

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: P312233

Luminaire Tested: **14FCZ2-35-UNV-L83050-CP187-W2A-U-4500K**

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: P312233
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-49)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 14FCZ2-35-UNV-L83050-CP187-W2A-U-4500K
Description: 1'X4' TROFFER LED MODULE,RIBBED LENS, 0.187" POLYCARB SHEET
Light Source: (168) 4500K 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: 3341.0 lumens
Efficiency: N/A
Efficacy: 108.1 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.28 / 1.37
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

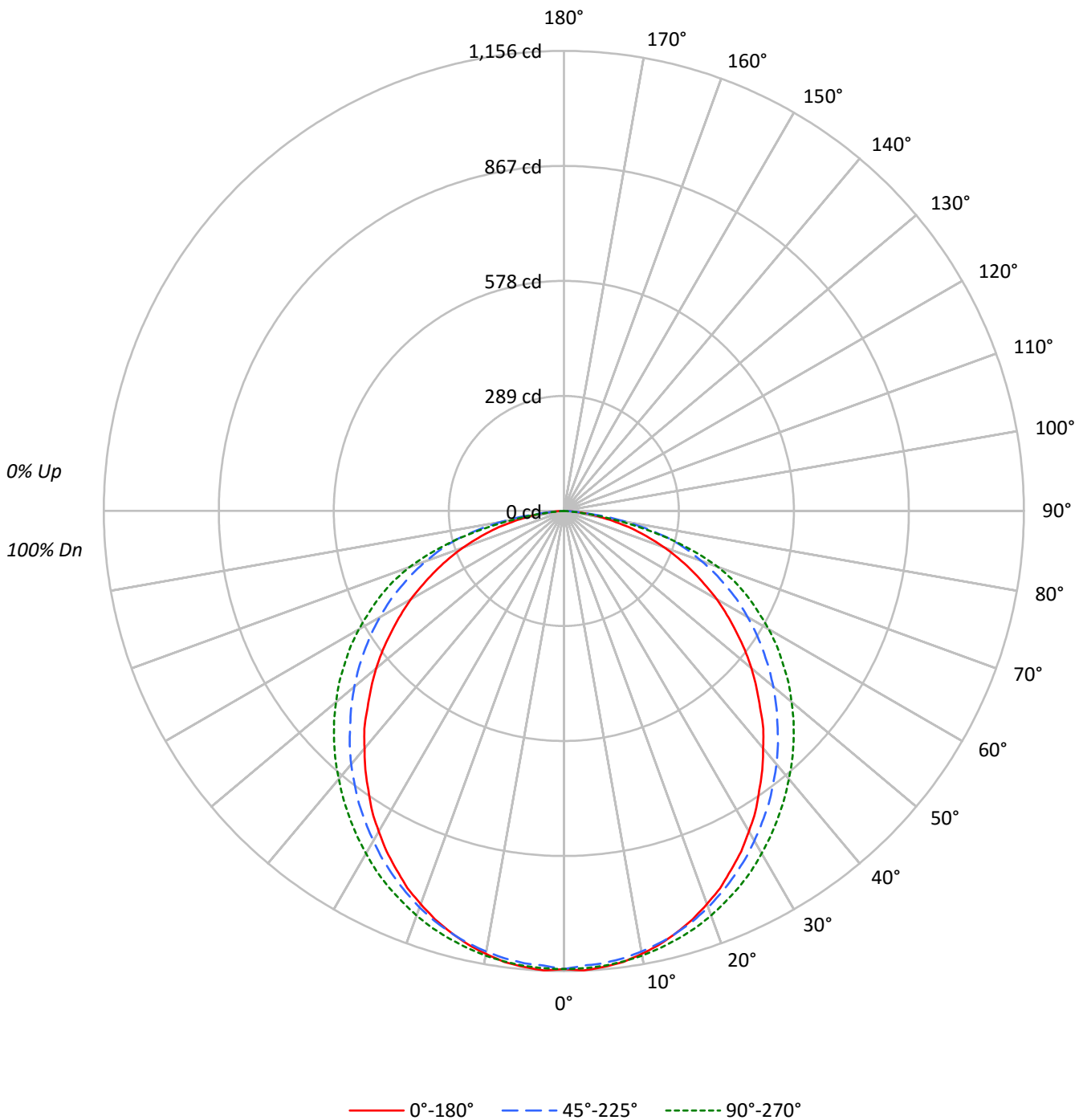
Input Watts (W): 30.9
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	99	95	106	101	97	94	97	94	91	93	90	88	90	87	85	83
2	98	90	83	77	96	88	82	76	84	79	74	81	77	73	78	74	71	69
3	89	79	70	64	87	77	69	63	74	67	62	71	66	61	69	64	60	58
4	82	70	61	54	79	68	60	53	66	58	53	63	57	52	61	56	51	49
5	75	62	53	46	73	61	52	46	59	51	45	57	50	45	55	49	44	42
6	69	56	47	40	67	55	46	40	53	45	40	51	44	39	50	44	39	37
7	64	51	42	35	63	50	41	35	48	41	35	47	40	35	45	39	34	32
8	60	46	37	32	58	45	37	31	44	37	31	43	36	31	42	35	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	39	31	26	37	30	26	37	30	25	36	30	25	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3097	3097	3097
5°	3107	3081	3099
10°	3088	3072	3100
15°	3055	3057	3098
20°	3010	3036	3098
25°	2953	3006	3094
30°	2889	2975	3088
35°	2812	2949	3086
40°	2737	2921	3091
45°	2654	2889	3107
50°	2576	2876	3128
55°	2478	2866	3156
60°	2390	2871	3200
65°	2267	2879	3249
70°	2127	2902	3247
75°	1929	2928	2935
80°	1582	2528	2089
85°	1173	1195	482



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	108.9	3.3
10°-20°	311.1	9.3
20°-30°	468.7	14.0
30°-40°	562.4	16.8
40°-50°	586.2	17.5
50°-60°	542.7	16.2
60°-70°	438.5	13.1
70°-80°	267.3	8.0
80°-90°	55.2	1.7
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°	888.7	26.6
0°-40°	1451.1	43.4
0°-60°	2580.0	77.2
0°-90°	3341.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3341.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1151	1151	1151	1151	1151	
5°	1150	1147	1141	1149	1147	109
15°	1097	1097	1097	1112	1112	309
25°	994	1000	1012	1038	1042	458
35°	856	869	898	930	939	536
45°	697	718	759	802	816	539
55°	528	556	611	659	673	473
65°	356	391	452	498	510	352
75°	186	226	282	286	282	195
85°	38	57	39	22	16	47
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1151.0	1151.0	1151.0	1151.0	1151.0
2.5°	1155.5	1151.7	1143.5	1151.7	1150.2
5°	1150.2	1147.3	1140.6	1148.8	1147.3
7.5°	1142.8	1139.8	1133.9	1143.5	1142.0
10°	1130.1	1128.6	1124.2	1135.3	1134.6
12.5°	1115.2	1114.5	1112.2	1124.9	1124.2
15°	1096.6	1097.3	1097.3	1112.2	1112.2
17.5°	1075.7	1077.2	1080.2	1096.6	1098.8
20°	1051.2	1054.1	1060.1	1078.7	1081.7
22.5°	1025.8	1028.1	1037.0	1059.4	1062.3
25°	994.5	1000.5	1012.4	1037.7	1042.2
27.5°	964.7	970.0	986.3	1012.4	1019.9
30°	929.7	937.9	957.3	985.6	993.8
32.5°	896.2	905.1	927.5	960.3	967.7
35°	856.0	869.4	897.7	930.5	939.4
37.5°	819.5	832.1	864.2	899.9	910.4
40°	779.2	794.9	831.4	869.4	879.8
42.5°	742.0	756.9	796.4	835.1	849.3
45°	697.3	718.2	759.1	801.6	816.5
47.5°	656.3	677.2	724.1	769.6	783.0
50°	615.3	637.7	686.9	733.8	747.2
52.5°	572.9	596.7	649.6	696.6	712.2
55°	528.2	555.8	610.9	658.6	672.7
57.5°	485.7	514.0	572.9	621.3	635.5
60°	444.0	473.1	533.4	579.6	594.5
62.5°	397.8	432.1	494.7	540.1	551.3
65°	356.1	391.1	452.2	497.6	510.3
67.5°	312.1	350.1	411.2	452.9	464.9
70°	270.4	309.9	368.8	407.5	412.7
72.5°	225.7	266.0	325.6	350.1	350.1
75°	185.5	226.5	281.6	286.1	282.3
77.5°	141.5	187.0	222.7	213.8	204.9
80°	102.1	146.8	163.1	146.8	134.8
82.5°	68.5	106.5	98.3	78.2	69.3
85°	38.0	56.6	38.7	21.6	15.6
87.5°	14.2	12.7	3.7	3.7	3.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)