

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: P518257

Luminaire Tested: HVL8-8-LD4-3HI-35-UNV-O-EDD-90

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: P518257
Test Lab: INNOVATION CENTER
Issue Date: 4/27/2021
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: HVL8-8-LD4-3HI-35-UNV-O-EDD-90
Description: 8 FOOT, 8 INCH WIDE, HVL LED LUMINAIRE, WITH 3500K, 90 CRI LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 25652.0 lumens
Efficiency: N/A
Efficacy: 101.9 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.27 / 1.38
Luminous Opening: Rectangular w/ Sides (W: 0.67' x L: 8' x H: 0.17')
CIE Type: Direct

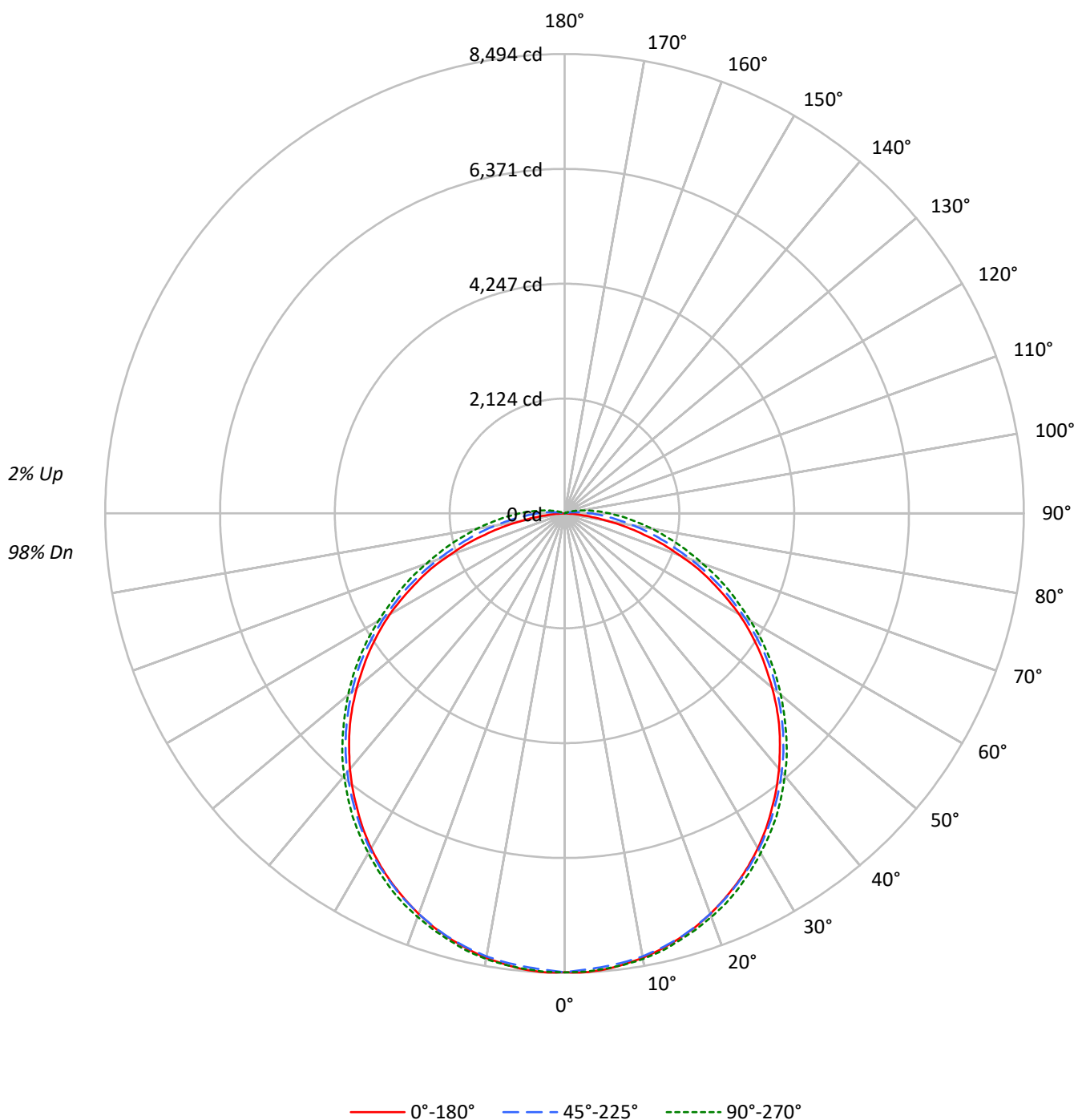
Input Watts (W): 251.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

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			98
1	108	102	98	94	105	100	96	92	95	92	89	91	88	86	87	85	83			81
2	98	89	82	76	95	87	80	75	83	77	73	79	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	52	62	56	51	60	54	50			47
5	75	61	52	45	72	60	52	45	58	50	44	56	49	44	54	48	43			41
6	69	55	46	40	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°	17123	17123	17123
5°	17121	16762	16757
10°	17038	16482	16421
15°	16922	16170	16018
20°	16797	15818	15627
25°	16643	15455	15229
30°	16460	15067	14777
35°	16222	14638	14329
40°	15977	14186	13807
45°	15714	13692	13243
50°	15362	13119	12637
55°	14987	12488	11969
60°	14540	11663	11188
65°	13778	10737	10414
70°	12659	9642	9514
75°	11041	8440	8697
80°	8565	7264	7950
85°	4937	6084	7239

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 15714 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	802.9	3.1
10°-20°	2303.0	9.0
20°-30°	3494.3	13.6
30°-40°	4225.3	16.5
40°-50°	4408.7	17.2
50°-60°	4030.9	15.7
60°-70°	3142.3	12.2
70°-80°	1965.6	7.7
80°-90°	892.8	3.5
90°-100°	299.2	1.2
100°-110°	75.1	0.3
110°-120°	11.8	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°	6600.2	25.7
0°-40°	10825.4	42.2
0°-60°	19265.1	75.1
0°-90°	25265.8	98.5
90°-120°	386.2	1.5
90°-150°	386.2	1.5
90°-180°	386.0	1.5
0°-180°	25652.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	8484	8484	8484	8484	8484	
5°	8466	8450	8412	8452	8452	804
15°	8144	8158	8136	8182	8180	2299
25°	7546	7552	7560	7624	7636	3477
35°	6680	6710	6738	6806	6834	4181
45°	5620	5670	5716	5772	5800	4331
55°	4386	4438	4520	4586	4616	3918
65°	3014	3066	3172	3298	3350	2982
75°	1526	1620	1856	2078	2156	1627
85°	264	488	838	1108	1206	334
90°	2	182	494	742	832	10
95°	2	48	256	464	536	2
105°	4	6	42	124	166	4
115°	6	6	8	22	32	4
125°	0	0	0	0	0	0
135°	0	0	0	0	0	0
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°	8484.1	8484.1	8484.1	8484.1	8484.1
2.5°	8494.1	8482.1	8444.1	8482.1	8480.1
5°	8466.1	8450.1	8412.1	8452.1	8452.1
7.5°	8410.1	8404.1	8370.1	8416.1	8416.1
10°	8344.1	8342.1	8314.1	8364.1	8366.1
12.5°	8252.1	8260.1	8234.1	8282.1	8288.1
15°	8144.1	8158.1	8136.1	8182.1	8180.1
17.5°	8026.1	8034.1	8018.1	8070.1	8068.1
20°	7880.1	7890.1	7878.1	7932.1	7938.1
22.5°	7718.1	7732.1	7730.1	7786.1	7802.1
25°	7546.1	7552.1	7560.1	7624.1	7636.1
27.5°	7356.1	7366.1	7380.1	7438.1	7450.1
30°	7148.1	7164.1	7180.1	7240.1	7256.1
32.5°	6928.1	6944.1	6964.1	7042.1	7050.1
35°	6680.1	6710.1	6738.1	6806.1	6834.1
37.5°	6432.1	6470.1	6496.1	6568.1	6590.1
40°	6170.1	6208.1	6250.1	6326.1	6340.1
42.5°	5896.1	5940.1	5990.1	6058.1	6082.1
45°	5620.1	5670.1	5716.1	5772.1	5800.1
47.5°	5322.1	5372.1	5428.1	5492.1	5510.1
50°	5014.1	5072.1	5132.1	5192.1	5224.1
52.5°	4698.1	4768.1	4836.1	4900.1	4930.1
55°	4386.1	4438.1	4520.1	4586.1	4616.1
57.5°	4062.1	4106.1	4180.1	4288.1	4304.1
60°	3732.1	3772.1	3848.1	3936.1	3972.1
62.5°	3368.1	3422.1	3502.1	3614.1	3646.1
65°	3014.0	3066.0	3172.0	3298.1	3350.1
67.5°	2672.0	2690.0	2826.0	2958.0	3042.0
70°	2268.0	2336.0	2494.0	2656.0	2720.0
72.5°	1920.0	1988.0	2162.0	2352.0	2432.0
75°	1526.0	1620.0	1856.0	2078.0	2156.0
77.5°	1180.0	1284.0	1576.0	1800.0	1890.0
80°	824.0	986.0	1304.0	1556.0	1654.0
82.5°	518.0	718.0	1058.0	1322.0	1408.0
85°	264.0	488.0	838.0	1108.0	1206.0
87.5°	70.0	316.0	652.0	910.0	1010.0
90°	2.0	182.0	494.0	742.0	832.0
92.5°	2.0	102.0	368.0	590.0	682.0
95°	2.0	48.0	256.0	464.0	536.0
97.5°	2.0	20.0	176.0	350.0	422.0
100°	2.0	10.0	112.0	254.0	316.0
102.5°	4.0	6.0	70.0	182.0	232.0
105°	4.0	6.0	42.0	124.0	166.0
107.5°	4.0	6.0	24.0	84.0	114.0
110°	6.0	6.0	14.0	52.0	76.0

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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	6.0	6.0	8.0	34.0	50.0
115°	6.0	6.0	8.0	22.0	32.0
117.5°	0.0	0.0	0.0	0.0	0.0
120°	0.0	0.0	0.0	0.0	0.0
122.5°	0.0	0.0	0.0	0.0	0.0
125°	0.0	0.0	0.0	0.0	0.0
127.5°	0.0	0.0	0.0	0.0	0.0
130°	0.0	0.0	0.0	0.0	0.0
132.5°	0.0	0.0	0.0	0.0	0.0
135°	0.0	0.0	0.0	0.0	0.0
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)