

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: P313458

Luminaire Tested: **24FCZ2-30-UNV-L83050-RDP-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: P313458
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-19)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 24FCZ2-30-UNV-L83050-RDP-CP187-W2A-U-4500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 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: 1850.0 lumens
Efficiency: N/A
Efficacy: 75.5 lumens/watt
Spacing Criteria (0/90/45): 1.26 / 1.3 / 1.41
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

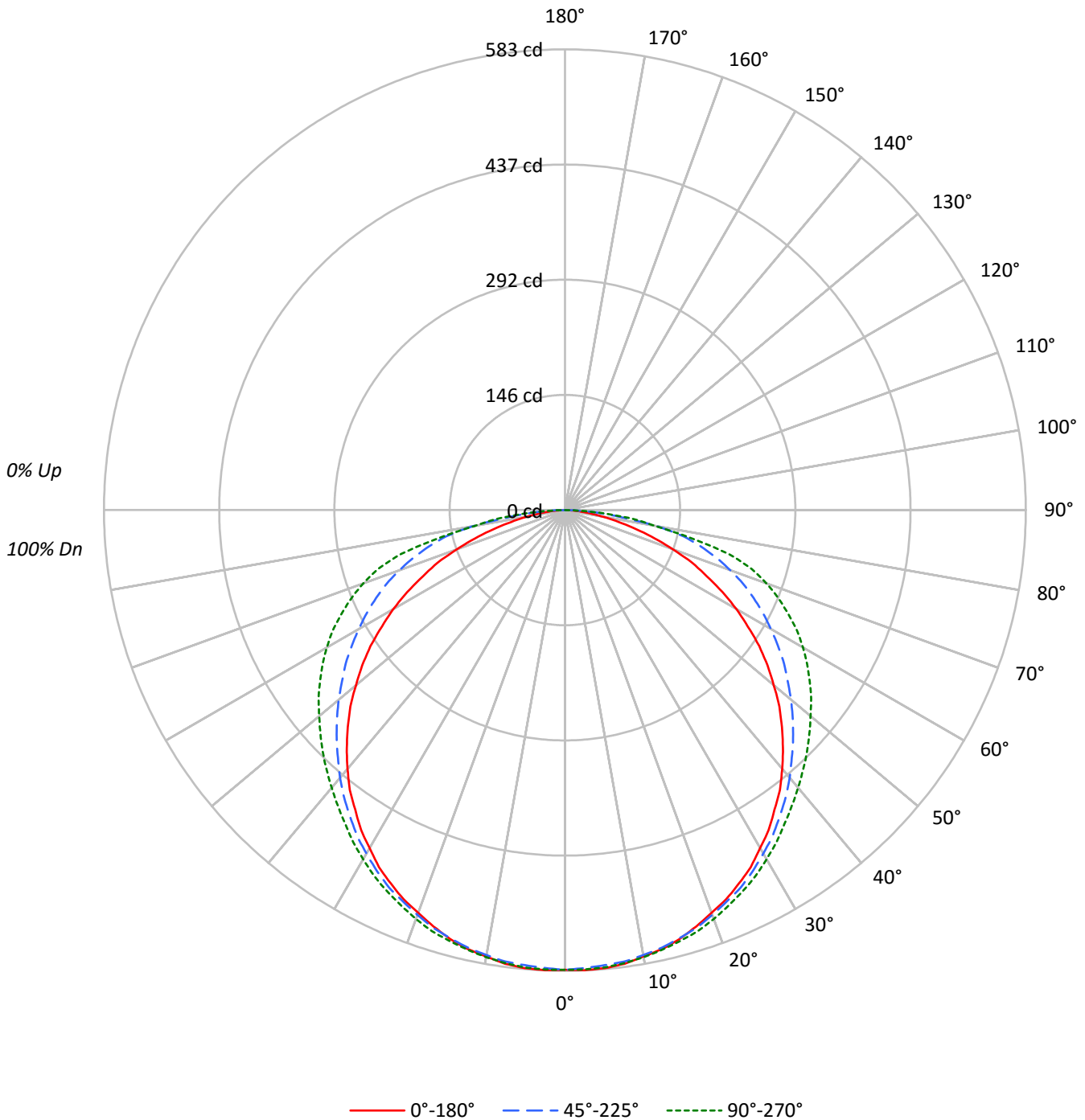
Input Watts (W): 24.5
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	108	103	98	94	105	100	96	92	96	93	89	92	89	87	88	86	84	82
2	97	89	81	75	95	87	80	74	83	77	72	80	75	71	77	73	69	67
3	88	77	68	62	86	76	67	61	72	66	60	70	64	59	67	62	58	56
4	81	68	59	52	78	67	58	51	64	57	51	62	55	50	59	54	49	47
5	74	60	51	44	72	59	51	44	57	49	43	55	48	43	53	47	42	40
6	68	54	45	38	66	53	45	38	51	44	38	50	43	37	48	42	37	35
7	63	49	40	34	61	48	40	34	47	39	33	45	38	33	44	38	33	31
8	59	45	36	30	57	44	36	30	43	35	30	41	34	29	40	34	29	27
9	55	41	33	27	53	40	32	27	39	32	27	38	31	26	37	31	26	24
10	51	38	30	24	50	37	29	24	36	29	24	35	29	24	34	28	24	22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	783	783	783
5°	786	781	785
10°	784	781	785
15°	782	781	786
20°	776	780	788
25°	774	782	790
30°	767	780	793
35°	760	778	796
40°	751	777	806
45°	739	777	824
50°	722	782	849
55°	704	794	887
60°	674	810	936
65°	631	839	993
70°	574	877	1068
75°	487	925	1116
80°	384	931	903
85°	284	709	794



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	55.2	3.0
10°-20°	158.8	8.6
20°-30°	242.9	13.1
30°-40°	296.9	16.0
40°-50°	316.5	17.1
50°-60°	302.6	16.4
60°-70°	256.3	13.9
70°-80°	172.3	9.3
80°-90°	48.6	2.6
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°	456.9	24.7
0°-40°	753.8	40.7
0°-60°	1372.8	74.2
0°-90°	1850.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1850.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	582	582	582	582	582	
5°	582	581	578	581	581	55
15°	562	562	561	565	564	158
25°	521	523	527	531	532	240
35°	462	466	474	483	484	290
45°	388	395	408	426	433	299
55°	300	311	339	365	378	267
65°	198	218	263	298	312	197
75°	94	128	178	208	215	100
85°	18	38	46	50	51	23
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	581.8	581.8	581.8	581.8	581.8
2.5°	582.7	582.7	579.9	581.8	581.8
5°	581.8	580.9	578.1	580.9	580.9
7.5°	579.0	578.1	576.3	579.0	578.1
10°	573.5	573.5	571.7	574.4	574.4
12.5°	568.9	568.0	567.1	570.8	569.8
15°	561.6	561.6	560.7	565.3	564.3
17.5°	552.4	553.3	554.2	557.9	558.8
20°	542.3	544.1	545.1	550.6	550.6
22.5°	533.1	534.1	535.9	541.4	541.4
25°	521.2	523.0	526.7	531.3	532.2
27.5°	509.3	510.2	514.8	521.2	522.1
30°	493.7	496.4	501.9	509.3	510.2
32.5°	479.9	482.7	489.1	496.4	498.3
35°	462.5	466.2	473.5	482.7	484.5
37.5°	446.9	449.6	458.8	468.9	471.7
40°	427.6	433.1	442.3	454.2	458.8
42.5°	408.3	413.8	424.9	440.5	446.0
45°	388.2	394.6	408.3	425.8	433.1
47.5°	368.0	375.3	390.9	411.1	419.4
50°	345.0	354.2	373.5	396.4	405.6
52.5°	323.0	334.0	355.1	380.8	392.7
55°	300.1	311.1	338.6	365.2	378.1
57.5°	274.4	289.1	319.3	349.6	363.4
60°	250.5	264.3	301.0	334.0	347.8
62.5°	224.8	243.2	282.6	317.5	331.3
65°	198.2	218.4	263.4	298.2	312.0
67.5°	174.3	196.4	244.1	279.0	292.7
70°	145.9	173.4	223.0	257.9	271.6
72.5°	119.3	149.6	201.0	234.9	247.8
75°	93.6	127.5	178.0	208.3	214.7
77.5°	69.7	105.5	154.2	167.0	162.4
80°	49.6	84.4	120.2	113.8	116.5
82.5°	32.1	64.2	74.3	84.4	87.2
85°	18.4	37.6	45.9	49.6	51.4
87.5°	8.3	13.8	18.4	18.4	17.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)