

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: P312083

Luminaire Tested: **14FCZ2-35-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: P312083
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: 14FCZ2-35-UNV-L83050-RDP-CP187-W2A-U-4500K
Description: 1'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: 2144.0 lumens
Efficiency: N/A
Efficacy: 69.4 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.29 / 1.4
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

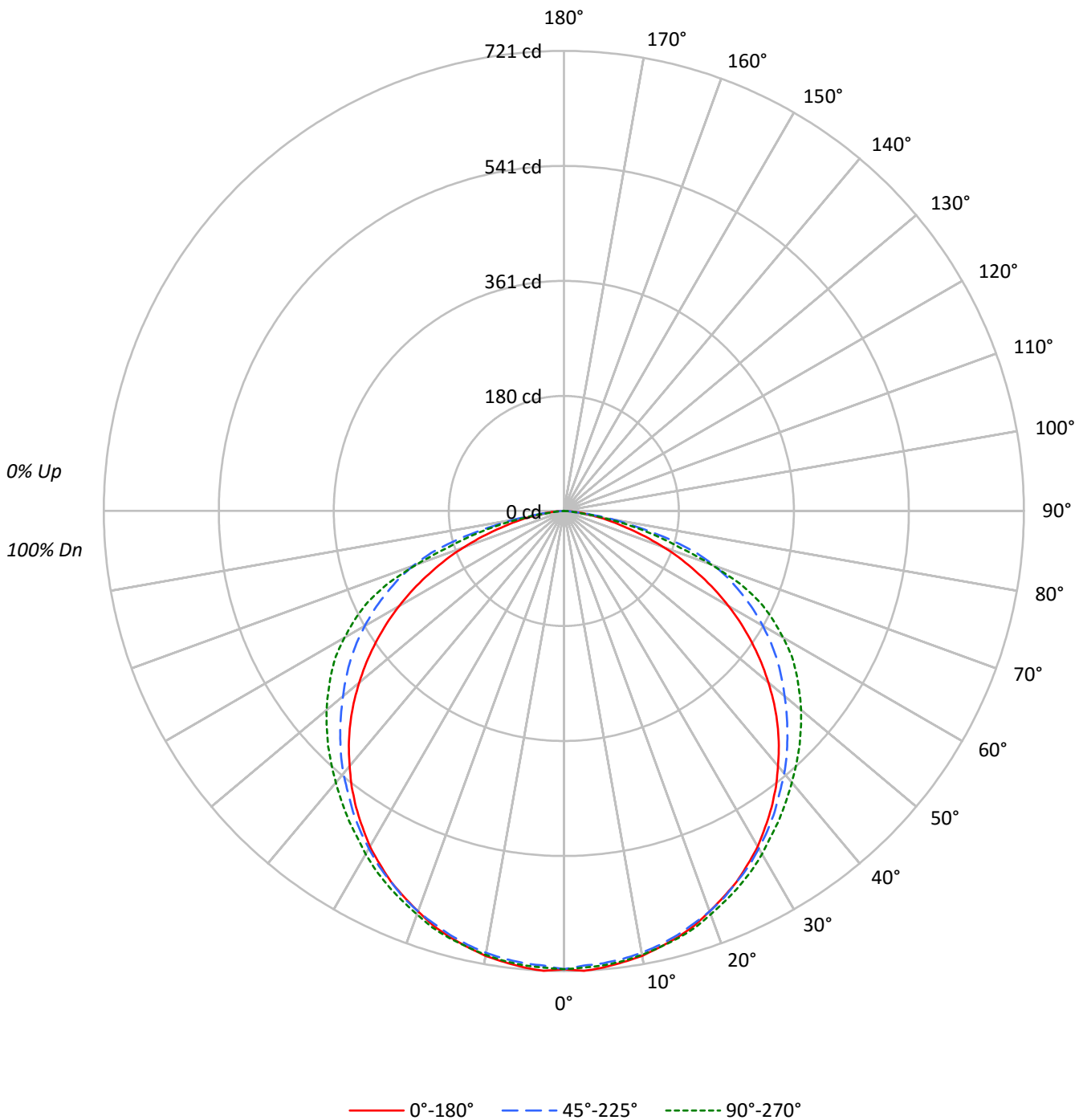
Input Watts (W): 30.9
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1932	1932	1932
5°	1940	1922	1931
10°	1935	1921	1930
15°	1926	1917	1931
20°	1913	1913	1927
25°	1904	1904	1928
30°	1888	1899	1930
35°	1864	1892	1936
40°	1834	1887	1952
45°	1803	1886	1987
50°	1752	1892	2032
55°	1688	1916	2089
60°	1603	1937	2135
65°	1482	1961	2164
70°	1317	1976	1936
75°	1062	1775	1549
80°	831	1244	1012
85°	568	361	259



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	68.0	3.2
10°-20°	195.0	9.1
20°-30°	296.9	13.8
30°-40°	361.7	16.9
40°-50°	383.7	17.9
50°-60°	362.1	16.9
60°-70°	292.4	13.6
70°-80°	158.6	7.4
80°-90°	25.7	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°	559.9	26.1
0°-40°	921.6	43.0
0°-60°	1667.4	77.8
0°-90°	2144.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2144.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	718	718	718	718	718	
5°	718	716	711	716	715	68
15°	691	690	688	693	693	195
25°	641	639	641	648	650	295
35°	567	571	576	588	589	355
45°	474	480	496	514	522	365
55°	360	375	408	435	445	321
65°	233	261	308	333	340	231
75°	102	149	171	154	149	112
85°	18	20	12	10	8	24
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	718.1	718.1	718.1	718.1	718.1
2.5°	721.4	718.1	713.1	718.1	716.4
5°	718.1	716.4	711.4	716.4	714.7
7.5°	713.1	713.1	708.0	711.4	711.4
10°	708.0	706.4	703.0	708.0	706.4
12.5°	699.7	698.0	696.3	701.3	699.7
15°	691.3	689.6	688.0	693.0	693.0
17.5°	681.3	679.6	677.9	684.6	684.6
20°	667.9	667.9	667.9	674.6	672.9
22.5°	654.5	654.5	656.1	662.8	661.2
25°	641.1	639.4	641.1	647.8	649.5
27.5°	624.3	626.0	627.7	634.4	636.1
30°	607.6	609.3	611.0	619.3	621.0
32.5°	587.5	590.9	594.2	604.3	604.3
35°	567.4	570.8	575.8	587.5	589.2
37.5°	545.7	549.0	555.7	569.1	572.5
40°	522.2	527.3	537.3	550.7	555.7
42.5°	498.8	505.5	517.2	532.3	539.0
45°	473.7	480.4	495.5	513.9	522.2
47.5°	446.9	455.3	473.7	497.1	503.8
50°	418.5	430.2	451.9	477.0	485.4
52.5°	390.0	403.4	430.2	457.0	465.3
55°	359.9	374.9	408.4	435.2	445.2
57.5°	329.7	346.5	385.0	413.4	423.5
60°	297.9	318.0	359.9	388.3	396.7
62.5°	266.1	289.6	334.8	363.2	369.9
65°	232.7	261.1	308.0	333.1	339.8
67.5°	200.9	234.3	281.2	299.6	299.6
70°	167.4	204.2	251.1	256.1	246.1
72.5°	133.9	175.8	217.6	199.2	190.8
75°	102.1	149.0	170.7	154.0	149.0
77.5°	77.0	120.5	120.5	110.5	107.1
80°	53.6	92.1	80.3	70.3	65.3
82.5°	35.2	51.9	41.8	33.5	28.5
85°	18.4	20.1	11.7	10.0	8.4
87.5°	6.7	3.3	1.7	3.3	1.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)