

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: P309985

Luminaire Tested: **24FCZ2-35-UNV-L82765-RDP-CP187-W2A-U-6500K**

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: P309985
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: 24FCZ2-35-UNV-L82765-RDP-CP187-W2A-U-6500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.187" POLYCARB SHEET
Light Source: (168) 6500K 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: 2139.0 lumens
Efficiency: N/A
Efficacy: 73.3 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

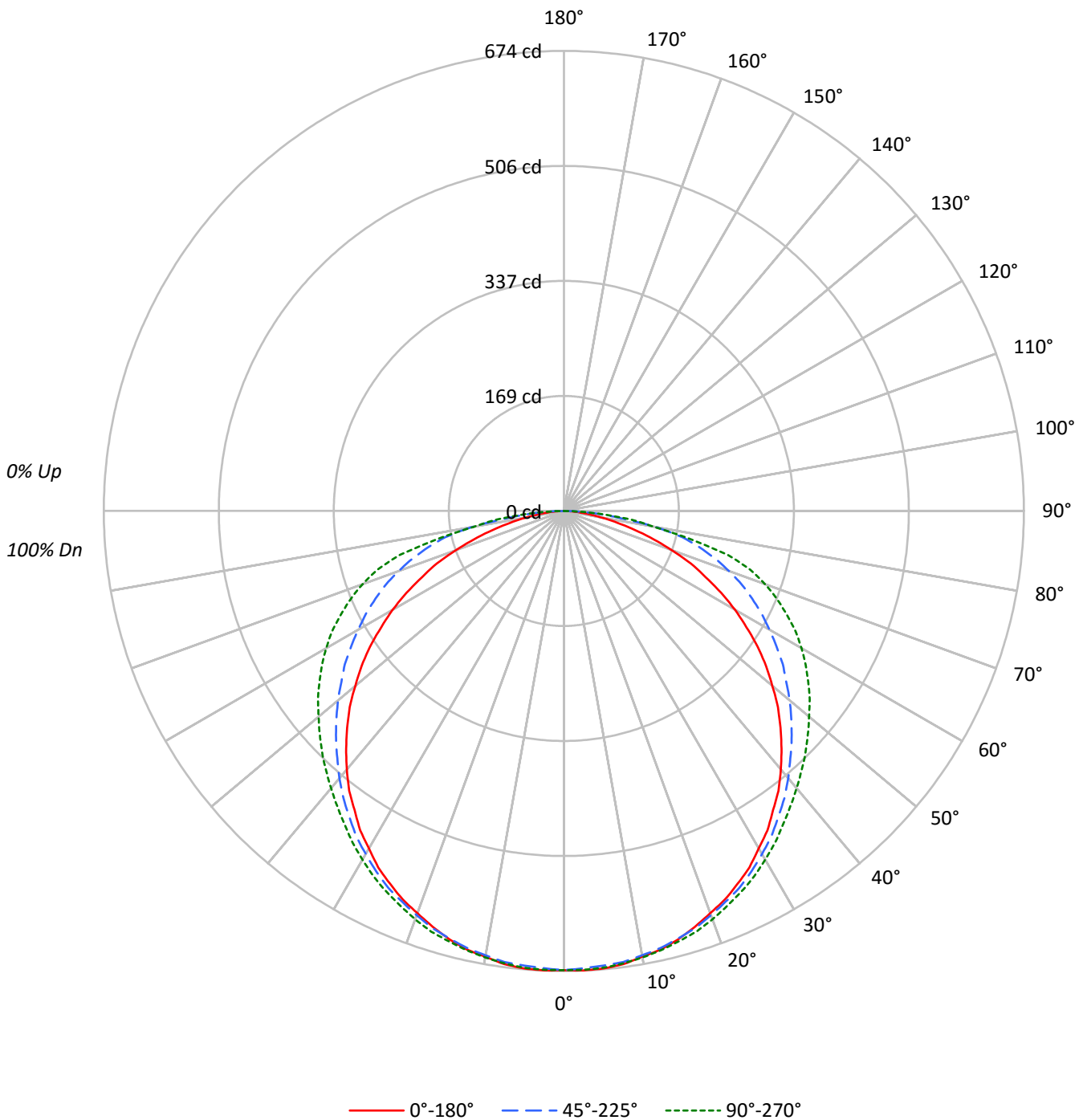
Input Watts (W): 29.2
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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	68	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°	905	905	905
5°	909	903	907
10°	906	903	907
15°	904	903	909
20°	898	902	912
25°	895	904	914
30°	887	902	916
35°	878	899	920
40°	868	898	932
45°	854	898	953
50°	835	904	982
55°	814	918	1025
60°	779	936	1082
65°	730	969	1148
70°	664	1014	1235
75°	562	1070	1291
80°	444	1077	1044
85°	327	818	917



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	63.8	3.0
10°-20°	183.6	8.6
20°-30°	280.8	13.1
30°-40°	343.3	16.1
40°-50°	365.9	17.1
50°-60°	349.8	16.4
60°-70°	296.3	13.9
70°-80°	199.2	9.3
80°-90°	56.2	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°	528.3	24.7
0°-40°	871.6	40.7
0°-60°	1587.3	74.2
0°-90°	2139.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2139.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	673	673	673	673	673	
5°	673	672	668	672	672	64
15°	649	649	648	654	652	183
25°	603	605	609	614	615	278
35°	535	539	548	558	560	335
45°	449	456	472	492	501	346
55°	347	360	392	422	437	309
65°	229	252	304	345	361	228
75°	108	148	206	241	248	116
85°	21	44	53	57	59	26
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	672.7	672.7	672.7	672.7	672.7
2.5°	673.7	673.7	670.5	672.7	672.7
5°	672.7	671.6	668.4	671.6	671.6
7.5°	669.5	668.4	666.3	669.5	668.4
10°	663.1	663.1	661.0	664.2	664.2
12.5°	657.8	656.7	655.7	659.9	658.9
15°	649.3	649.3	648.3	653.6	652.5
17.5°	638.7	639.8	640.8	645.1	646.1
20°	627.0	629.2	630.2	636.6	636.6
22.5°	616.4	617.5	619.6	626.0	626.0
25°	602.6	604.8	609.0	614.3	615.4
27.5°	588.8	589.9	595.2	602.6	603.7
30°	570.8	574.0	580.4	588.8	589.9
32.5°	554.9	558.1	565.5	574.0	576.1
35°	534.7	539.0	547.5	558.1	560.2
37.5°	516.7	519.9	530.5	542.2	545.3
40°	494.4	500.8	511.4	525.2	530.5
42.5°	472.1	478.5	491.2	509.3	515.6
45°	448.8	456.2	472.1	492.3	500.8
47.5°	425.4	433.9	452.0	475.3	484.9
50°	398.9	409.5	431.8	458.3	468.9
52.5°	373.5	386.2	410.6	440.3	454.1
55°	346.9	359.7	391.5	422.3	437.1
57.5°	317.2	334.2	369.2	404.2	420.1
60°	289.6	305.6	348.0	386.2	402.1
62.5°	259.9	281.2	326.8	367.1	383.0
65°	229.2	252.5	304.5	344.8	360.7
67.5°	201.6	227.0	282.2	322.5	338.4
70°	168.7	200.5	257.8	298.1	314.0
72.5°	137.9	172.9	232.4	271.6	286.5
75°	108.2	147.5	205.8	240.8	248.3
77.5°	80.6	122.0	178.2	193.1	187.8
80°	57.3	97.6	139.0	131.6	134.7
82.5°	37.1	74.3	85.9	97.6	100.8
85°	21.2	43.5	53.0	57.3	59.4
87.5°	9.5	15.9	21.2	21.2	20.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)