

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: P837385

Luminaire Tested: HCSQ420D010-HM40525935-41SQLWW

Issue Date: 5/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P837385
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: HCSQ420D010-HM40525935-41SQLWW
Description: HALO COMMERCIAL 4" SQUARE, NEW CONSTRUCTION FRAME, LENSED WALLWASH TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 3500K CCT
Ballast/Driver: -

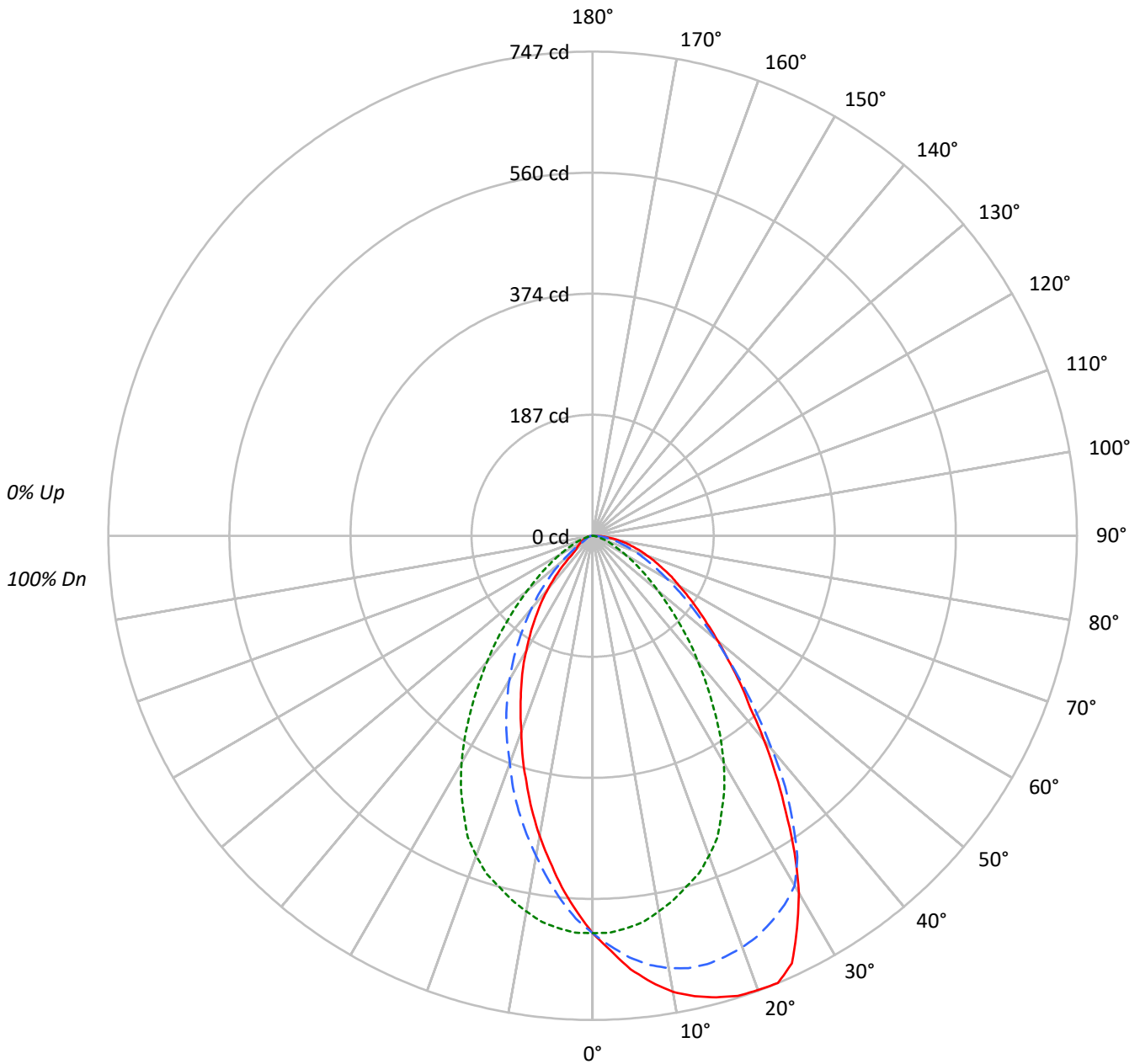
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 991.4 lumens
Efficiency: N/A
Efficacy: 49.6 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): 20
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	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°	59385	59385	59385	59385	59385
5°	65271	63492	59096	54788	52931
10°	70305	66626	57901	49352	46273
15°	73946	68620	56154	44119	39505
20°	76907	69649	54134	38454	33165
25°	77784	70077	50281	33735	27877
30°	71189	69735	45226	28693	22853
35°	61390	63649	38554	23546	18094
40°	52001	54429	31881	18577	13519
45°	44074	45142	25496	13824	8700
50°	37994	37090	19788	9299	5245
55°	33475	30537	15133	5134	4695
60°	29818	25614	11296	2868	4204
65°	27301	21914	8367	2590	3782
70°	25379	18949	6146	2464	3682
75°	23768	16581	4230	2283	3256
80°	22817	14561	2901	2399	2901
85°	22230	12560	1890	1890	1890

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 22.5°
 Vertical Angle: 45°
 Luminance: 45855 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	57.5	5.8
10°-20°	158.2	16.0
20°-30°	221.2	22.3
30°-40°	216.3	21.8
40°-50°	156.9	15.8
50°-60°	94.6	9.5
60°-70°	53.2	5.4
70°-80°	26.3	2.7
80°-90°	7.2	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°	437.0	44.1
0°-40°	653.2	65.9
0°-60°	904.7	91.3
0°-90°	991.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	991.4	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	613	613	613	613	613	
5°	671	653	608	563	544	65
15°	737	684	560	440	394	209
25°	728	656	470	316	261	328
35°	519	538	326	199	153	325
45°	322	330	186	101	64	249
55°	198	181	90	30	28	178
65°	119	96	36	11	16	119
75°	64	44	11	6	9	68
85°	20	11	2	2	2	22
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°	613.0	613.0	613.0	613.0	613.0	613.0	613.0	613.0	613.0
2.5°	640.8	639.0	633.8	623.4	613.0	600.8	591.2	584.3	579.0
5°	671.2	667.7	652.9	631.2	607.7	584.3	563.4	551.2	544.3
7.5°	694.7	688.6	667.7	637.3	600.8	565.1	533.0	513.8	506.0
10°	714.7	704.2	677.3	636.4	588.6	541.7	501.7	479.1	470.4
12.5°	727.7	716.4	683.4	635.6	575.6	518.2	471.2	441.7	433.0
15°	737.3	723.4	684.2	628.6	559.9	493.8	439.9	405.2	393.9
17.5°	744.2	725.1	680.8	620.8	546.0	468.6	407.8	370.4	359.1
20°	746.0	725.1	675.6	609.5	525.1	443.4	373.0	335.6	321.7
22.5°	746.8	722.5	667.7	595.6	503.4	414.7	344.3	305.2	290.4
25°	727.7	713.8	655.6	572.1	470.4	383.4	315.6	273.0	260.8
27.5°	682.5	681.6	641.6	540.8	439.9	349.5	286.0	245.2	233.9
30°	636.4	637.3	623.4	506.0	404.3	317.3	256.5	216.5	204.3
32.5°	579.9	588.6	587.7	466.9	366.0	286.9	227.8	190.4	178.2
35°	519.1	534.7	538.2	422.5	326.0	252.1	199.1	165.2	153.0
37.5°	464.3	479.9	487.8	383.4	288.7	221.7	172.1	142.6	130.4
40°	411.2	424.3	430.4	338.2	252.1	190.4	146.9	119.1	106.9
42.5°	359.9	379.1	377.3	300.0	220.0	165.2	124.3	96.5	84.3
45°	321.7	334.7	329.5	260.0	186.1	139.1	100.9	74.8	63.5
47.5°	283.4	293.0	285.2	226.1	157.4	114.8	81.7	54.8	42.6
50°	252.1	256.5	246.1	192.1	131.3	93.9	61.7	36.5	34.8
52.5°	222.6	225.2	210.4	163.5	108.7	75.6	45.2	28.7	30.4
55°	198.2	197.4	180.8	138.2	89.6	58.3	30.4	26.1	27.8
57.5°	174.8	172.1	155.6	114.8	73.0	45.2	18.3	22.6	24.3
60°	153.9	151.3	132.2	94.8	58.3	33.9	14.8	20.0	21.7
62.5°	137.4	131.3	112.2	78.2	46.9	24.3	13.0	17.4	19.1
65°	119.1	113.9	95.6	63.5	36.5	17.4	11.3	14.8	16.5
67.5°	104.3	98.2	80.9	52.2	29.6	12.2	10.4	13.0	14.8
70°	89.6	84.3	66.9	41.7	21.7	7.8	8.7	11.3	13.0
72.5°	77.4	71.3	55.6	33.0	16.5	6.1	7.8	9.6	10.4
75°	63.5	58.3	44.3	25.2	11.3	5.2	6.1	7.8	8.7
77.5°	53.0	47.8	34.8	19.1	7.8	4.3	5.2	7.0	7.0
80°	40.9	36.5	26.1	13.0	5.2	2.6	4.3	5.2	5.2
82.5°	29.6	26.1	18.3	8.7	2.6	2.6	2.6	3.5	3.5
85°	20.0	17.4	11.3	5.2	1.7	1.7	1.7	1.7	1.7
87.5°	11.3	8.7	5.2	1.7	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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