

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: P312357

Luminaire Tested: **14FCZ2-29-UNV-L83050-S-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: P312357
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-40)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 14FCZ2-29-UNV-L83050-S-CP187-W2A-U-4000K
Description: 1'X4' TROFFER LED MODULE,SMOOTH 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: 2782.0 lumens
Efficiency: N/A
Efficacy: 114.5 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.26 / 1.36
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

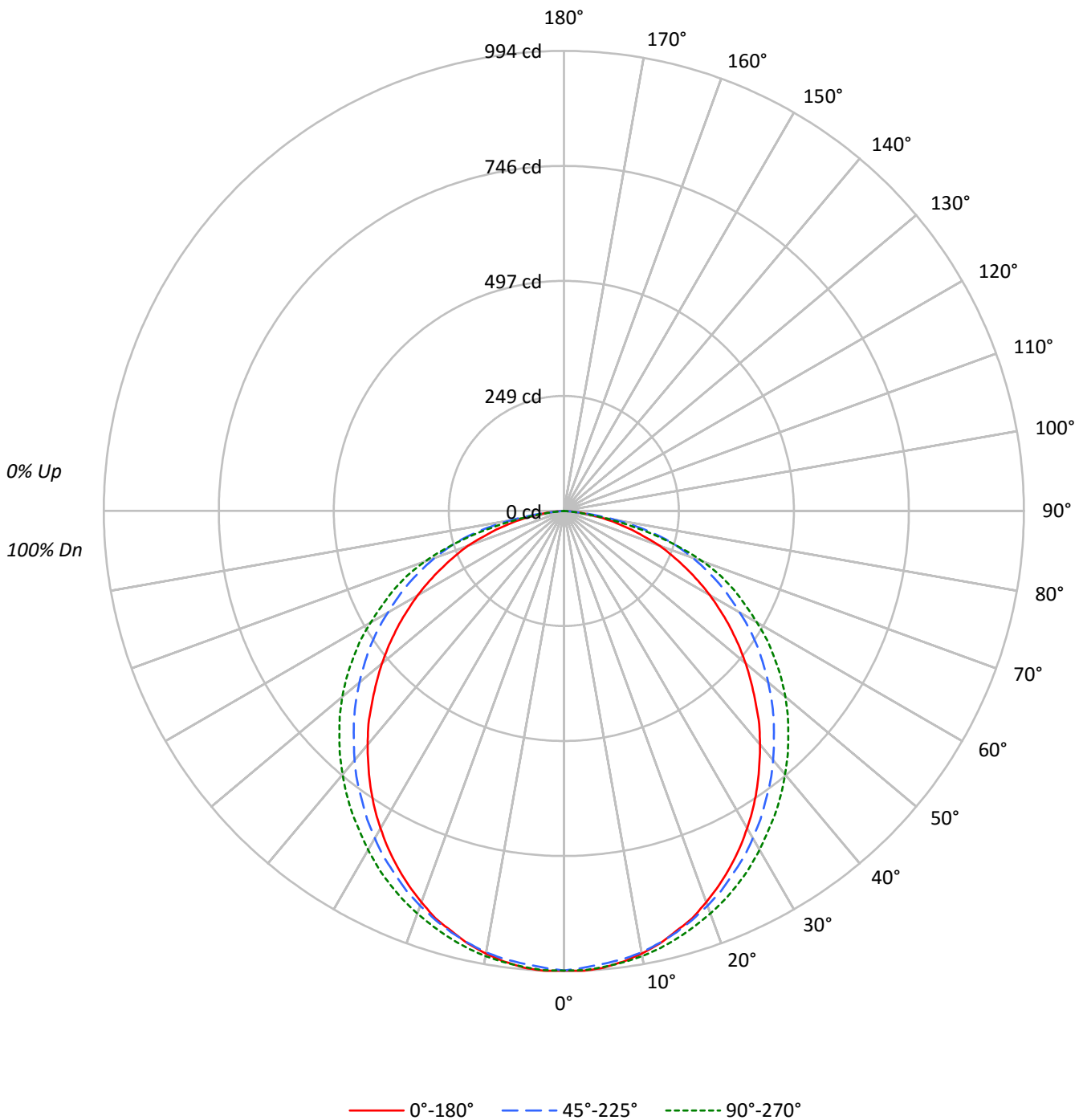
Input Watts (W): 24.3
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	94	91	89	90	88	86	84
2	99	90	84	78	96	89	82	77	85	80	75	82	77	73	79	75	72	70
3	90	79	71	65	87	78	70	64	75	68	63	72	66	62	69	65	61	58
4	82	70	61	55	80	69	61	54	66	59	53	64	58	53	62	56	52	50
5	76	63	54	47	74	62	53	47	59	52	46	57	51	46	56	50	45	43
6	70	56	47	41	68	55	47	41	54	46	40	52	45	40	50	44	40	38
7	65	51	42	36	63	50	42	36	49	41	36	47	41	35	46	40	35	33
8	60	47	38	32	59	46	38	32	45	37	32	43	37	32	42	36	32	30
9	56	43	35	29	55	42	34	29	41	34	29	40	33	29	39	33	28	27
10	53	40	32	26	52	39	31	26	38	31	26	37	31	26	36	30	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2672	2672	2672
5°	2675	2653	2672
10°	2654	2646	2669
15°	2617	2625	2659
20°	2575	2599	2650
25°	2523	2568	2642
30°	2460	2537	2627
35°	2393	2501	2619
40°	2316	2471	2612
45°	2231	2441	2609
50°	2148	2414	2616
55°	2058	2395	2608
60°	1960	2361	2591
65°	1845	2354	2591
70°	1736	2334	2518
75°	1506	2280	2151
80°	1218	1838	1432
85°	809	639	426



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	93.8	3.4
10°-20°	266.9	9.6
20°-30°	400.3	14.4
30°-40°	477.5	17.2
40°-50°	493.7	17.7
50°-60°	450.7	16.2
60°-70°	354.7	12.7
70°-80°	206.4	7.4
80°-90°	38.0	1.4
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°	760.9	27.4
0°-40°	1238.4	44.5
0°-60°	2182.8	78.5
0°-90°	2782.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2782.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	993	993	993	993	993	
5°	990	988	982	990	989	94
15°	939	941	942	954	954	265
25°	850	854	865	886	890	391
35°	728	738	761	790	797	455
45°	586	606	641	677	686	453
55°	439	462	510	548	556	392
65°	290	320	370	399	407	288
75°	145	179	219	215	207	154
85°	26	37	21	17	14	34
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	993.1	993.1	993.1	993.1	993.1
2.5°	994.5	991.7	987.6	994.5	993.1
5°	990.4	987.6	982.1	990.4	989.0
7.5°	982.1	979.3	976.6	984.9	983.5
10°	971.1	969.7	968.3	978.0	976.6
12.5°	957.3	957.3	955.9	966.9	966.9
15°	939.3	940.7	942.1	954.5	954.5
17.5°	922.8	921.4	925.5	939.3	940.7
20°	899.3	902.1	907.6	924.2	925.5
22.5°	875.9	878.6	888.3	904.8	909.0
25°	849.7	853.8	864.8	885.5	889.7
27.5°	822.1	827.6	842.8	864.8	869.0
30°	791.7	800.0	816.6	841.4	845.5
32.5°	761.4	769.7	790.4	815.2	820.7
35°	728.3	737.9	761.4	790.4	797.3
37.5°	693.8	706.2	733.8	762.8	771.1
40°	659.3	673.1	703.5	733.8	743.5
42.5°	624.8	638.6	671.7	706.2	715.9
45°	586.2	605.5	641.4	677.3	685.5
47.5°	549.0	569.7	609.7	645.5	656.6
50°	513.1	533.8	576.6	613.8	624.8
52.5°	475.9	497.9	543.5	582.1	591.7
55°	438.6	462.1	510.4	547.6	555.9
57.5°	401.4	426.2	475.9	511.7	521.4
60°	364.1	390.4	438.6	474.5	481.4
62.5°	326.9	354.5	404.1	435.9	442.8
65°	289.7	320.0	369.7	398.6	406.9
67.5°	253.8	284.1	332.4	360.0	366.9
70°	220.7	248.3	296.6	317.2	320.0
72.5°	179.3	213.8	260.7	271.7	264.8
75°	144.8	179.3	219.3	215.2	206.9
77.5°	110.3	144.8	171.0	157.2	146.2
80°	78.6	113.1	118.6	97.9	92.4
82.5°	51.0	78.6	66.2	51.0	41.4
85°	26.2	37.2	20.7	16.6	13.8
87.5°	8.3	5.5	2.8	2.8	1.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)