

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: P837320

Luminaire Tested: HCSQ415D010-HM40525830-41SQLWW

Issue Date: 5/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P837320
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: HCSQ415D010-HM40525830-41SQLWW
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, LENSED WALLWASH TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 3000K CCT
Ballast/Driver: -

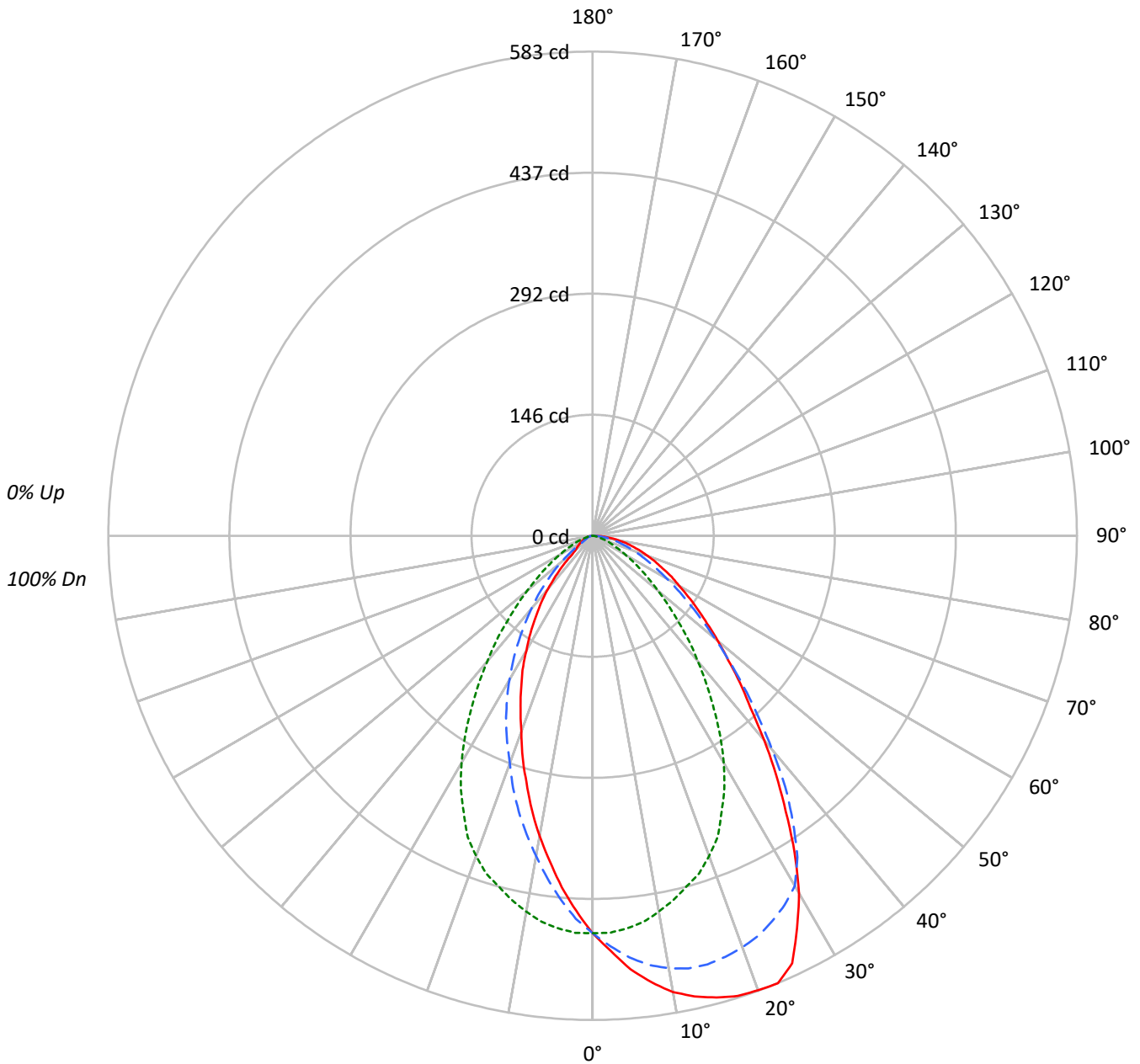
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 774.1 lumens
Efficiency: N/A
Efficacy: 55.3 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): 14
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	100	100	100	100	100		
	1	111	107	104	101	109	105	102	99	101	99	96	97	95	93	94	92	91	89	89	89	89	89	89		
	2	103	97	91	87	101	95	90	86	92	87	84	88	85	82	86	83	80	78	78	78	78	78	78		
	3	96	87	81	76	94	86	80	75	83	78	74	81	76	72	78	74	71	69	69	69	69	69	69		
	4	89	79	72	67	87	78	71	66	76	70	65	74	69	64	72	67	64	62	62	62	62	62	62		
	5	83	72	65	59	81	71	64	59	69	63	58	68	62	58	66	61	57	55	55	55	55	55	55		
	6	78	66	59	53	76	66	58	53	64	57	53	62	57	52	61	56	52	50	50	50	50	50	50		
	7	73	61	54	48	71	60	53	48	59	53	48	58	52	48	56	51	47	45	45	45	45	45	45		
	8	68	57	49	44	67	56	49	44	55	48	44	54	48	43	52	47	43	42	42	42	42	42	42		
	9	64	53	45	40	63	52	45	40	51	45	40	50	44	40	49	44	40	38	38	38	38	38	38		
	10	61	49	42	37	60	48	42	37	48	41	37	47	41	37	46	41	37	35	35	35	35	35	35		

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	46355	46355	46355	46355	46355
5°	50957	49576	46143	42769	41320
10°	54881	52018	45201	38531	36121
15°	57729	53576	43838	34451	30840
20°	60041	54371	42268	30021	25887
25°	60724	54706	39250	26338	21763
30°	55584	54443	35304	22395	17842
35°	47920	49694	30098	18378	14132
40°	40607	42491	24888	14505	10560
45°	34401	35251	19906	10782	6795
50°	29660	28952	15448	7264	4099
55°	26145	23848	11806	4020	3665
60°	23269	19995	8816	2228	3294
65°	21318	17123	6533	2017	2957
70°	19799	14814	4815	1926	2889
75°	18565	12951	3294	1797	2545
80°	17796	11381	2287	1897	2287
85°	17340	9781	1556	1556	1556

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 22.5°
 Vertical Angle: 45°
 Luminance: 35799 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	44.9	5.8
10°-20°	123.5	16.0
20°-30°	172.7	22.3
30°-40°	168.8	21.8
40°-50°	122.5	15.8
50°-60°	73.9	9.5
60°-70°	41.5	5.4
70°-80°	20.6	2.7
80°-90°	5.6	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°	341.1	44.1
0°-40°	510.0	65.9
0°-60°	706.3	91.3
0°-90°	774.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	774.1	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	478	478	478	478	478	
5°	524	510	474	440	425	51
15°	576	534	437	344	308	163
25°	568	512	367	246	204	256
35°	405	420	254	155	120	254
45°	251	257	145	79	50	195
55°	155	141	70	24	22	139
65°	93	75	28	9	13	93
75°	50	35	9	5	7	53
85°	16	9	1	1	1	17
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°	478.5	478.5	478.5	478.5	478.5	478.5	478.5	478.5	478.5
2.5°	500.3	498.9	494.8	486.7	478.5	469.0	461.6	456.1	452.1
5°	524.0	521.3	509.8	492.8	474.5	456.1	439.8	430.3	424.9
7.5°	542.3	537.6	521.3	497.5	469.0	441.2	416.1	401.2	395.0
10°	557.9	549.8	528.8	496.9	459.5	422.9	391.7	374.0	367.2
12.5°	568.1	559.3	533.5	496.2	449.3	404.5	367.9	344.8	338.0
15°	575.6	564.7	534.2	490.8	437.1	385.5	343.5	316.3	307.5
17.5°	581.0	566.1	531.5	484.6	426.3	365.9	318.3	289.2	280.3
20°	582.4	566.1	527.4	475.8	410.0	346.2	291.2	262.0	251.1
22.5°	583.1	564.1	521.3	465.0	393.0	323.8	268.8	238.2	226.7
25°	568.1	557.3	511.8	446.6	367.2	299.3	246.4	213.1	203.6
27.5°	532.8	532.2	500.9	422.2	343.5	272.9	223.3	191.4	182.6
30°	496.9	497.5	486.7	395.0	315.6	247.8	200.2	169.0	159.5
32.5°	452.7	459.5	458.8	364.5	285.8	224.0	177.8	148.7	139.1
35°	405.2	417.4	420.2	329.9	254.5	196.8	155.4	129.0	119.5
37.5°	362.5	374.7	380.8	299.3	225.4	173.1	134.4	111.3	101.8
40°	321.1	331.2	336.0	264.0	196.8	148.7	114.7	93.0	83.5
42.5°	281.0	295.9	294.6	234.2	171.7	129.0	97.1	75.3	65.8
45°	251.1	261.3	257.3	203.0	145.3	108.6	78.7	58.4	49.6
47.5°	221.3	228.7	222.6	176.5	122.9	89.6	63.8	42.8	33.3
50°	196.8	200.2	192.1	150.0	102.5	73.3	48.2	28.5	27.2
52.5°	173.8	175.8	164.3	127.6	84.8	59.1	35.3	22.4	23.8
55°	154.8	154.1	141.2	107.9	69.9	45.5	23.8	20.4	21.7
57.5°	136.4	134.4	121.5	89.6	57.0	35.3	14.3	17.6	19.0
60°	120.1	118.1	103.2	74.0	45.5	26.5	11.5	15.6	17.0
62.5°	107.2	102.5	87.6	61.1	36.7	19.0	10.2	13.6	14.9
65°	93.0	88.9	74.7	49.6	28.5	13.6	8.8	11.5	12.9
67.5°	81.5	76.7	63.1	40.7	23.1	9.5	8.1	10.2	11.5
70°	69.9	65.8	52.3	32.6	17.0	6.1	6.8	8.8	10.2
72.5°	60.4	55.7	43.4	25.8	12.9	4.8	6.1	7.5	8.1
75°	49.6	45.5	34.6	19.7	8.8	4.1	4.8	6.1	6.8
77.5°	41.4	37.3	27.2	14.9	6.1	3.4	4.1	5.4	5.4
80°	31.9	28.5	20.4	10.2	4.1	2.0	3.4	4.1	4.1
82.5°	23.1	20.4	14.3	6.8	2.0	2.0	2.0	2.7	2.7
85°	15.6	13.6	8.8	4.1	1.4	1.4	1.4	1.4	1.4
87.5°	8.8	6.8	4.1	1.4	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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