

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: P313433

Luminaire Tested: **24FCZ2-30HE-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: P313433
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-4500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.187" POLYCARB SHEET
Light Source: (336) 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: 1872.0 lumens
Efficiency: N/A
Efficacy: 84.7 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

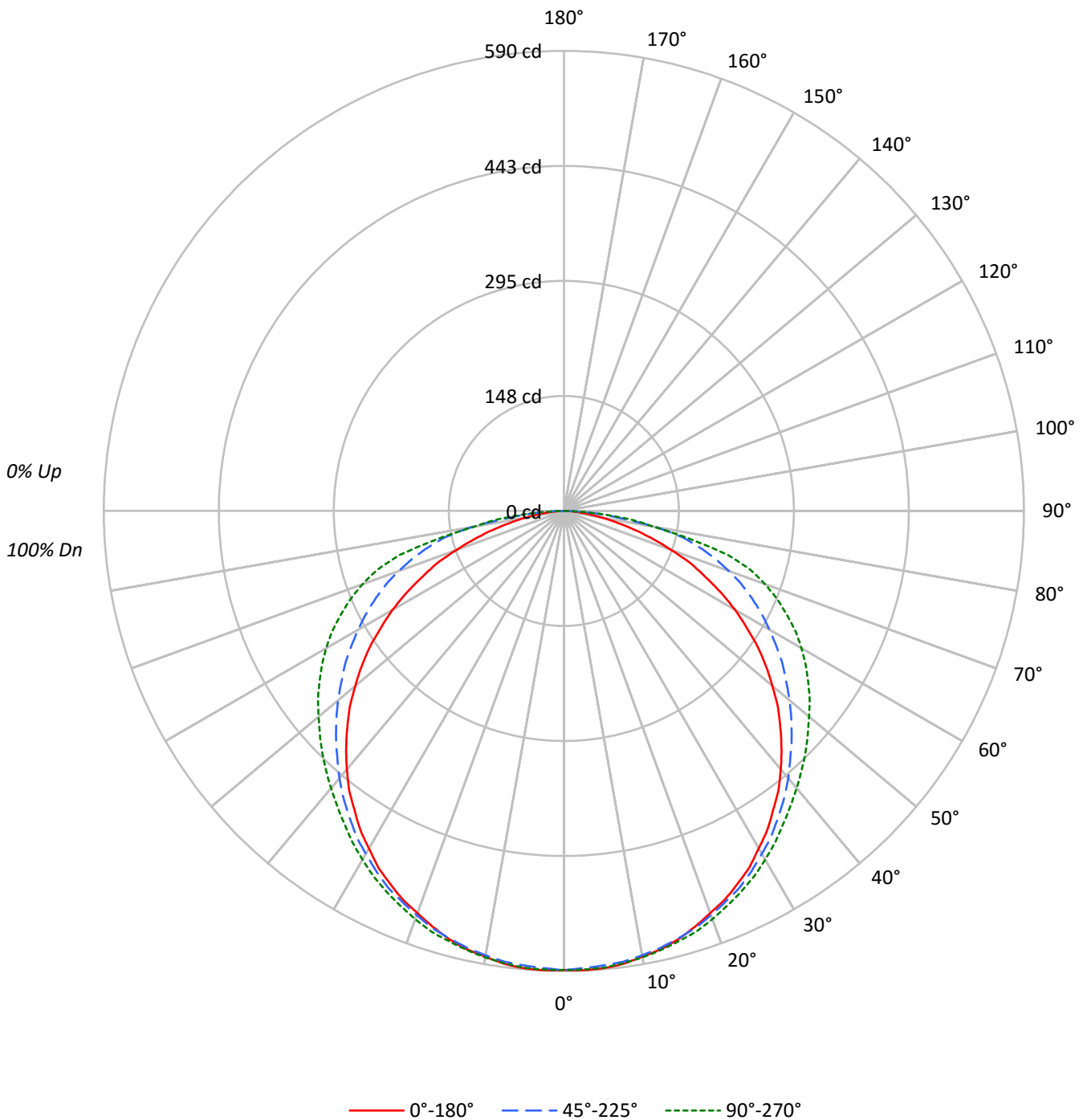
Input Watts (W): 22.1
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	792	792	792
5°	795	790	794
10°	793	790	794
15°	792	790	795
20°	786	790	798
25°	783	791	799
30°	776	789	802
35°	769	787	805
40°	760	786	816
45°	747	786	834
50°	731	791	859
55°	712	804	897
60°	682	820	947
65°	639	848	1005
70°	581	887	1081
75°	492	936	1130
80°	388	942	914
85°	287	716	803



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	55.8	3.0
10°-20°	160.7	8.6
20°-30°	245.8	13.1
30°-40°	300.4	16.0
40°-50°	320.2	17.1
50°-60°	306.2	16.4
60°-70°	259.4	13.9
70°-80°	174.3	9.3
80°-90°	49.2	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°	462.3	24.7
0°-40°	762.8	40.7
0°-60°	1389.2	74.2
0°-90°	1872.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1872.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	589	589	589	589	589	
5°	589	588	585	588	588	56
15°	568	568	567	572	571	160
25°	527	529	533	538	538	243
35°	468	472	479	488	490	293
45°	393	399	413	431	438	303
55°	304	315	343	370	383	270
65°	201	221	266	302	316	199
75°	95	129	180	211	217	101
85°	19	38	46	50	52	23
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	588.7	588.7	588.7	588.7	588.7
2.5°	589.6	589.6	586.8	588.7	588.7
5°	588.7	587.8	585.0	587.8	587.8
7.5°	585.9	585.0	583.1	585.9	585.0
10°	580.3	580.3	578.5	581.3	581.3
12.5°	575.7	574.8	573.8	577.5	576.6
15°	568.3	568.3	567.3	572.0	571.0
17.5°	559.0	559.9	560.8	564.5	565.5
20°	548.8	550.6	551.5	557.1	557.1
22.5°	539.5	540.4	542.3	547.8	547.8
25°	527.4	529.3	533.0	537.6	538.5
27.5°	515.3	516.3	520.9	527.4	528.3
30°	499.6	502.3	507.9	515.3	516.3
32.5°	485.6	488.4	494.9	502.3	504.2
35°	468.0	471.7	479.1	488.4	490.3
37.5°	452.2	455.0	464.3	474.5	477.3
40°	432.7	438.3	447.6	459.6	464.3
42.5°	413.2	418.8	429.9	445.7	451.3
45°	392.8	399.3	413.2	430.8	438.3
47.5°	372.3	379.8	395.6	416.0	424.3
50°	349.1	358.4	377.9	401.1	410.4
52.5°	326.8	338.0	359.3	385.3	397.4
55°	303.6	314.8	342.6	369.6	382.6
57.5°	277.6	292.5	323.1	353.8	367.7
60°	253.5	267.4	304.6	338.0	351.9
62.5°	227.5	246.1	286.0	321.3	335.2
65°	200.6	221.0	266.5	301.8	315.7
67.5°	176.4	198.7	247.0	282.3	296.2
70°	147.6	175.5	225.6	260.9	274.8
72.5°	120.7	151.4	203.3	237.7	250.7
75°	94.7	129.1	180.1	210.8	217.3
77.5°	70.6	106.8	156.0	169.0	164.4
80°	50.1	85.4	121.6	115.1	117.9
82.5°	32.5	65.0	75.2	85.4	88.2
85°	18.6	38.1	46.4	50.1	52.0
87.5°	8.4	13.9	18.6	18.6	17.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)