

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: P313806

Luminaire Tested: **24FCZ2-30HE-UNV-L83050-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: P313806
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-15)
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-CP187-W2A-U-3500K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 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: 2626.0 lumens
Efficiency: N/A
Efficacy: 124.5 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.29 / 1.38
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

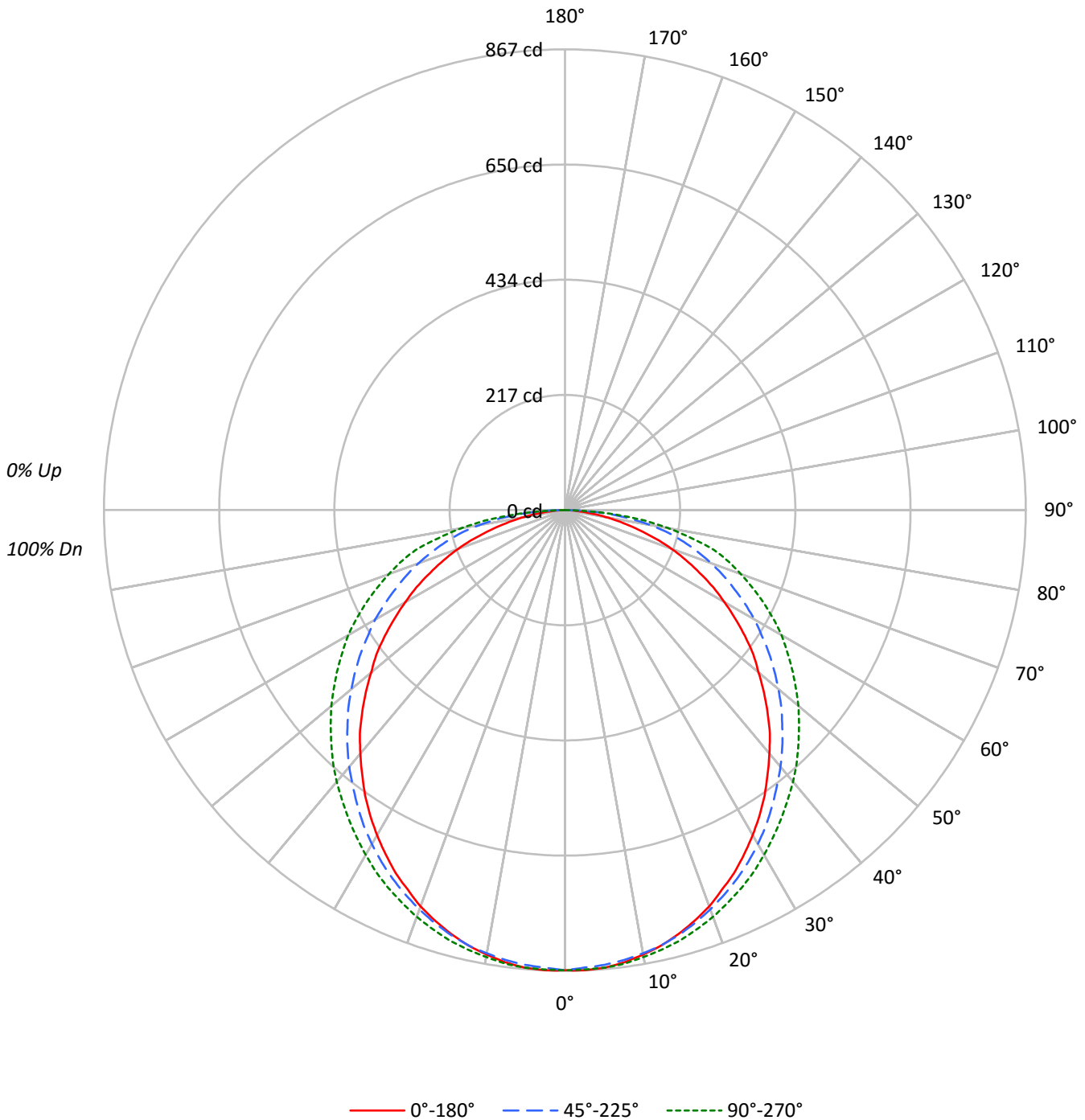
Input Watts (W): 21.1
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	92	89	92	89	87	88	86	84	82
2	98	89	81	75	95	87	80	74	83	78	73	80	75	71	77	73	69	67
3	89	77	69	62	86	76	68	61	73	66	60	70	64	59	67	62	58	56
4	81	68	59	52	79	67	58	52	64	57	51	62	56	50	60	54	50	47
5	74	61	52	45	72	60	51	44	58	50	44	56	49	43	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36
7	64	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31
8	59	45	37	31	57	45	36	30	43	36	30	42	35	30	41	34	30	28
9	55	41	33	27	54	41	33	27	40	32	27	39	32	27	38	31	27	25
10	52	38	30	25	50	38	30	25	37	30	25	36	29	25	35	29	24	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1165	1165	1165
5°	1167	1160	1167
10°	1161	1157	1167
15°	1151	1153	1168
20°	1136	1145	1166
25°	1119	1137	1165
30°	1098	1128	1164
35°	1076	1116	1165
40°	1051	1108	1172
45°	1026	1101	1182
50°	996	1098	1200
55°	971	1099	1224
60°	933	1109	1266
65°	890	1121	1312
70°	843	1155	1385
75°	752	1205	1513
80°	642	1276	1546
85°	457	1264	1479



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	82.0	3.1
10°-20°	234.4	8.9
20°-30°	354.0	13.5
30°-40°	426.6	16.2
40°-50°	447.9	17.1
50°-60°	419.0	16.0
60°-70°	346.0	13.2
70°-80°	235.8	9.0
80°-90°	80.4	3.1
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°	670.3	25.5
0°-40°	1096.9	41.8
0°-60°	1963.8	74.8
0°-90°	2626.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2626.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	866	866	866	866	866	
5°	864	863	859	864	864	82
15°	826	827	828	836	838	233
25°	754	757	766	781	785	347
35°	655	662	680	702	709	409
45°	539	551	578	610	621	416
55°	414	430	469	507	522	369
65°	280	303	352	396	412	277
75°	145	178	232	275	291	154
85°	30	58	82	92	96	37
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	866.0	866.0	866.0	866.0	866.0
2.5°	866.9	866.0	861.7	866.0	865.2
5°	864.3	863.4	859.1	864.3	864.3
7.5°	858.2	858.2	853.8	859.9	860.8
10°	849.5	849.5	846.9	853.8	853.8
12.5°	839.0	839.0	839.0	846.0	846.9
15°	826.0	826.8	827.7	836.4	838.2
17.5°	810.3	812.0	814.6	825.1	826.8
20°	793.7	795.5	799.8	812.0	814.6
22.5°	772.8	777.2	783.3	797.2	799.8
25°	753.6	757.1	765.8	780.6	785.0
27.5°	730.1	735.3	746.7	762.4	768.5
30°	706.6	711.8	725.8	744.1	749.3
32.5°	681.3	689.2	704.0	723.1	729.2
35°	655.2	662.2	679.6	702.2	709.2
37.5°	626.4	636.0	655.2	679.6	688.3
40°	598.6	609.0	630.8	656.9	667.4
42.5°	570.7	581.1	605.5	635.1	645.6
45°	539.3	550.6	578.5	609.9	621.2
47.5°	507.9	521.9	552.4	585.5	597.7
50°	475.7	491.4	524.5	559.3	573.3
52.5°	447.0	461.8	496.6	534.1	547.2
55°	413.8	430.4	468.7	507.1	521.9
57.5°	379.9	398.2	439.1	480.9	495.7
60°	346.8	366.8	412.1	453.9	470.5
62.5°	314.5	334.6	381.6	425.2	441.7
65°	279.7	303.2	352.0	396.4	412.1
67.5°	246.6	271.8	323.2	366.8	382.5
70°	214.3	238.7	293.6	336.3	352.0
72.5°	179.5	207.4	262.2	306.7	323.2
75°	144.6	177.7	231.8	275.3	291.0
77.5°	112.4	146.4	200.4	236.1	244.0
80°	82.8	117.6	164.7	189.9	199.5
82.5°	53.1	88.0	125.5	143.8	151.6
85°	29.6	58.4	81.9	92.4	95.8
87.5°	12.2	25.3	33.1	37.5	37.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)