

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: P312031

Luminaire Tested: **14FCZ2-25-UNV-L83050-RDP-CP187-W2A-U-3500K**

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: P312031
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-43)
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-RDP-CP187-W2A-U-3500K
Description: 1'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT , 0.187" POLYCARB SHEET
Light Source: (168) 3500K 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: 1408.0 lumens
Efficiency: N/A
Efficacy: 71.8 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.28 / 1.4
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

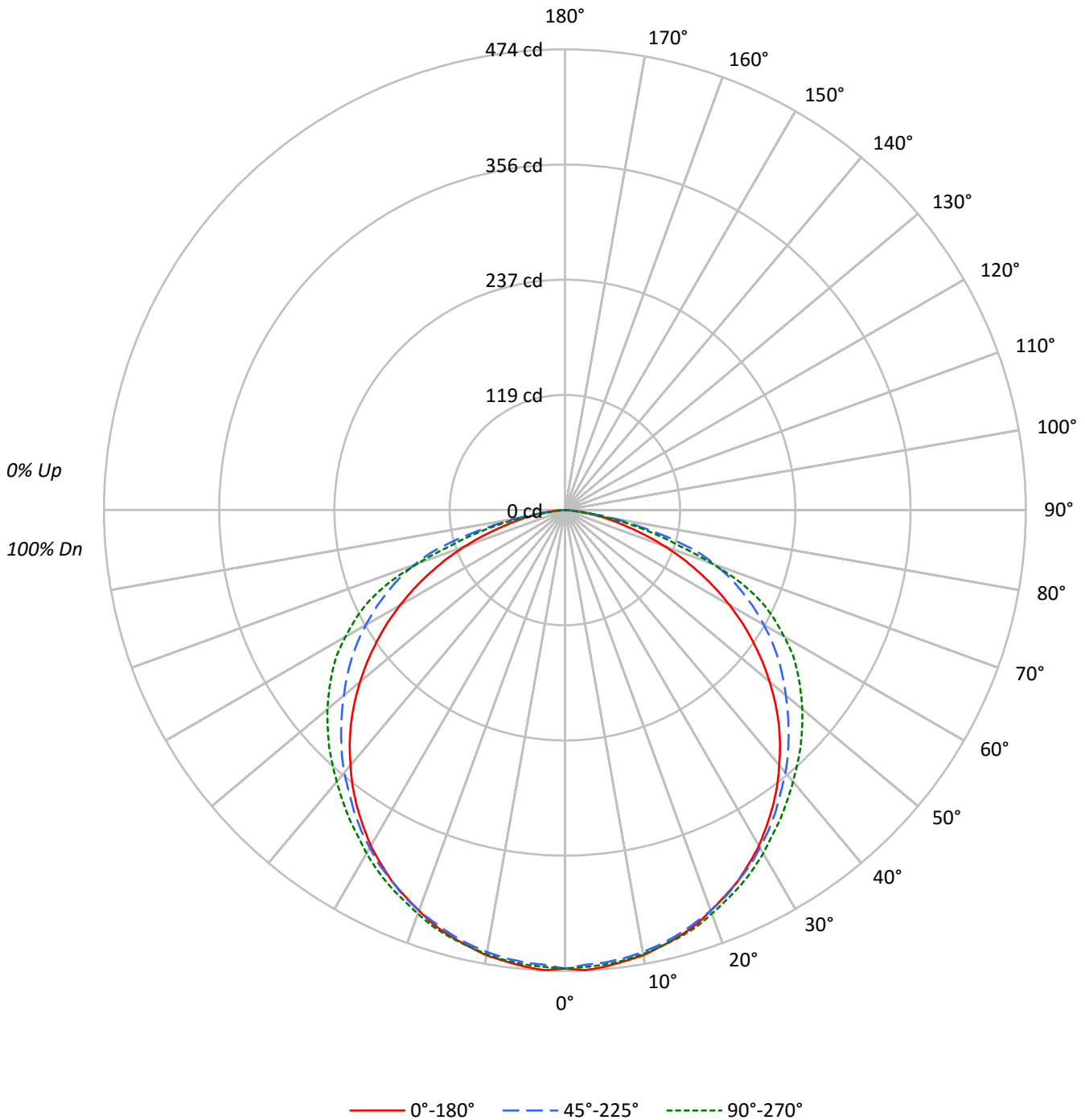
Input Watts (W): 19.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	93	91	88	90	88	86	84
2	99	90	83	77	96	88	82	76	85	79	75	81	77	73	78	75	71	69
3	90	79	71	64	87	77	70	63	74	68	62	71	66	61	69	64	60	58
4	82	70	61	54	80	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	50	42	35	62	50	41	35	48	40	35	47	40	35	45	39	34	32
8	60	46	37	31	58	45	37	31	44	36	31	43	36	31	41	35	31	29
9	56	42	34	28	54	42	34	28	40	33	28	39	33	28	38	32	28	26
10	52	39	31	25	51	38	31	25	37	30	25	36	30	25	35	29	25	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1269	1269	1269
5°	1274	1262	1268
10°	1271	1262	1268
15°	1265	1259	1268
20°	1256	1256	1265
25°	1250	1250	1266
30°	1240	1247	1267
35°	1224	1242	1271
40°	1205	1240	1282
45°	1184	1238	1305
50°	1150	1243	1335
55°	1109	1258	1372
60°	1053	1272	1402
65°	973	1288	1421
70°	865	1297	1271
75°	698	1166	1017
80°	545	818	665
85°	374	238	170



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	44.6	3.2
10°-20°	128.1	9.1
20°-30°	195.0	13.8
30°-40°	237.5	16.9
40°-50°	252.0	17.9
50°-60°	237.8	16.9
60°-70°	192.0	13.6
70°-80°	104.2	7.4
80°-90°	16.9	1.2
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°	367.7	26.1
0°-40°	605.2	43.0
0°-60°	1095.0	77.8
0°-90°	1408.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1408.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	472	472	472	472	472	
5°	472	470	467	470	469	45
15°	454	453	452	455	455	128
25°	421	420	421	425	426	194
35°	373	375	378	386	387	233
45°	311	316	325	338	343	240
55°	236	246	268	286	292	211
65°	153	172	202	219	223	151
75°	67	98	112	101	98	73
85°	12	13	8	7	6	16
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	471.6	471.6	471.6	471.6	471.6
2.5°	473.8	471.6	468.3	471.6	470.5
5°	471.6	470.5	467.2	470.5	469.4
7.5°	468.3	468.3	465.0	467.2	467.2
10°	465.0	463.9	461.7	465.0	463.9
12.5°	459.5	458.4	457.3	460.6	459.5
15°	454.0	452.9	451.8	455.1	455.1
17.5°	447.4	446.3	445.2	449.6	449.6
20°	438.6	438.6	438.6	443.0	441.9
22.5°	429.8	429.8	430.9	435.3	434.2
25°	421.0	419.9	421.0	425.4	426.5
27.5°	410.0	411.1	412.2	416.6	417.7
30°	399.0	400.1	401.2	406.7	407.8
32.5°	385.8	388.0	390.2	396.8	396.8
35°	372.6	374.8	378.1	385.8	386.9
37.5°	358.4	360.6	364.9	373.7	375.9
40°	343.0	346.3	352.9	361.7	364.9
42.5°	327.6	332.0	339.7	349.6	354.0
45°	311.1	315.5	325.4	337.5	343.0
47.5°	293.5	299.0	311.1	326.5	330.9
50°	274.8	282.5	296.8	313.3	318.8
52.5°	256.1	264.9	282.5	300.1	305.6
55°	236.3	246.2	268.2	285.8	292.4
57.5°	216.6	227.5	252.8	271.5	278.1
60°	195.7	208.9	236.3	255.0	260.5
62.5°	174.8	190.2	219.8	238.5	242.9
65°	152.8	171.5	202.3	218.7	223.1
67.5°	131.9	153.9	184.7	196.8	196.8
70°	109.9	134.1	164.9	168.2	161.6
72.5°	87.9	115.4	142.9	130.8	125.3
75°	67.1	97.8	112.1	101.1	97.8
77.5°	50.6	79.1	79.1	72.6	70.4
80°	35.2	60.5	52.8	46.2	42.9
82.5°	23.1	34.1	27.5	22.0	18.7
85°	12.1	13.2	7.7	6.6	5.5
87.5°	4.4	2.2	1.1	2.2	1.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)