

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: FAIL-SAFE

Report Number: P311957

Luminaire Tested: **14FCZ2-39-UNV-L83050-HRP-CP187-W2A-U-4000K**

Issue Date: 3/3/2020

This test was performed under the Supervised Manufacturer's Testing Program. The results of this test have not been influenced by sources from within Cooper Lighting Solutions or from external interests.

Test Information

Test Method: LM-79-08
Report Number: P311957
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-18)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 14FCZ2-39-UNV-L83050-HRP-CP187-W2A-U-4000K
Description: 1'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.187"
POLYCARB SHEET
Light Source: (168) 4000K TUNABLE CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER
Luminaire Equipment:

<u>Sample No.</u>	<u>Condition</u>	<u>Description</u>
AS-5443-1	Good	WHITE TWIN R-EVOLVE FLOOD
AS-5443-2	Good	REFLECTOR
AS-5443-3	Good	DRIVER
AS-5443-4	Good	UPPER MODULE
AS-5443-5	Good	LENS
AS-5443-6	Good	DRIVER 2
AS-5443-7	Good	TRIM RING

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2771.0 lumens
Efficiency: N/A
Efficacy: 81.3 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.29 / 1.39
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

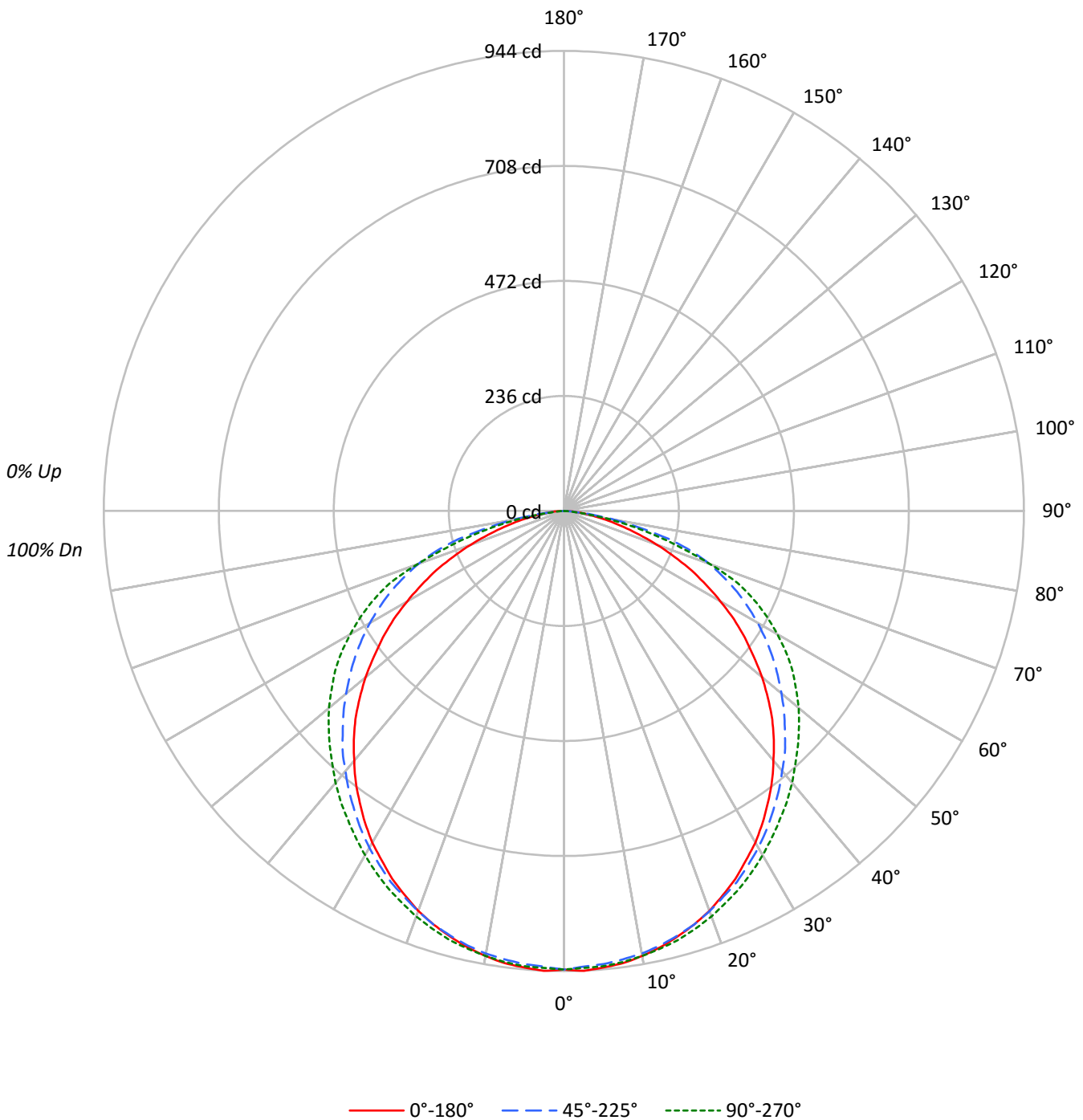
Input Watts (W): 34.1
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	109	104	100	96	106	102	98	94	97	94	91	93	91	88	90	88	86	84
2	99	90	83	78	96	88	82	77	85	79	75	82	77	73	78	75	71	69
3	90	79	71	64	87	77	70	64	74	68	62	72	66	61	69	64	60	58
4	82	70	61	54	80	68	60	54	66	59	53	64	57	52	61	56	51	49
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	42
6	69	56	47	40	68	55	46	40	53	45	40	51	45	39	50	44	39	37
7	64	51	42	36	63	50	41	35	48	41	35	47	40	35	45	39	35	33
8	60	46	38	32	58	45	37	32	44	37	31	43	36	31	42	36	31	29
9	56	42	34	28	54	42	34	28	41	33	28	39	33	28	38	32	28	26
10	52	39	31	26	51	38	31	26	37	30	26	37	30	25	36	30	25	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2532	2532	2532
5°	2540	2521	2533
10°	2533	2519	2533
15°	2517	2512	2537
20°	2500	2503	2535
25°	2473	2494	2535
30°	2442	2480	2534
35°	2399	2462	2539
40°	2351	2449	2559
45°	2301	2441	2586
50°	2221	2440	2634
55°	2126	2453	2690
60°	1998	2471	2724
65°	1842	2497	2741
70°	1604	2502	2523
75°	1323	2328	2039
80°	1040	1674	1364
85°	806	645	324



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	89.1	3.2
10°-20°	255.6	9.2
20°-30°	388.2	14.0
30°-40°	470.4	17.0
40°-50°	495.7	17.9
50°-60°	462.8	16.7
60°-70°	369.8	13.3
70°-80°	203.5	7.3
80°-90°	35.9	1.3
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°	733.0	26.5
0°-40°	1203.3	43.4
0°-60°	2161.8	78.0
0°-90°	2771.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2771.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	941	941	941	941	941	
5°	940	938	933	939	938	89
15°	904	904	902	910	910	255
25°	833	835	840	852	854	383
35°	730	737	749	768	773	457
45°	605	616	641	670	680	465
55°	453	476	523	559	573	404
65°	289	326	392	424	430	285
75°	127	182	224	201	196	137
85°	26	33	21	13	10	32
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	941.0	941.0	941.0	941.0	941.0
2.5°	944.5	941.9	935.8	941.0	938.4
5°	940.2	937.6	933.2	939.3	937.6
7.5°	935.8	932.3	928.0	934.9	933.2
10°	927.1	924.5	921.9	928.0	927.1
12.5°	916.6	915.8	913.2	920.1	919.3
15°	903.6	903.6	901.8	910.5	910.5
17.5°	889.6	888.8	889.6	899.2	898.4
20°	873.1	873.1	874.0	885.3	885.3
22.5°	853.0	853.9	856.5	870.5	869.6
25°	833.0	834.7	840.0	852.2	853.9
27.5°	808.6	813.0	819.1	833.9	835.6
30°	785.9	788.6	798.1	812.1	815.6
32.5°	758.9	764.2	774.6	790.3	794.7
35°	730.2	737.2	749.4	768.5	772.9
37.5°	701.4	707.5	724.1	744.1	752.0
40°	669.2	679.6	697.1	719.7	728.4
42.5°	637.8	648.3	671.8	695.3	703.2
45°	604.7	616.0	641.3	670.1	679.6
47.5°	568.1	581.2	613.4	643.9	654.4
50°	530.6	547.2	582.9	616.9	629.1
52.5°	491.4	512.3	553.3	589.0	600.4
55°	453.1	475.8	522.8	559.4	573.3
57.5°	413.9	438.3	491.4	533.3	541.1
60°	371.2	400.8	459.2	495.8	506.2
62.5°	329.4	363.3	426.1	460.9	469.7
65°	289.3	325.9	392.1	424.3	430.4
67.5°	245.7	289.3	354.6	384.3	386.0
70°	203.9	254.4	318.0	332.0	320.7
72.5°	162.9	217.0	275.3	264.0	254.4
75°	127.2	182.1	223.9	201.3	196.1
77.5°	94.1	149.0	160.3	148.1	138.5
80°	67.1	117.6	108.0	92.4	88.0
82.5°	46.2	74.1	59.3	46.2	40.1
85°	26.1	33.1	20.9	13.1	10.5
87.5°	11.3	7.8	4.4	3.5	3.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)