

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: P310250

Luminaire Tested: **24FCZ2-50-UNV-L82765-RDP-CP187-W2A-U-4000K**

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: P310250
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: 24FCZ2-50-UNV-L82765-RDP-CP187-W2A-U-4000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.187" POLYCARB SHEET
Light Source: (168) 4000K 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: 2873.0 lumens
Efficiency: N/A
Efficacy: 66.5 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

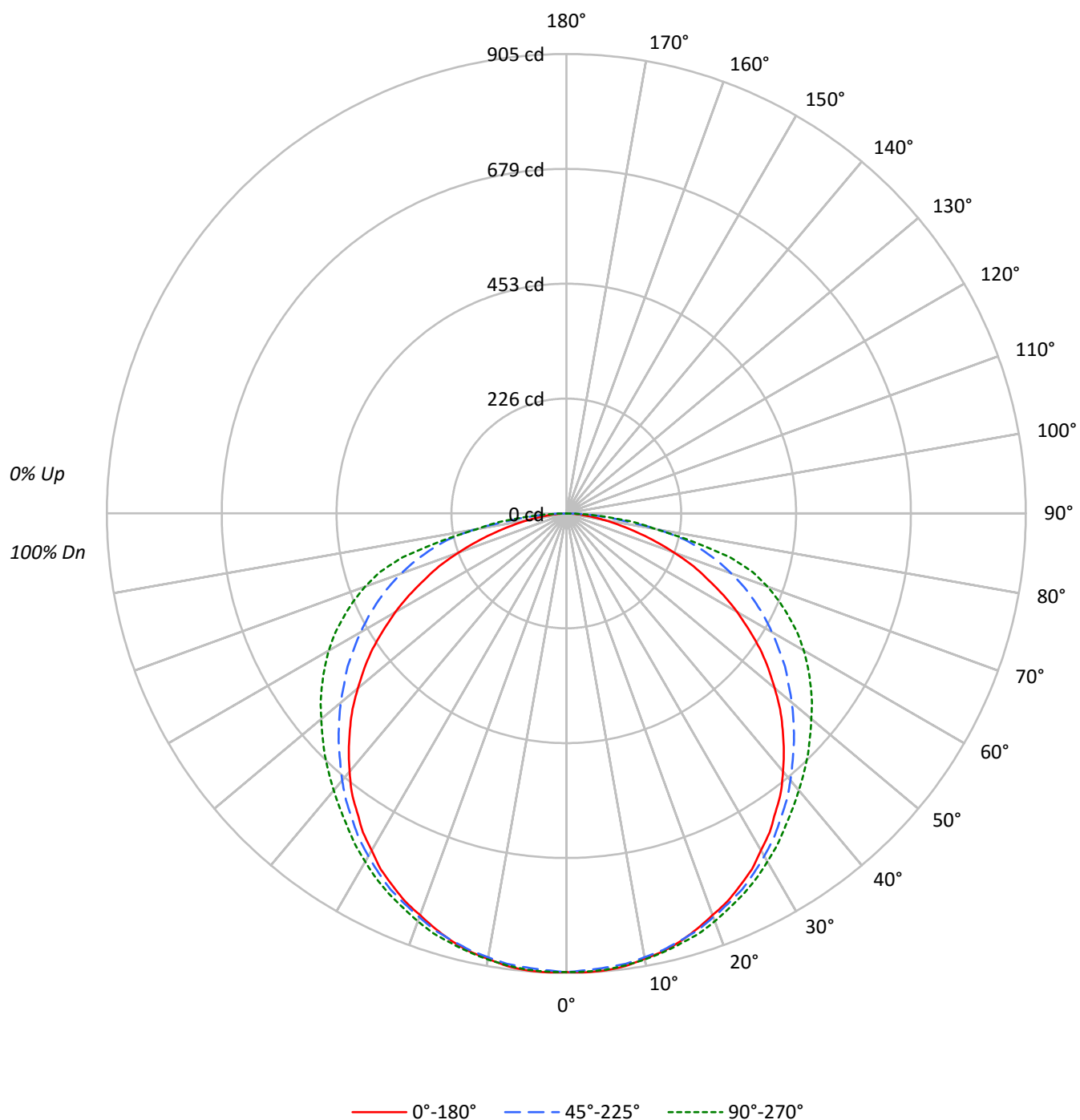
Input Watts (W): 43.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	93	89		92	89	87		82
2	97	89	81	75	95	87	80	74	83	77	72		80	75	71		67
3	88	77	68	62	86	76	67	61	72	66	60		70	64	59		56
4	81	68	59	52	78	67	58	51	64	57	51		62	55	50		47
5	74	60	51	44	72	59	51	44	57	49	43		55	48	43		40
6	68	54	45	38	66	53	45	38	51	44	38		50	43	37		35
7	63	49	40	34	61	48	40	34	47	39	33		45	38	33		31
8	59	45	36	30	57	44	36	30	43	35	30		41	34	29		27
9	55	41	33	27	53	40	32	27	39	32	27		38	31	26		24
10	51	38	30	24	50	37	29	24	36	29	24		35	29	24		22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1216	1216	1216
5°	1220	1213	1218
10°	1217	1213	1219
15°	1215	1213	1221
20°	1206	1212	1224
25°	1202	1214	1227
30°	1191	1211	1231
35°	1180	1208	1236
40°	1166	1206	1251
45°	1147	1207	1280
50°	1122	1214	1319
55°	1093	1233	1377
60°	1047	1258	1453
65°	980	1302	1543
70°	891	1362	1659
75°	756	1437	1734
80°	597	1447	1402
85°	440	1101	1232



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	85.7	3.0
10°-20°	246.7	8.6
20°-30°	377.2	13.1
30°-40°	461.1	16.0
40°-50°	491.4	17.1
50°-60°	469.9	16.4
60°-70°	398.0	13.9
70°-80°	267.5	9.3
80°-90°	75.5	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°	709.5	24.7
0°-40°	1170.6	40.7
0°-60°	2132.0	74.2
0°-90°	2873.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2873.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	904	904	904	904	904	
5°	904	902	898	902	902	86
15°	872	872	871	878	876	246
25°	809	812	818	825	826	373
35°	718	724	735	750	752	450
45°	603	613	634	661	673	465
55°	466	483	526	567	587	415
65°	308	339	409	463	484	306
75°	145	198	276	324	334	156
85°	28	58	71	77	80	35
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	903.5	903.5	903.5	903.5	903.5
2.5°	904.9	904.9	900.6	903.5	903.5
5°	903.5	902.1	897.8	902.1	902.1
7.5°	899.2	897.8	894.9	899.2	897.8
10°	890.7	890.7	887.8	892.1	892.1
12.5°	883.5	882.1	880.7	886.4	885.0
15°	872.1	872.1	870.7	877.8	876.4
17.5°	857.9	859.3	860.7	866.4	867.9
20°	842.2	845.0	846.5	855.0	855.0
22.5°	827.9	829.4	832.2	840.8	840.8
25°	809.4	812.3	818.0	825.1	826.5
27.5°	790.9	792.3	799.4	809.4	810.8
30°	766.7	770.9	779.5	790.9	792.3
32.5°	745.3	749.6	759.5	770.9	773.8
35°	718.2	723.9	735.3	749.6	752.4
37.5°	694.0	698.3	712.5	728.2	732.5
40°	664.1	672.6	686.9	705.4	712.5
42.5°	634.1	642.7	659.8	684.0	692.6
45°	602.8	612.8	634.1	661.2	672.6
47.5°	571.4	582.8	607.1	638.4	651.2
50°	535.8	550.1	580.0	615.6	629.9
52.5°	501.6	518.7	551.5	591.4	609.9
55°	466.0	483.1	525.8	567.2	587.1
57.5°	426.1	448.9	495.9	542.9	564.3
60°	389.0	410.4	467.4	518.7	540.1
62.5°	349.1	377.6	438.9	493.1	514.4
65°	307.8	339.2	409.0	463.1	484.5
67.5°	270.8	305.0	379.1	433.2	454.6
70°	226.6	269.3	346.3	400.4	421.8
72.5°	185.3	232.3	312.1	364.8	384.8
75°	145.4	198.1	276.5	323.5	333.5
77.5°	108.3	163.9	239.4	259.4	252.2
80°	77.0	131.1	186.7	176.7	181.0
82.5°	49.9	99.8	115.4	131.1	135.4
85°	28.5	58.4	71.3	77.0	79.8
87.5°	12.8	21.4	28.5	28.5	27.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)