

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: P311980

Luminaire Tested: **14FCZ2-44-UNV-L83050-HRP-CP187-W2A-U-3000K**

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: P311980
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: 14FCZ2-44-UNV-L83050-HRP-CP187-W2A-U-3000K
Description: 1'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.187"
POLYCARB SHEET
Light Source: (168) 3000K 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: 2788.0 lumens
Efficiency: N/A
Efficacy: 73.0 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

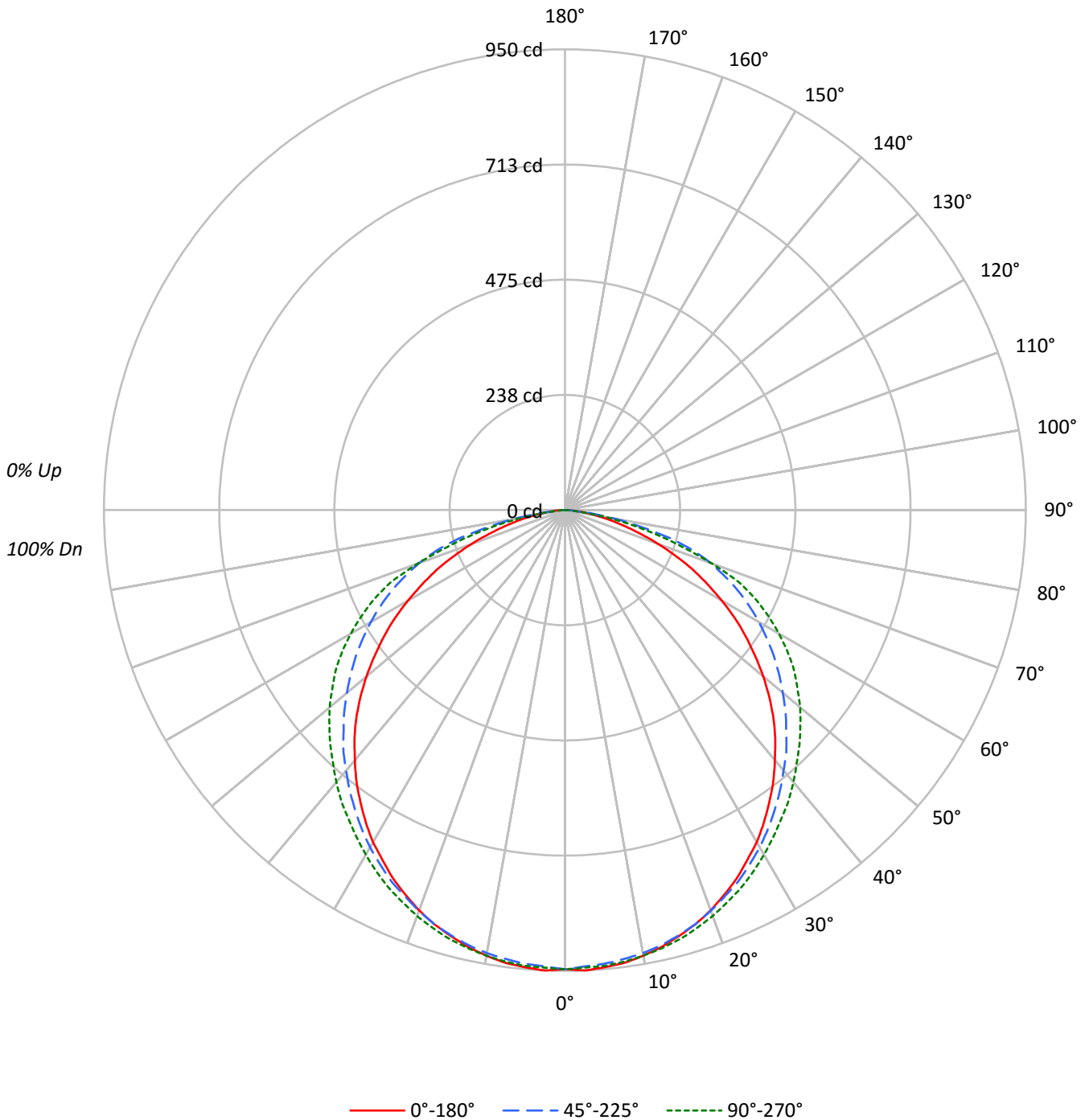
Input Watts (W): 38.2
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2548	2548	2548
5°	2555	2536	2548
10°	2549	2534	2549
15°	2533	2528	2552
20°	2515	2518	2551
25°	2488	2509	2551
30°	2457	2495	2550
35°	2414	2477	2554
40°	2365	2464	2575
45°	2315	2455	2602
50°	2235	2455	2650
55°	2139	2468	2707
60°	2010	2486	2742
65°	1854	2512	2758
70°	1614	2518	2538
75°	1331	2342	2051
80°	1046	1684	1371
85°	812	648	324



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	89.6	3.2
10°-20°	257.2	9.2
20°-30°	390.6	14.0
30°-40°	473.3	17.0
40°-50°	498.7	17.9
50°-60°	465.6	16.7
60°-70°	372.1	13.3
70°-80°	204.7	7.3
80°-90°	36.2	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°	737.4	26.5
0°-40°	1210.7	43.4
0°-60°	2175.0	78.0
0°-90°	2788.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2788.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	947	947	947	947	947	
5°	946	943	939	945	943	90
15°	909	909	907	916	916	257
25°	838	840	845	857	859	386
35°	735	742	754	773	778	460
45°	608	620	645	674	684	468
55°	456	479	526	563	577	407
65°	291	328	394	427	433	287
75°	128	183	225	202	197	138
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°	946.8	946.8	946.8	946.8	946.8
2.5°	950.3	947.7	941.6	946.8	944.2
5°	945.9	943.3	938.9	945.1	943.3
7.5°	941.6	938.1	933.7	940.7	938.9
10°	932.8	930.2	927.5	933.7	932.8
12.5°	922.3	921.4	918.8	925.8	924.9
15°	909.1	909.1	907.4	916.1	916.1
17.5°	895.1	894.2	895.1	904.7	903.9
20°	878.4	878.4	879.3	890.7	890.7
22.5°	858.3	859.2	861.8	875.8	874.9
25°	838.1	839.9	845.1	857.4	859.2
27.5°	813.6	817.9	824.1	839.0	840.7
30°	790.8	793.4	803.0	817.1	820.6
32.5°	763.6	768.9	779.4	795.2	799.5
35°	734.7	741.7	753.9	773.2	777.6
37.5°	705.7	711.9	728.5	748.7	756.6
40°	673.3	683.8	701.3	724.1	732.9
42.5°	641.7	652.3	675.9	699.6	707.5
45°	608.4	619.8	645.2	674.2	683.8
47.5°	571.6	584.7	617.2	647.9	658.4
50°	533.9	550.6	586.5	620.7	633.0
52.5°	494.4	515.5	556.7	592.6	604.0
55°	455.9	478.7	526.0	562.8	576.9
57.5°	416.4	441.0	494.4	536.5	544.4
60°	373.5	403.3	462.0	498.8	509.4
62.5°	331.4	365.6	428.7	463.8	472.5
65°	291.1	327.9	394.5	426.9	433.1
67.5°	247.2	291.1	356.8	386.6	388.4
70°	205.1	256.0	320.0	334.0	322.6
72.5°	163.9	218.3	277.0	265.6	256.0
75°	128.0	183.2	225.3	202.5	197.3
77.5°	94.7	149.9	161.3	149.0	139.4
80°	67.5	118.4	108.7	92.9	88.5
82.5°	46.5	74.5	59.6	46.5	40.3
85°	26.3	33.3	21.0	13.2	10.5
87.5°	11.4	7.9	4.4	3.5	3.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)