

LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-State Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

Brand: FAIL-SAFE

Report Number: P517628

Luminaire Tested: HVL12-8-LD4-2HI-30-UNV-C-EDD

Issue Date: 4/27/2021

Tested By:

Approved By:



NVLAP Lab Code: 200050-0

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Test Information

Test Method: LM-79-2019
Report Number: P517628
Test Lab: INNOVATION CENTER
Issue Date: 4/27/2021
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: HVL12-8-LD4-2HI-30-UNV-C-EDD
Description: 8 FOOT, 12 INCH WIDE, HVL LED LUMINAIRE, WITH 3000K, 80 CRI LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 15487.0 lumens
Efficiency: N/A
Efficacy: 87.5 lumens/watt
Spacing Criteria (0/90/45): 1.18 / 1.32 / 1.37
Luminous Opening: Rectangular w/ Sides (W: 1' x L: 8' x H: 0.17')
CIE Type: Direct

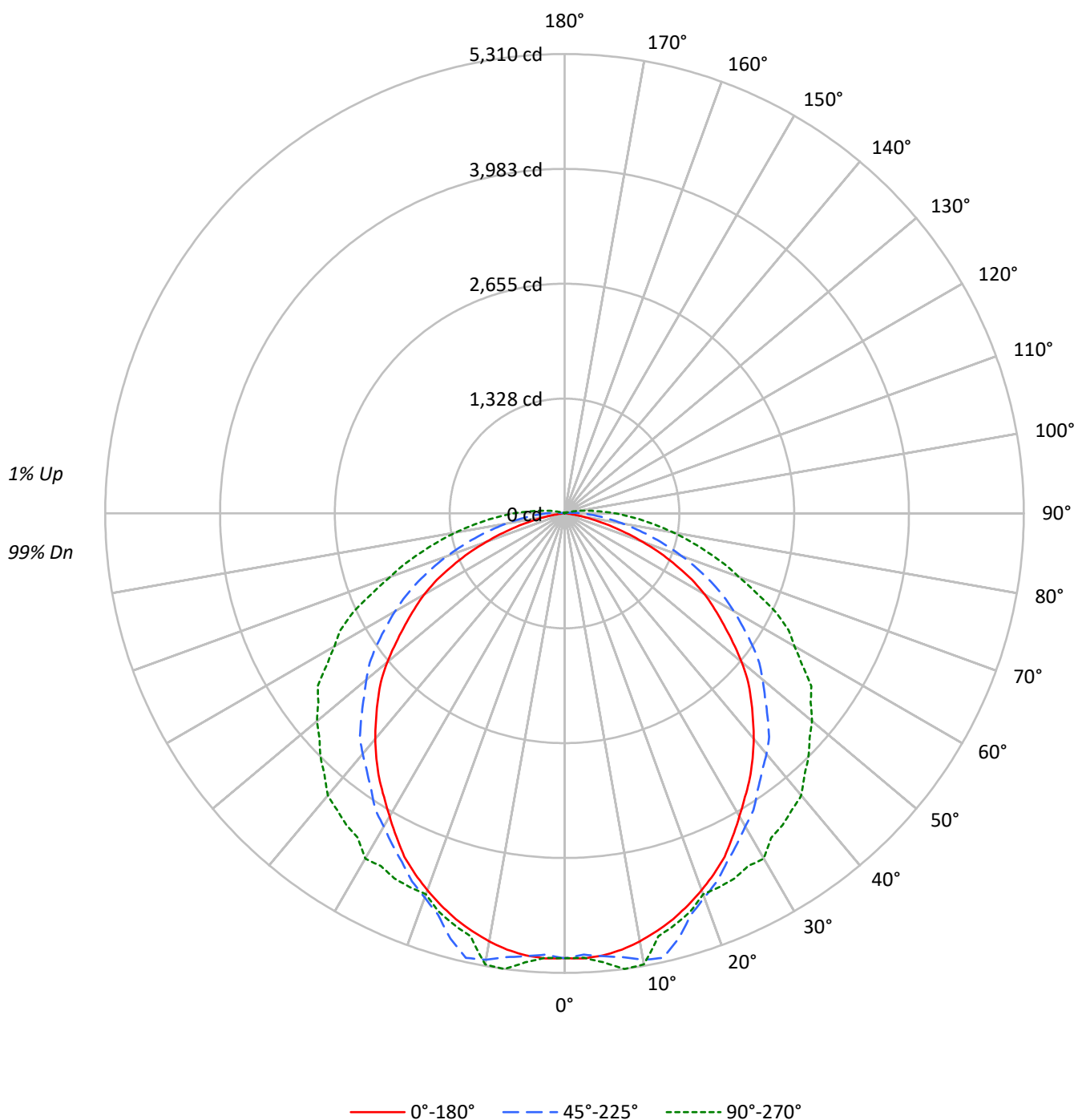
Input Watts (W): 176.9
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	P3	10/30/2015	4/30/2016
Power Meter	IN0214	1/12/2016	1/12/2017
AC Power Source	IN0062	1/12/2016	1/12/2017
DC Power Supply	--	--	--
Room Thermometer	IN0145	1/13/2016	1/13/2017

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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
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10
RCR																				
0	119	119	119	119	116	116	116	116	110	110	110	105	105	105	101	101	101			99
1	108	103	98	94	105	100	96	92	96	92	89	91	89	86	87	85	83			81
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	76	72	69			67
3	89	78	69	63	86	76	68	62	73	66	61	70	64	59	67	62	58			56
4	81	69	60	53	79	67	59	52	65	57	51	62	56	51	60	54	50			47
5	75	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43			41
6	69	55	46	39	67	54	46	39	52	45	39	50	44	38	49	43	38			36
7	64	50	41	35	62	49	41	35	47	40	34	46	39	34	44	38	34			32
8	59	46	37	31	58	45	37	31	43	36	31	42	35	30	41	35	30			28
9	55	42	34	28	54	41	33	28	40	33	28	39	32	27	38	32	27			25
10	52	39	31	25	51	38	30	25	37	30	25	36	29	25	35	29	25			23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6917	6917	6917
5°	6914	6857	6933
10°	6835	6993	7025
15°	6724	6846	6566
20°	6585	6454	6323
25°	6438	6215	6409
30°	6207	6030	6529
35°	6047	5857	6465
40°	5875	5738	6561
45°	5690	5575	6504
50°	5463	5404	6523
55°	5122	5221	6599
60°	4869	4952	6409
65°	4337	4623	6314
70°	3577	4176	5790
75°	2596	3616	5444
80°	1502	3057	5097
85°	601	2487	4796

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°

Vertical Angle: 55°

Luminance: 6599 cd/sqm

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CATALOG NUMBER: HVL12-8-LD4-2HI-30-UNV-C-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	494.1	3.2
10°-20°	1407.1	9.1
20°-30°	2093.5	13.5
30°-40°	2516.4	16.2
40°-50°	2648.7	17.1
50°-60°	2457.7	15.9
60°-70°	1943.2	12.5
70°-80°	1187.0	7.7
80°-90°	517.2	3.3
90°-100°	161.0	1.0
100°-110°	36.2	0.2
110°-120°	14.5	0.1
120°-130°	8.2	0.1
130°-140°	2.2	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°	3994.7	25.8
0°-40°	6511.1	42.0
0°-60°	11617.5	75.0
0°-90°	15264.9	98.6
90°-120°	211.7	1.4
90°-150°	222.1	1.4
90°-180°	222.0	1.4
0°-180°	15487.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5141	5141	5141	5141	5141	
5°	5128	5118	5136	5193	5208	486
15°	4854	5040	5090	4921	4924	1367
25°	4378	4658	4446	4578	4653	2010
35°	3736	3839	3897	4251	4395	2335
45°	3053	3066	3319	3844	3988	2353
55°	2248	2285	2647	3226	3483	2020
65°	1423	1468	1865	2468	2692	1409
75°	538	713	1040	1598	1699	587
85°	48	168	405	786	903	75
90°	1	50	213	498	588	2
95°	1	13	93	273	334	1
105°	1	7	19	53	75	1
115°	1	4	15	24	25	2
125°	1	2	6	16	22	2
135°	2	2	2	5	7	1
145°	0	0	0	0	0	0
155°	0	0	0	0	0	0
165°	0	0	0	0	0	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5140.8	5140.8	5140.8	5140.8	5140.8
2.5°	5147.1	5133.5	5105.2	5132.5	5139.8
5°	5128.3	5117.8	5135.6	5193.2	5207.9
7.5°	5085.3	5125.1	5172.3	5277.0	5310.5
10°	5021.5	5096.9	5238.2	5327.2	5292.7
12.5°	4944.0	5071.7	5261.3	5087.4	5006.8
15°	4853.9	5040.3	5089.5	4920.9	4924.1
17.5°	4748.1	5014.1	4862.3	4858.1	4827.7
20°	4634.0	4926.2	4725.1	4716.7	4684.3
22.5°	4511.5	4809.9	4603.6	4586.9	4674.8
25°	4378.5	4658.1	4445.5	4578.5	4652.8
27.5°	4212.0	4459.1	4313.5	4502.0	4595.2
30°	4043.3	4253.8	4178.4	4441.3	4606.8
32.5°	3885.2	4039.2	4067.4	4418.3	4445.5
35°	3735.5	3839.1	3896.7	4250.7	4395.2
37.5°	3571.0	3599.3	3752.2	4180.5	4319.8
40°	3403.5	3385.7	3630.7	4065.3	4258.0
42.5°	3223.4	3217.1	3501.9	4007.7	4104.1
45°	3052.7	3066.3	3318.7	3844.4	3987.8
47.5°	2877.8	2895.6	3144.8	3665.3	3843.3
50°	2674.6	2697.7	2989.8	3506.1	3735.5
52.5°	2454.7	2498.7	2839.0	3355.3	3586.8
55°	2248.4	2285.1	2647.4	3226.5	3483.1
57.5°	2059.9	2081.9	2449.5	3064.2	3257.9
60°	1874.5	1879.8	2263.1	2884.1	3069.4
62.5°	1662.0	1671.4	2071.4	2671.5	2919.7
65°	1423.2	1468.2	1865.1	2468.3	2692.4
67.5°	1200.1	1278.7	1654.6	2281.9	2399.2
70°	961.4	1094.4	1448.3	2063.0	2145.8
72.5°	742.5	898.5	1236.8	1818.0	1934.2
75°	538.3	713.2	1039.9	1598.1	1698.6
77.5°	362.3	540.4	855.6	1355.1	1488.1
80°	216.8	394.8	691.2	1130.0	1279.7
82.5°	111.0	264.9	536.2	947.7	1081.8
85°	48.2	167.6	405.3	786.5	902.7
87.5°	13.6	95.3	298.5	635.7	734.1
90°	1.0	50.3	212.6	498.5	587.5
92.5°	1.0	24.1	149.8	377.0	445.1
95°	1.0	12.6	93.2	273.3	334.1
97.5°	1.0	7.3	56.6	193.7	245.1
100°	1.0	6.3	33.5	128.8	174.9
102.5°	1.0	7.3	23.0	81.7	114.1
105°	1.0	7.3	18.9	53.4	75.4
107.5°	2.1	7.3	16.8	39.8	52.4
110°	1.0	6.3	17.8	30.4	40.8

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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	2.1	5.2	16.8	25.1	30.4
115°	1.0	4.2	14.7	24.1	25.1
117.5°	2.1	3.1	11.5	24.1	25.1
120°	2.1	2.1	9.4	23.0	26.2
122.5°	2.1	2.1	7.3	20.9	25.1
125°	1.0	2.1	6.3	15.7	22.0
127.5°	2.1	2.1	5.2	12.6	16.8
130°	2.1	2.1	4.2	9.4	12.6
132.5°	2.1	2.1	3.1	7.3	9.4
135°	2.1	2.1	2.1	5.2	7.3
137.5°	0.0	0.0	0.0	0.0	0.0
140°	0.0	0.0	0.0	0.0	0.0
142.5°	0.0	0.0	0.0	0.0	0.0
145°	0.0	0.0	0.0	0.0	0.0
147.5°	0.0	0.0	0.0	0.0	0.0
150°	0.0	0.0	0.0	0.0	0.0
152.5°	0.0	0.0	0.0	0.0	0.0
155°	0.0	0.0	0.0	0.0	0.0
157.5°	0.0	0.0	0.0	0.0	0.0
160°	0.0	0.0	0.0	0.0	0.0
162.5°	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0
167.5°	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)