

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: P312405

Luminaire Tested: **14FCZ2-39-UNV-L83050-S-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: P312405
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: 14FCZ2-39-UNV-L83050-S-CP187-W2A-U-3000K
Description: 1'X4' TROFFER LED MODULE,SMOOTH 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: 3322.0 lumens
Efficiency: N/A
Efficacy: 100.1 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

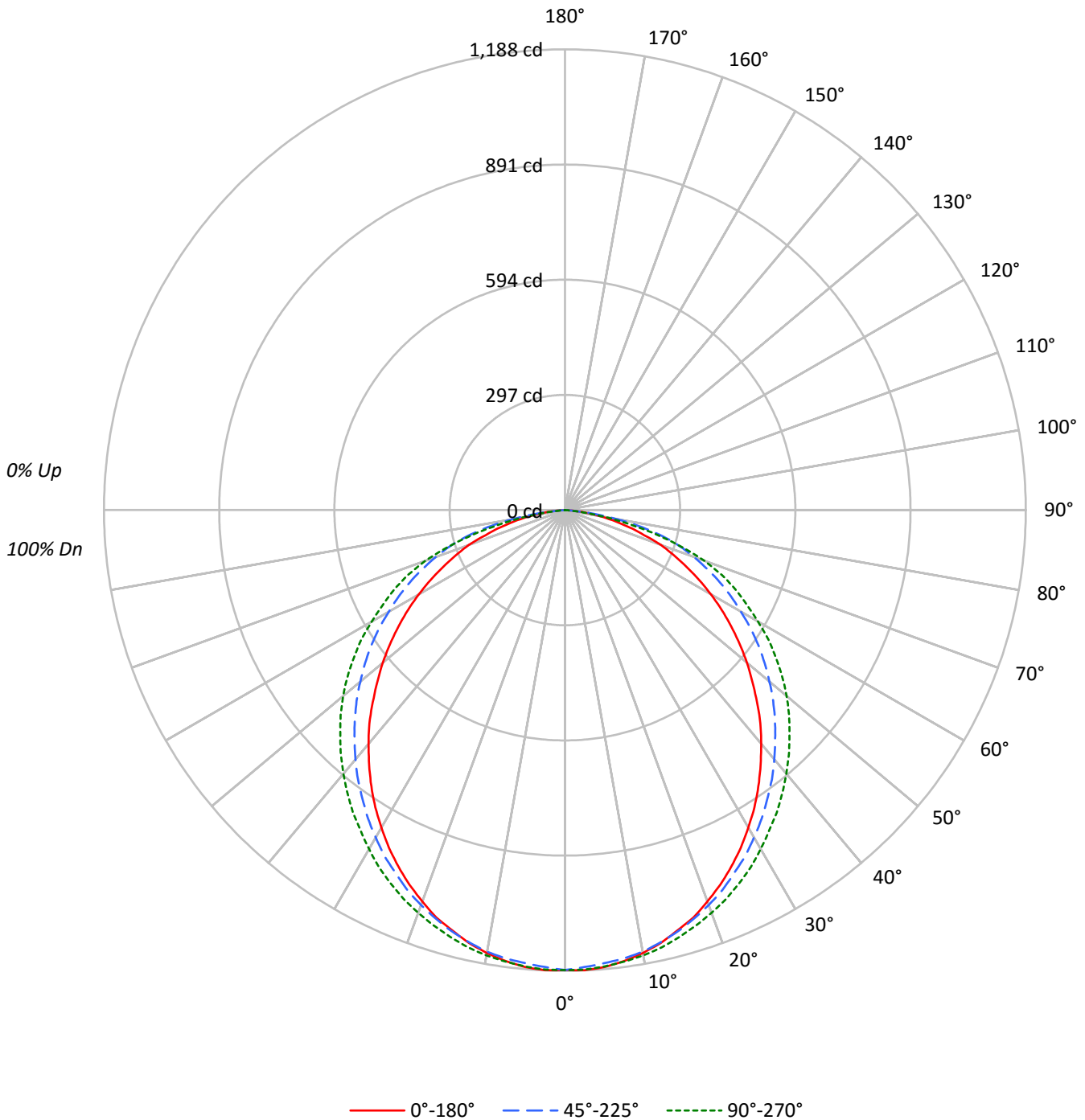
Input Watts (W): 33.2
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	3191	3191	3191
5°	3195	3168	3190
10°	3168	3160	3186
15°	3125	3134	3175
20°	3075	3104	3165
25°	3013	3066	3154
30°	2938	3030	3137
35°	2857	2987	3127
40°	2766	2951	3119
45°	2664	2915	3115
50°	2565	2882	3123
55°	2457	2859	3114
60°	2340	2819	3094
65°	2202	2811	3094
70°	2073	2786	3006
75°	1798	2723	2569
80°	1455	2194	1711
85°	966	763	509



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	112.0	3.4
10°-20°	318.7	9.6
20°-30°	478.0	14.4
30°-40°	570.2	17.2
40°-50°	589.5	17.7
50°-60°	538.2	16.2
60°-70°	423.5	12.7
70°-80°	246.5	7.4
80°-90°	45.4	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°	908.6	27.4
0°-40°	1478.8	44.5
0°-60°	2606.5	78.5
0°-90°	3322.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3322.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1186	1186	1186	1186	1186	
5°	1183	1179	1173	1183	1181	112
15°	1122	1123	1125	1140	1140	317
25°	1015	1020	1033	1057	1062	467
35°	870	881	909	944	952	544
45°	700	723	766	809	819	541
55°	524	552	609	654	664	468
65°	346	382	441	476	486	343
75°	173	214	262	257	247	184
85°	31	44	25	20	16	41
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1185.9	1185.9	1185.9	1185.9	1185.9
2.5°	1187.5	1184.3	1179.3	1187.5	1185.9
5°	1182.6	1179.3	1172.7	1182.6	1181.0
7.5°	1172.7	1169.4	1166.1	1176.0	1174.4
10°	1159.5	1157.9	1156.3	1167.8	1166.1
12.5°	1143.1	1143.1	1141.4	1154.6	1154.6
15°	1121.7	1123.3	1125.0	1139.8	1139.8
17.5°	1101.9	1100.3	1105.2	1121.7	1123.3
20°	1073.9	1077.2	1083.8	1103.5	1105.2
22.5°	1045.9	1049.2	1060.7	1080.5	1085.4
25°	1014.6	1019.5	1032.7	1057.4	1062.4
27.5°	981.7	988.2	1006.4	1032.7	1037.7
30°	945.4	955.3	975.1	1004.7	1009.7
32.5°	909.2	919.1	943.8	973.4	980.0
35°	869.7	881.2	909.2	943.8	952.0
37.5°	828.5	843.3	876.2	910.8	920.7
40°	787.3	803.8	840.0	876.2	887.8
42.5°	746.1	762.6	802.1	843.3	854.8
45°	700.0	723.1	765.9	808.7	818.6
47.5°	655.5	680.2	728.0	770.8	784.0
50°	612.7	637.4	688.5	733.0	746.1
52.5°	568.2	594.6	649.0	695.1	706.6
55°	523.8	551.8	609.4	653.9	663.8
57.5°	479.3	508.9	568.2	611.1	622.6
60°	434.8	466.1	523.8	566.6	574.8
62.5°	390.4	423.3	482.6	520.5	528.7
65°	345.9	382.1	441.4	476.0	485.9
67.5°	303.1	339.3	396.9	429.9	438.1
70°	263.5	296.5	354.1	378.8	382.1
72.5°	214.1	255.3	311.3	324.5	316.2
75°	172.9	214.1	261.9	256.9	247.1
77.5°	131.8	172.9	204.2	187.8	174.6
80°	93.9	135.1	141.6	116.9	110.4
82.5°	60.9	93.9	79.1	60.9	49.4
85°	31.3	44.5	24.7	19.8	16.5
87.5°	9.9	6.6	3.3	3.3	1.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)