

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: P312232

Luminaire Tested: **14FCZ2-35-UNV-L83050-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: P312232
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-4000K
Description: 1'X4' TROFFER LED MODULE,RIBBED 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: 3310.0 lumens
Efficiency: N/A
Efficacy: 109.6 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

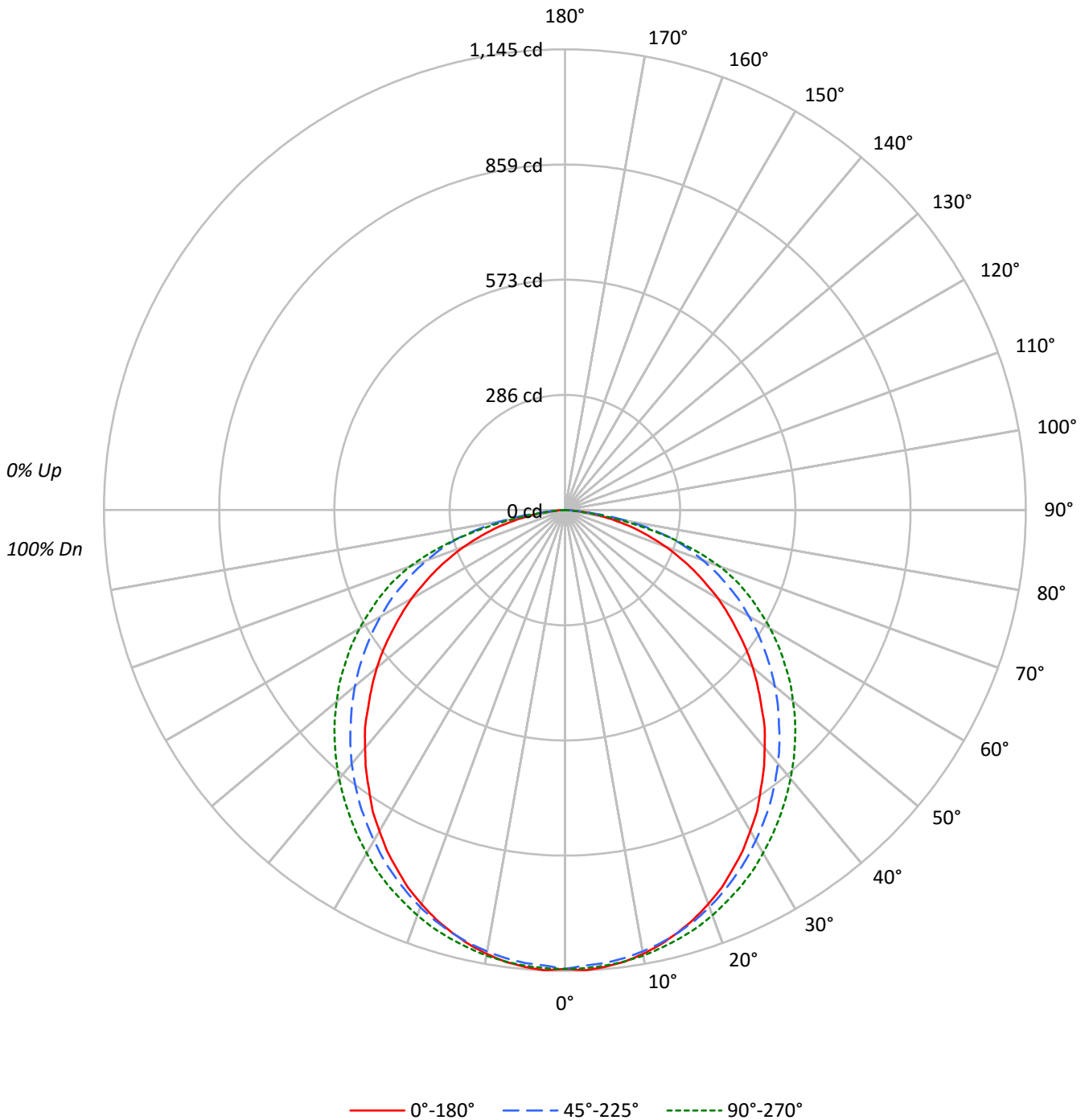
Input Watts (W): 30.2
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	3069	3069	3069
5°	3078	3052	3070
10°	3059	3043	3072
15°	3027	3029	3070
20°	2982	3008	3069
25°	2926	2978	3066
30°	2862	2947	3059
35°	2786	2922	3057
40°	2712	2894	3062
45°	2629	2862	3078
50°	2552	2849	3099
55°	2455	2839	3127
60°	2368	2844	3170
65°	2246	2853	3219
70°	2108	2874	3217
75°	1911	2901	2908
80°	1567	2504	2070
85°	1161	1186	479



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	107.9	3.3
10°-20°	308.2	9.3
20°-30°	464.3	14.0
30°-40°	557.2	16.8
40°-50°	580.8	17.5
50°-60°	537.6	16.2
60°-70°	434.4	13.1
70°-80°	264.9	8.0
80°-90°	54.7	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°	880.5	26.6
0°-40°	1437.7	43.4
0°-60°	2556.1	77.2
0°-90°	3310.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3310.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1140	1140	1140	1140	1140	
5°	1140	1137	1130	1138	1137	108
15°	1086	1087	1087	1102	1102	306
25°	985	991	1003	1028	1032	454
35°	848	861	889	922	931	531
45°	691	712	752	794	809	534
55°	523	551	605	652	666	469
65°	353	388	448	493	506	349
75°	184	224	279	283	280	193
85°	38	56	38	21	16	46
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1140.3	1140.3	1140.3	1140.3	1140.3
2.5°	1144.7	1141.0	1132.9	1141.0	1139.6
5°	1139.6	1136.6	1130.0	1138.1	1136.6
7.5°	1132.2	1129.2	1123.3	1132.9	1131.4
10°	1119.6	1118.2	1113.7	1124.8	1124.1
12.5°	1104.9	1104.1	1101.9	1114.5	1113.7
15°	1086.4	1087.2	1087.2	1101.9	1101.9
17.5°	1065.8	1067.2	1070.2	1086.4	1088.6
20°	1041.4	1044.4	1050.3	1068.7	1071.7
22.5°	1016.3	1018.5	1027.4	1049.5	1052.5
25°	985.3	991.2	1003.0	1028.1	1032.5
27.5°	955.8	961.0	977.2	1003.0	1010.4
30°	921.1	929.2	948.4	976.5	984.6
32.5°	887.9	896.7	918.9	951.4	958.7
35°	848.0	861.3	889.4	921.8	930.7
37.5°	811.9	824.4	856.2	891.6	901.9
40°	772.0	787.5	823.7	861.3	871.7
42.5°	735.1	749.9	789.0	827.4	841.4
45°	690.8	711.5	752.1	794.2	808.9
47.5°	650.2	670.9	717.4	762.4	775.7
50°	609.6	631.8	680.5	727.0	740.3
52.5°	567.6	591.2	643.6	690.1	705.6
55°	523.3	550.6	605.2	652.4	666.5
57.5°	481.2	509.3	567.6	615.5	629.6
60°	439.9	468.7	528.5	574.2	589.0
62.5°	394.1	428.1	490.1	535.1	546.2
65°	352.8	387.5	448.0	493.0	505.6
67.5°	309.2	346.9	407.4	448.7	460.6
70°	267.9	307.0	365.3	403.7	408.9
72.5°	223.6	263.5	322.5	346.9	346.9
75°	183.8	224.4	279.0	283.4	279.7
77.5°	140.2	185.3	220.7	211.8	203.0
80°	101.1	145.4	161.6	145.4	133.6
82.5°	67.9	105.5	97.4	77.5	68.6
85°	37.6	56.1	38.4	21.4	15.5
87.5°	14.0	12.5	3.7	3.7	3.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)