

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: P310928

Luminaire Tested: **24FCZ2-50-UNV-L82765-CP187-W2A-U-5500K**

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: P310928
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: 24FCZ2-50-UNV-L82765-CP187-W2A-U-5500K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.187" POLYCARB SHEET
Light Source: (168) 5500K 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: 4449.0 lumens
Efficiency: N/A
Efficacy: 101.3 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

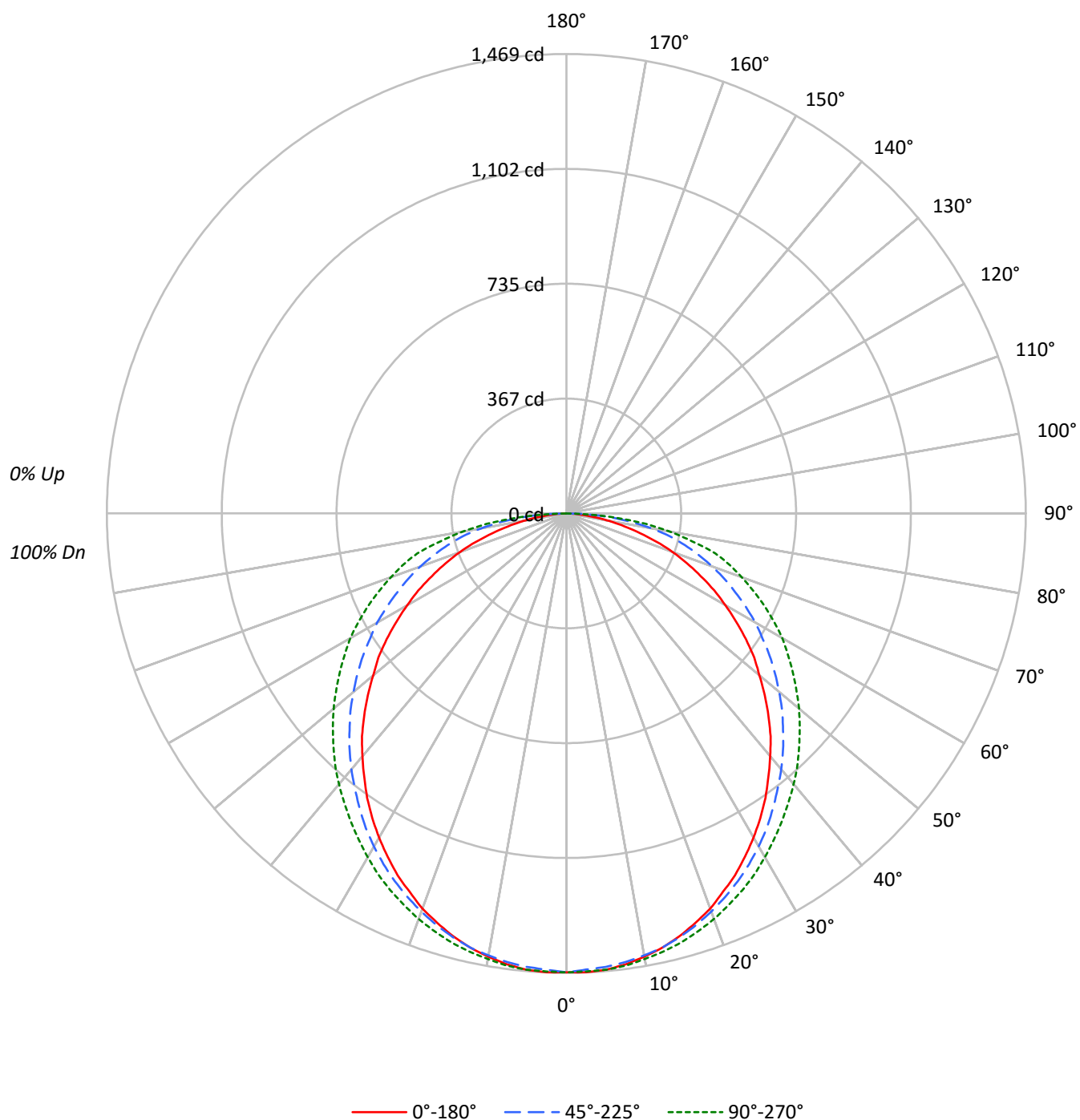
Input Watts (W): 43.9
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P310928

CATALOG NUMBER: 24FCZ2-50-UNV-L82765-CP187-W2A-U-5500K

Luminous Intensity Polar Plot





TEST NUMBER: P310928

CATALOG NUMBER: 24FCZ2-50-UNV-L82765-CP187-W2A-U-5500K

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°	1974	1974	1974
5°	1978	1966	1978
10°	1966	1960	1976
15°	1949	1953	1978
20°	1925	1940	1976
25°	1896	1926	1974
30°	1860	1910	1972
35°	1823	1891	1974
40°	1781	1877	1986
45°	1739	1865	2003
50°	1687	1860	2033
55°	1645	1863	2074
60°	1581	1879	2145
65°	1508	1898	2223
70°	1428	1957	2346
75°	1274	2041	2563
80°	1086	2162	2619
85°	775	2143	2507



TEST NUMBER: P310928

CATALOG NUMBER: 24FCZ2-50-UNV-L82765-CP187-W2A-U-5500K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	138.9	3.1
10°-20°	397.0	8.9
20°-30°	599.7	13.5
30°-40°	722.8	16.2
40°-50°	758.8	17.1
50°-60°	709.9	16.0
60°-70°	586.2	13.2
70°-80°	399.5	9.0
80°-90°	136.3	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°	1135.6	25.5
0°-40°	1858.4	41.8
0°-60°	3327.1	74.8
0°-90°	4449.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4449.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1467	1467	1467	1467	1467	
5°	1464	1463	1455	1464	1464	139
15°	1399	1401	1402	1417	1420	394
25°	1277	1283	1298	1323	1330	587
35°	1110	1122	1151	1190	1202	694
45°	914	933	980	1033	1052	705
55°	701	729	794	859	884	626
65°	474	514	596	672	698	470
75°	245	301	393	466	493	261
85°	50	99	139	156	162	63
90°	0	0	0	0	0	



TEST NUMBER: P310928

CATALOG NUMBER: 24FCZ2-50-UNV-L82765-CP187-W2A-U-5500K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1467.2	1467.2	1467.2	1467.2	1467.2
2.5°	1468.7	1467.2	1459.9	1467.2	1465.8
5°	1464.3	1462.8	1455.4	1464.3	1464.3
7.5°	1454.0	1454.0	1446.6	1456.9	1458.4
10°	1439.2	1439.2	1434.8	1446.6	1446.6
12.5°	1421.5	1421.5	1421.5	1433.3	1434.8
15°	1399.3	1400.8	1402.3	1417.1	1420.0
17.5°	1372.8	1375.7	1380.2	1397.9	1400.8
20°	1344.7	1347.7	1355.1	1375.7	1380.2
22.5°	1309.3	1316.7	1327.0	1350.6	1355.1
25°	1276.8	1282.7	1297.5	1322.6	1330.0
27.5°	1237.0	1245.8	1265.0	1291.6	1301.9
30°	1197.1	1206.0	1229.6	1260.6	1269.4
32.5°	1154.3	1167.6	1192.7	1225.2	1235.5
35°	1110.0	1121.8	1151.4	1189.7	1201.5
37.5°	1061.3	1077.6	1110.0	1151.4	1166.1
40°	1014.1	1031.8	1068.7	1113.0	1130.7
42.5°	966.8	984.6	1025.9	1076.1	1093.8
45°	913.7	932.9	980.1	1033.3	1052.5
47.5°	860.6	884.2	935.8	991.9	1012.6
50°	805.9	832.5	888.6	947.7	971.3
52.5°	757.2	782.3	841.4	904.8	927.0
55°	701.1	729.2	794.1	859.1	884.2
57.5°	643.6	674.6	744.0	814.8	839.9
60°	587.5	621.4	698.2	769.0	797.1
62.5°	532.9	566.8	646.5	720.3	748.4
65°	473.8	513.7	596.3	671.6	698.2
67.5°	417.7	460.5	547.6	621.4	648.0
70°	363.1	404.5	497.4	569.8	596.3
72.5°	304.1	351.3	444.3	519.6	547.6
75°	245.0	301.1	392.6	466.4	493.0
77.5°	190.4	248.0	339.5	400.0	413.3
80°	140.2	199.3	279.0	321.8	338.0
82.5°	90.0	149.1	212.6	243.6	256.8
85°	50.2	98.9	138.8	156.5	162.4
87.5°	20.7	42.8	56.1	63.5	63.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)