

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: P312332

Luminaire Tested: **14FCZ2-25-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: P312332
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: 14FCZ2-25-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: 2327.0 lumens
Efficiency: N/A
Efficacy: 115.8 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

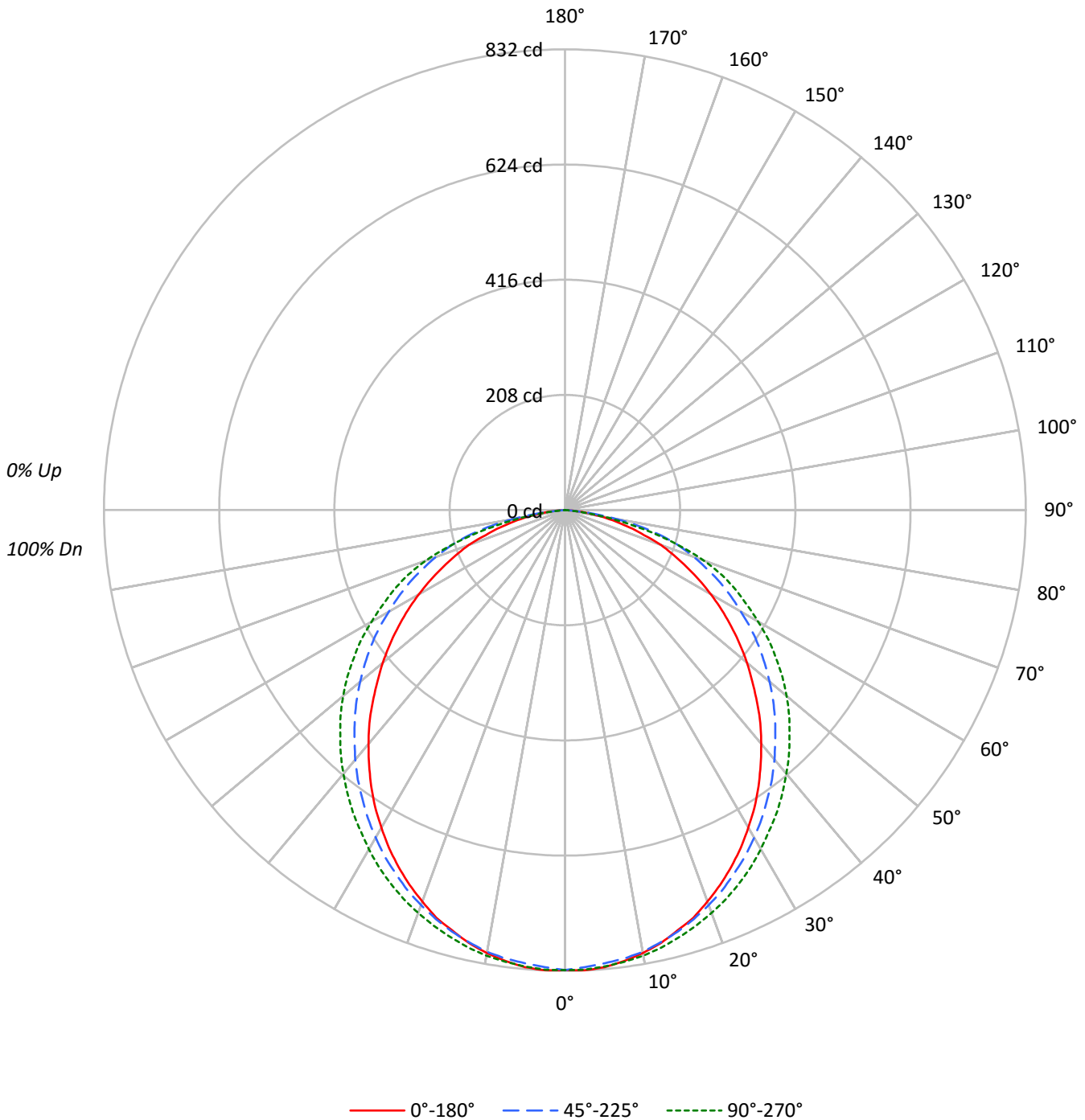
Input Watts (W): 20.1
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2235	2235	2235
5°	2238	2219	2234
10°	2219	2213	2232
15°	2189	2195	2224
20°	2154	2174	2217
25°	2110	2148	2210
30°	2058	2122	2197
35°	2001	2092	2191
40°	1937	2067	2185
45°	1866	2042	2182
50°	1797	2019	2188
55°	1721	2003	2182
60°	1639	1975	2167
65°	1543	1969	2167
70°	1452	1952	2106
75°	1259	1907	1800
80°	1020	1537	1198
85°	676	534	355



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	78.4	3.4
10°-20°	223.2	9.6
20°-30°	334.8	14.4
30°-40°	399.4	17.2
40°-50°	412.9	17.7
50°-60°	377.0	16.2
60°-70°	296.7	12.7
70°-80°	172.7	7.4
80°-90°	31.8	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°	636.5	27.4
0°-40°	1035.9	44.5
0°-60°	1825.8	78.5
0°-90°	2327.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2327.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	831	831	831	831	831	
5°	828	826	822	828	827	79
15°	786	787	788	798	798	222
25°	711	714	723	741	744	327
35°	609	617	637	661	667	381
45°	490	506	536	566	573	379
55°	367	386	427	458	465	328
65°	242	268	309	333	340	241
75°	121	150	183	180	173	129
85°	22	31	17	14	12	28
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	830.7	830.7	830.7	830.7	830.7
2.5°	831.9	829.5	826.1	831.9	830.7
5°	828.4	826.1	821.5	828.4	827.2
7.5°	821.5	819.2	816.9	823.8	822.6
10°	812.2	811.1	809.9	818.0	816.9
12.5°	800.7	800.7	799.5	808.8	808.8
15°	785.7	786.9	788.0	798.4	798.4
17.5°	771.9	770.7	774.2	785.7	786.9
20°	752.2	754.6	759.2	773.0	774.2
22.5°	732.6	734.9	743.0	756.9	760.3
25°	710.7	714.2	723.4	740.7	744.2
27.5°	687.6	692.3	704.9	723.4	726.9
30°	662.3	669.2	683.0	703.8	707.2
32.5°	636.9	643.8	661.1	681.9	686.5
35°	609.2	617.3	636.9	661.1	666.9
37.5°	580.3	590.7	613.8	638.0	644.9
40°	551.5	563.0	588.4	613.8	621.9
42.5°	522.6	534.2	561.9	590.7	598.8
45°	490.3	506.5	536.5	566.5	573.4
47.5°	459.2	476.5	510.0	540.0	549.2
50°	429.2	446.5	482.3	513.4	522.6
52.5°	398.0	416.5	454.6	486.9	495.0
55°	366.9	386.5	426.9	458.0	465.0
57.5°	335.7	356.5	398.0	428.0	436.1
60°	304.6	326.5	366.9	396.9	402.7
62.5°	273.4	296.5	338.0	364.6	370.4
65°	242.3	267.7	309.2	333.4	340.4
67.5°	212.3	237.7	278.1	301.1	306.9
70°	184.6	207.7	248.1	265.4	267.7
72.5°	150.0	178.8	218.1	227.3	221.5
75°	121.1	150.0	183.4	180.0	173.1
77.5°	92.3	121.1	143.1	131.5	122.3
80°	65.8	94.6	99.2	81.9	77.3
82.5°	42.7	65.8	55.4	42.7	34.6
85°	21.9	31.2	17.3	13.8	11.5
87.5°	6.9	4.6	2.3	2.3	1.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)