

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: P313431

Luminaire Tested: **24FCZ2-30HE-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: P313431
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: 24FCZ2-30HE-UNV-L83050-RDP-CP187-W2A-U-3500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.187" POLYCARB SHEET
Light Source: (336) 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: 1766.0 lumens
Efficiency: N/A
Efficacy: 83.7 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

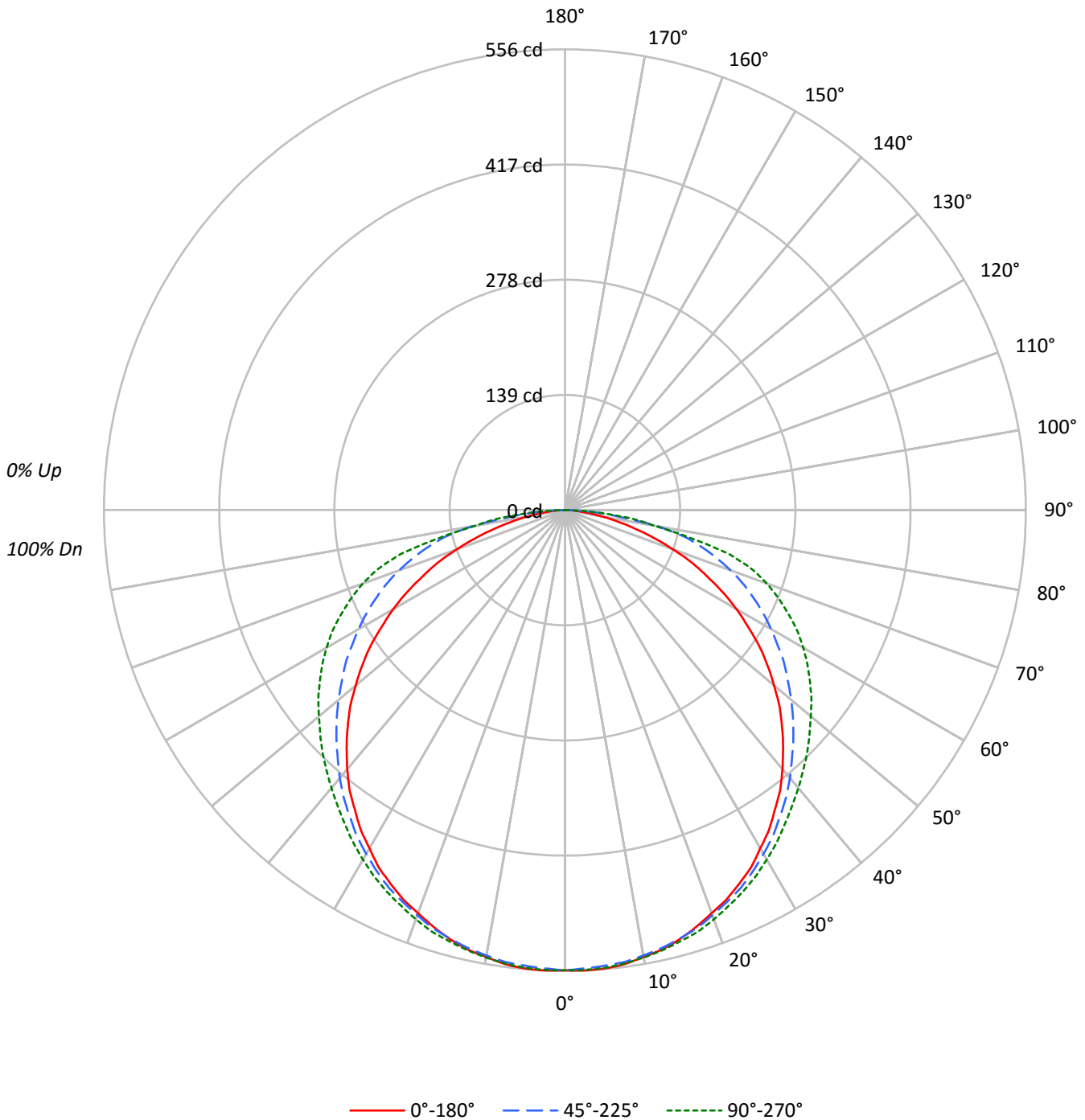
Input Watts (W): 21.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	747	747	747
5°	750	745	749
10°	748	746	749
15°	747	746	750
20°	741	745	753
25°	739	746	754
30°	732	744	757
35°	725	742	760
40°	717	742	769
45°	705	742	787
50°	690	746	810
55°	672	758	847
60°	643	773	893
65°	602	800	948
70°	548	838	1020
75°	464	883	1066
80°	366	890	862
85°	270	676	758



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	52.7	3.0
10°-20°	151.6	8.6
20°-30°	231.8	13.1
30°-40°	283.4	16.0
40°-50°	302.1	17.1
50°-60°	288.8	16.4
60°-70°	244.7	13.9
70°-80°	164.4	9.3
80°-90°	46.4	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°	436.1	24.7
0°-40°	719.6	40.7
0°-60°	1310.5	74.2
0°-90°	1766.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1766.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	555	555	555	555	555	
5°	555	554	552	554	554	53
15°	536	536	535	540	539	151
25°	498	499	503	507	508	229
35°	442	445	452	461	462	277
45°	370	377	390	406	414	286
55°	286	297	323	349	361	255
65°	189	208	251	285	298	188
75°	89	122	170	199	205	96
85°	18	36	44	47	49	22
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	555.4	555.4	555.4	555.4	555.4
2.5°	556.2	556.2	553.6	555.4	555.4
5°	555.4	554.5	551.9	554.5	554.5
7.5°	552.7	551.9	550.1	552.7	551.9
10°	547.5	547.5	545.7	548.3	548.3
12.5°	543.1	542.2	541.3	544.8	544.0
15°	536.1	536.1	535.2	539.6	538.7
17.5°	527.3	528.2	529.1	532.6	533.5
20°	517.7	519.4	520.3	525.6	525.6
22.5°	508.9	509.8	511.6	516.8	516.8
25°	497.5	499.3	502.8	507.2	508.1
27.5°	486.2	487.0	491.4	497.5	498.4
30°	471.3	473.9	479.1	486.2	487.0
32.5°	458.1	460.8	466.9	473.9	475.6
35°	441.5	445.0	452.0	460.8	462.5
37.5°	426.6	429.2	438.0	447.6	450.2
40°	408.2	413.5	422.2	433.6	438.0
42.5°	389.8	395.1	405.6	420.5	425.7
45°	370.5	376.7	389.8	406.4	413.5
47.5°	351.3	358.3	373.2	392.4	400.3
50°	329.4	338.1	356.5	378.4	387.2
52.5°	308.3	318.8	339.0	363.5	374.9
55°	286.4	296.9	323.2	348.6	360.9
57.5°	261.9	275.9	304.8	333.7	346.9
60°	239.1	252.3	287.3	318.8	332.0
62.5°	214.6	232.1	269.8	303.1	316.2
65°	189.2	208.5	251.4	284.7	297.8
67.5°	166.4	187.5	233.0	266.3	279.4
70°	139.3	165.6	212.9	246.1	259.3
72.5°	113.9	142.8	191.8	224.2	236.5
75°	89.3	121.8	169.9	198.8	205.0
77.5°	66.6	100.7	147.2	159.4	155.0
80°	47.3	80.6	114.8	108.6	111.2
82.5°	30.7	61.3	71.0	80.6	83.2
85°	17.5	35.9	43.8	47.3	49.1
87.5°	7.9	13.1	17.5	17.5	16.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)