

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: P837329

Luminaire Tested: HCSQ415D010-HM40525840-41SQH

Issue Date: 5/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P837329
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2309-165-2)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 5/17/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCSQ415D010-HM40525840-41SQH
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, HAZE TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 4000K CCT
Ballast/Driver: -

Summary

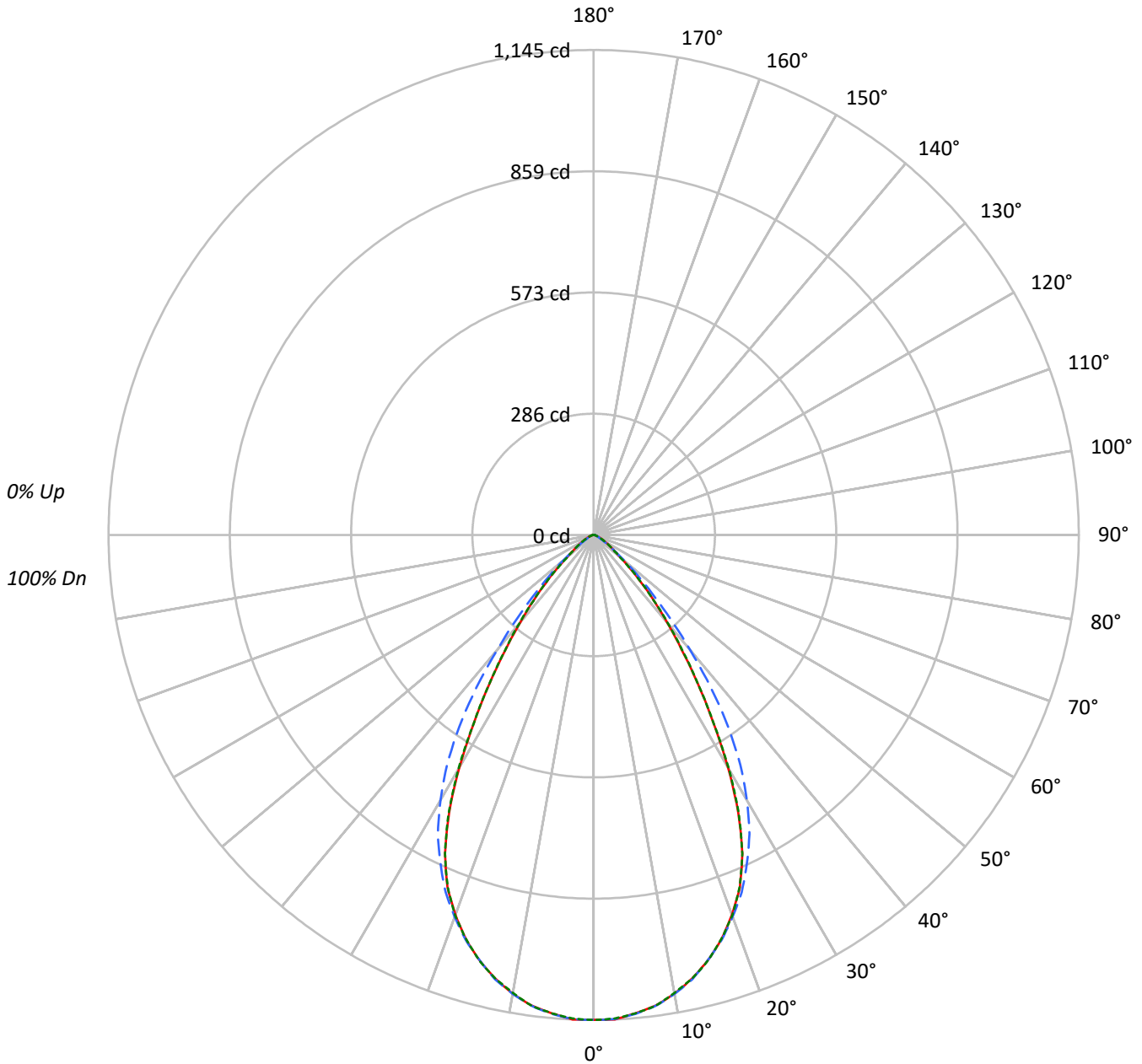
Lumens per Lamp: N/A
Luminaire Lumens: 1287.2 lumens
Efficiency: N/A
Efficacy: 91.9 lumens/watt
Spacing Criteria (0/90/45): 0.98 / 0.98 / 1.01
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 14
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									
RC	80									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	113	110	107	105	110	108	105	103	104	102	100	100	98	97	96	95	94	92			92																
2	107	101	97	93	104	100	95	92	96	93	90	93	90	88	90	88	86	85			85																
3	101	93	88	84	98	92	87	83	89	85	82	87	83	80	85	82	79	77			77																
4	95	87	80	76	93	85	80	75	83	78	74	81	77	74	79	76	73	71			71																
5	89	80	74	69	88	79	73	69	77	72	68	76	71	68	74	70	67	65			65																
6	84	75	68	63	83	74	68	63	72	67	63	71	66	62	69	65	62	60			60																
7	80	70	63	59	78	69	63	58	68	62	58	66	61	58	65	61	57	56			56																
8	75	65	59	54	74	65	58	54	63	58	54	62	57	54	61	57	53	52			52																
9	72	61	55	50	70	61	54	50	60	54	50	59	54	50	58	53	50	48			48																
10	68	57	51	47	67	57	51	47	56	51	47	55	50	47	55	50	46	45			45																

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	110932	110932	110932
5°	110247	110393	110247
10°	108187	108256	107981
15°	104345	104274	104415
20°	98361	98876	98577
25°	88751	91477	88751
30°	70887	80932	71446
35°	50605	65494	50688
40°	34170	44540	34701
45°	21701	26359	21797
50°	12358	14076	11936
55°	8124	6807	8006
60°	5619	3972	5483
65°	3897	2911	3897
70°	2804	2209	2804
75°	1871	1871	1871
80°	1172	1562	1562
85°	1556	1556	1556

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 26359 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	107.3	8.3
10°-20°	291.7	22.7
20°-30°	381.9	29.7
30°-40°	300.2	23.3
40°-50°	140.2	10.9
50°-60°	43.5	3.4
60°-70°	15.5	1.2
70°-80°	5.5	0.4
80°-90°	1.5	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°	780.9	60.7
0°-40°	1081.0	84.0
0°-60°	1264.7	98.3
0°-90°	1287.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1287.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1145	1145	1145	1145	1145	
5°	1134	1134	1135	1137	1134	107
15°	1040	1040	1040	1040	1041	291
25°	830	842	856	842	830	373
35°	428	467	554	472	429	270
45°	158	178	192	174	159	126
55°	48	45	40	45	47	45
65°	17	16	13	15	17	18
75°	5	5	5	5	5	6
85°	1	1	1	1	1	1
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1145.1	1145.1	1145.1	1145.1	1145.1
2.5°	1145.1	1143.6	1144.4	1142.9	1142.9
5°	1133.7	1134.5	1135.2	1136.6	1133.7
7.5°	1121.0	1122.4	1121.7	1121.7	1121.7
10°	1099.8	1100.5	1100.5	1100.5	1097.7
12.5°	1072.9	1074.3	1075.0	1072.9	1072.9
15°	1040.4	1040.4	1039.7	1040.4	1041.1
17.5°	1001.5	1003.6	1003.6	1001.5	1000.8
20°	954.1	957.6	959.1	956.2	956.2
22.5°	901.1	904.6	913.1	906.0	900.3
25°	830.3	841.6	855.8	842.4	830.3
27.5°	739.1	763.8	796.4	768.1	741.2
30°	633.7	674.0	723.5	676.1	638.7
32.5°	526.2	571.5	644.3	575.0	526.2
35°	427.9	466.8	553.8	472.5	428.6
37.5°	340.2	377.7	454.1	381.9	345.1
40°	270.2	300.6	352.2	299.9	274.4
42.5°	210.8	232.7	266.6	232.0	210.1
45°	158.4	177.5	192.4	174.0	159.1
47.5°	116.7	129.4	137.9	127.3	113.9
50°	82.0	91.2	93.4	89.1	79.2
52.5°	61.5	61.5	62.2	60.8	60.1
55°	48.1	45.3	40.3	44.6	47.4
57.5°	37.5	34.7	28.3	33.2	36.8
60°	29.0	26.2	20.5	25.5	28.3
62.5°	22.6	19.8	16.3	19.8	21.9
65°	17.0	15.6	12.7	14.9	17.0
67.5°	12.7	11.3	9.9	11.3	12.7
70°	9.9	9.2	7.8	8.5	9.9
72.5°	7.1	6.4	6.4	6.4	7.1
75°	5.0	5.0	5.0	5.0	5.0
77.5°	3.5	3.5	3.5	3.5	3.5
80°	2.1	2.1	2.8	2.8	2.8
82.5°	1.4	1.4	2.1	2.1	2.1
85°	1.4	1.4	1.4	1.4	1.4
87.5°	0.7	0.7	0.7	1.4	1.4
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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