

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: P310570

Luminaire Tested: **24FCZ2-30-UNV-L82765-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: P310570
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: 24FCZ2-30-UNV-L82765-CP187-W2A-U-6500K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 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: 2712.0 lumens
Efficiency: N/A
Efficacy: 111.1 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

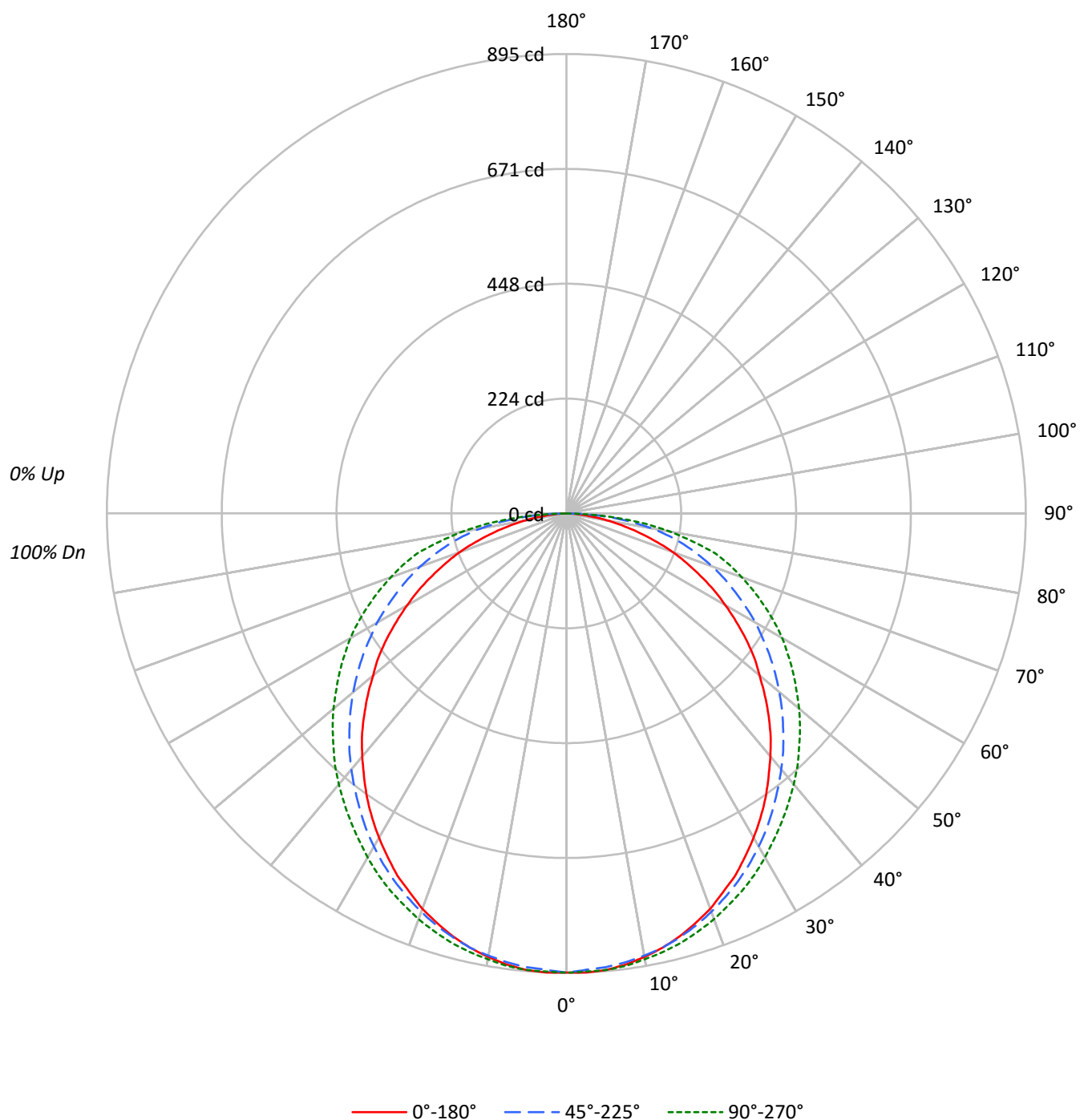
Input Watts (W): 24.4
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				0
RW	70	50	30	10	70	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		100
1	108	103	98	94	105	100	96	92	96	92	89		92	89	87		82
2	98	89	81	75	95	87	80	74	83	78	73		80	75	71		67
3	89	77	69	62	86	76	68	61	73	66	60		70	64	59		56
4	81	68	59	52	79	67	58	52	64	57	51		62	56	50		47
5	74	61	52	45	72	60	51	44	58	50	44		56	49	43		41
6	69	55	46	39	67	54	45	39	52	44	38		50	43	38		36
7	64	50	41	34	62	49	40	34	47	39	34		46	39	34		31
8	59	45	37	31	57	45	36	30	43	36	30		42	35	30		28
9	55	41	33	27	54	41	33	27	40	32	27		39	32	27		25
10	52	38	30	25	50	38	30	25	37	30	25		36	29	25		23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1203	1203	1203
5°	1206	1198	1206
10°	1199	1195	1205
15°	1188	1191	1206
20°	1174	1183	1205
25°	1155	1174	1204
30°	1134	1164	1202
35°	1111	1153	1203
40°	1086	1144	1211
45°	1060	1137	1221
50°	1028	1134	1239
55°	1003	1136	1264
60°	964	1145	1308
65°	919	1157	1355
70°	871	1193	1430
75°	777	1244	1562
80°	662	1318	1597
85°	472	1306	1528



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	84.6	3.1
10°-20°	242.0	8.9
20°-30°	365.6	13.5
30°-40°	440.6	16.2
40°-50°	462.6	17.1
50°-60°	432.7	16.0
60°-70°	357.3	13.2
70°-80°	243.5	9.0
80°-90°	83.1	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°	692.2	25.5
0°-40°	1132.8	41.8
0°-60°	2028.1	74.8
0°-90°	2712.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2712.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	894	894	894	894	894	
5°	893	892	887	893	893	85
15°	853	854	855	864	866	240
25°	778	782	791	806	811	358
35°	677	684	702	725	732	423
45°	557	569	598	630	642	430
55°	427	444	484	524	539	381
65°	289	313	364	409	426	286
75°	149	184	239	284	300	159
85°	31	60	85	95	99	38
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	894.4	894.4	894.4	894.4	894.4
2.5°	895.3	894.4	889.9	894.4	893.5
5°	892.6	891.7	887.2	892.6	892.6
7.5°	886.3	886.3	881.8	888.1	889.0
10°	877.3	877.3	874.6	881.8	881.8
12.5°	866.5	866.5	866.5	873.7	874.6
15°	853.0	853.9	854.8	863.8	865.6
17.5°	836.8	838.6	841.3	852.1	853.9
20°	819.7	821.5	826.0	838.6	841.3
22.5°	798.1	802.6	808.9	823.3	826.0
25°	778.3	781.9	790.9	806.2	810.7
27.5°	754.0	759.4	771.1	787.3	793.6
30°	729.7	735.1	749.5	768.4	773.8
32.5°	703.6	711.7	727.0	746.8	753.1
35°	676.6	683.8	701.8	725.2	732.4
37.5°	647.0	656.8	676.6	701.8	710.8
40°	618.2	629.0	651.4	678.4	689.2
42.5°	589.4	600.2	625.4	655.9	666.7
45°	557.0	568.7	597.5	629.9	641.6
47.5°	524.6	539.0	570.5	604.7	617.3
50°	491.3	507.5	541.7	577.7	592.1
52.5°	461.6	476.9	512.9	551.6	565.1
55°	427.4	444.5	484.1	523.7	539.0
57.5°	392.3	411.2	453.5	496.7	512.0
60°	358.1	378.8	425.6	468.8	485.9
62.5°	324.8	345.5	394.1	439.1	456.2
65°	288.8	313.1	363.5	409.4	425.6
67.5°	254.6	280.7	333.8	378.8	395.0
70°	221.3	246.5	303.2	347.3	363.5
72.5°	185.4	214.2	270.8	316.7	333.8
75°	149.4	183.6	239.3	284.3	300.5
77.5°	116.1	151.2	207.0	243.8	251.9
80°	85.5	121.5	170.1	196.2	206.1
82.5°	54.9	90.9	129.6	148.5	156.6
85°	30.6	60.3	84.6	95.4	99.0
87.5°	12.6	26.1	34.2	38.7	38.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)