975	107995	84858	75962
20°	147897	133938	104113	73948	63783
25°	149593	134756	96693	64882	53616
30°	136908	134111	86973	55182	43951
35°	118050	122402	74151	45283	34805
40°	100019	104673	61321	35738	26013
45°	84763	86819	49020	26578	16728
50°	73080	71317	38055	17889	10083
55°	64384	58742	29084	9880	9036
60°	57350	49251	21700	5503	8099
65°	52516	42155	16092	4974	7289
70°	48775	36454	11840	4730	7109
75°	45702	31928	8122	4379	6251
80°	43850	28006	5579	4686	5579
85°	42794	24120	3668	3668	3668

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 22.5°
 Vertical Angle: 45°
 Luminance: 88189 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	110.5	5.8
10°-20°	304.3	16.0
20°-30°	425.5	22.3
30°-40°	415.9	21.8
40°-50°	301.8	15.8
50°-60°	181.9	9.5
60°-70°	102.3	5.4
70°-80°	50.6	2.7
80°-90°	13.8	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°	840.3	44.1
0°-40°	1256.2	65.9
0°-60°	1740.0	91.3
0°-90°	1906.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1906.7	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1179	1179	1179	1179	1179	
5°	1291	1256	1169	1084	1047	126
15°	1418	1316	1077	846	757	402
25°	1400	1261	905	607	502	631
35°	998	1035	627	383	294	625
45°	619	634	358	194	122	480
55°	381	348	172	58	54	343
65°	229	184	70	22	32	229
75°	122	85	22	12	17	131
85°	38	22	3	3	3	43
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°	1178.8	1178.8	1178.8	1178.8	1178.8	1178.8	1178.8	1178.8	1178.8
2.5°	1232.3	1229.0	1218.9	1198.9	1178.8	1155.4	1137.0	1123.6	1113.6
5°	1290.8	1284.1	1255.7	1213.9	1168.8	1123.6	1083.5	1060.1	1046.7
7.5°	1336.0	1324.3	1284.1	1225.6	1155.4	1086.8	1025.0	988.2	973.1
10°	1374.4	1354.4	1302.5	1223.9	1132.0	1041.7	964.8	921.3	904.6
12.5°	1399.5	1377.8	1314.2	1222.3	1106.9	996.5	906.3	849.4	832.7
15°	1417.9	1391.2	1315.9	1208.9	1076.8	949.7	846.1	779.2	757.4
17.5°	1431.3	1394.5	1309.2	1193.9	1050.1	901.2	784.2	712.3	690.6
20°	1434.6	1394.5	1299.2	1172.1	1009.9	852.8	717.3	645.4	618.7
22.5°	1436.3	1389.5	1284.1	1145.4	968.1	797.6	662.1	586.9	558.5
25°	1399.5	1372.8	1260.7	1100.2	904.6	737.4	607.0	525.0	501.6
27.5°	1312.6	1310.9	1234.0	1040.0	846.1	672.2	550.1	471.5	449.8
30°	1223.9	1225.6	1198.9	973.1	777.5	610.3	493.3	416.3	392.9
32.5°	1115.3	1132.0	1130.3	897.9	703.9	551.8	438.1	366.2	342.8
35°	998.2	1028.3	1035.0	812.6	627.0	484.9	382.9	317.7	294.3
37.5°	892.9	923.0	938.0	737.4	555.1	426.4	331.1	274.2	250.8
40°	790.9	816.0	827.7	650.4	484.9	366.2	282.6	229.1	205.7
42.5°	692.2	729.0	725.7	576.9	423.0	317.7	239.1	185.6	162.2
45°	618.7	643.7	633.7	499.9	357.8	267.5	194.0	143.8	122.1
47.5°	545.1	563.5	548.4	434.7	302.6	220.7	157.2	105.3	81.9
50°	484.9	493.3	473.2	369.5	252.5	180.6	118.7	70.2	66.9
52.5°	428.0	433.1	404.6	314.3	209.0	145.5	86.9	55.2	58.5
55°	381.2	379.6	347.8	265.9	172.2	112.0	58.5	50.2	53.5
57.5°	336.1	331.1	299.3	220.7	140.5	86.9	35.1	43.5	46.8
60°	296.0	290.9	254.2	182.3	112.0	65.2	28.4	38.5	41.8
62.5°	264.2	252.5	215.7	150.5	90.3	46.8	25.1	33.4	36.8
65°	229.1	219.0	183.9	122.1	70.2	33.4	21.7	28.4	31.8
67.5°	200.6	188.9	155.5	100.3	56.9	23.4	20.1	25.1	28.4
70°	172.2	162.2	128.7	80.3	41.8	15.0	16.7	21.7	25.1
72.5°	148.8	137.1	107.0	63.5	31.8	11.7	15.0	18.4	20.1
75°	122.1	112.0	85.3	48.5	21.7	10.0	11.7	15.0	16.7
77.5°	102.0	92.0	66.9	36.8	15.0	8.4	10.0	13.4	13.4
80°	78.6	70.2	50.2	25.1	10.0	5.0	8.4	10.0	10.0
82.5°	56.9	50.2	35.1	16.7	5.0	5.0	5.0	6.7	6.7
85°	38.5	33.4	21.7	10.0	3.3	3.3	3.3	3.3	3.3
87.5°	21.7	16.7	10.0	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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