

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: P310927

Luminaire Tested: **24FCZ2-50-UNV-L82765-CP187-W2A-U-5000K**

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: P310927
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-5000K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.187" POLYCARB SHEET
Light Source: (168) 5000K 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: 4406.0 lumens
Efficiency: N/A
Efficacy: 100.8 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

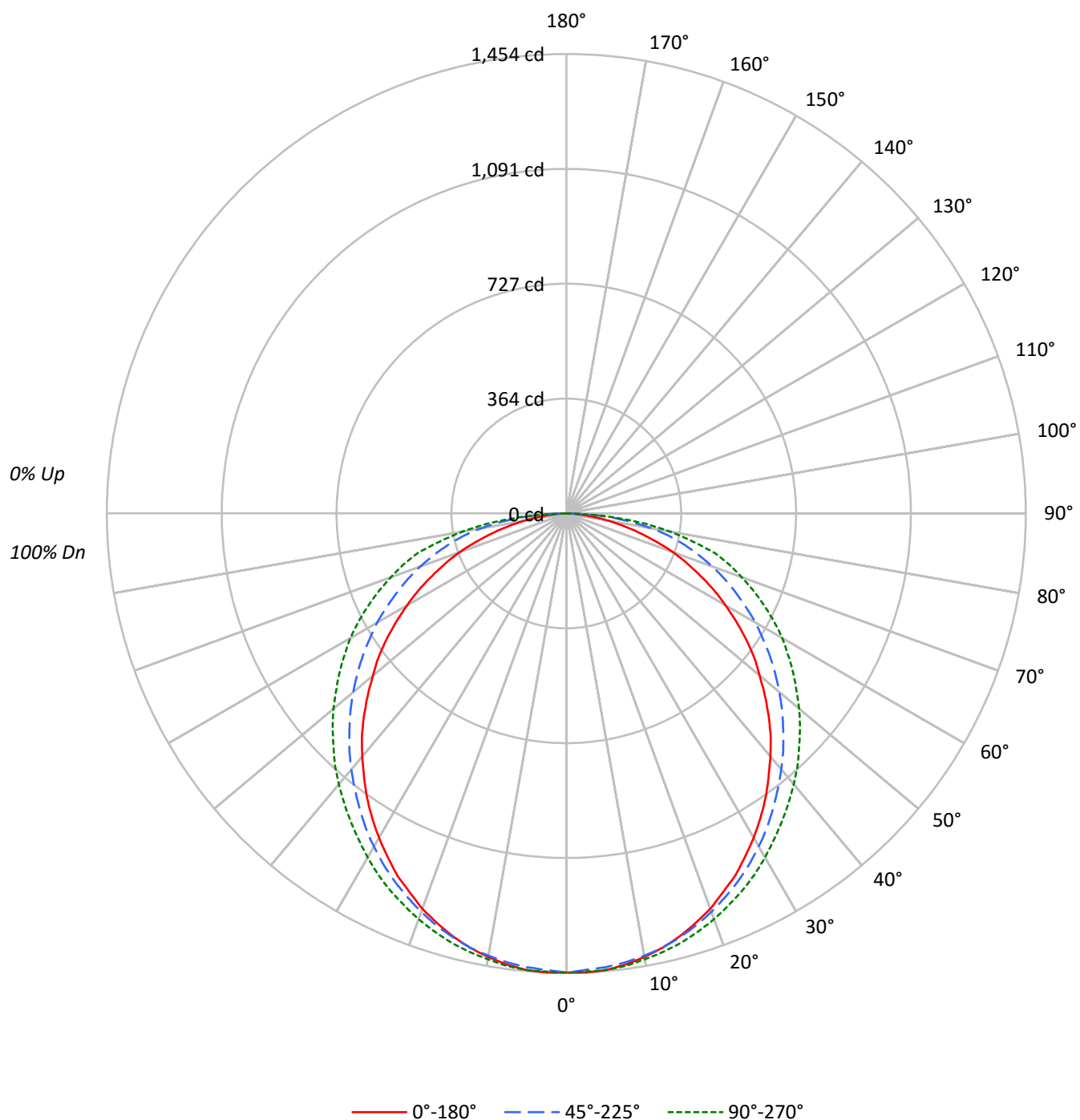
Input Watts (W): 43.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1955	1955	1955
5°	1959	1947	1959
10°	1947	1941	1957
15°	1930	1934	1959
20°	1907	1922	1957
25°	1877	1908	1955
30°	1842	1892	1953
35°	1806	1873	1954
40°	1764	1859	1967
45°	1722	1847	1983
50°	1671	1842	2013
55°	1629	1845	2054
60°	1566	1861	2124
65°	1494	1880	2201
70°	1415	1938	2323
75°	1262	2021	2538
80°	1076	2141	2594
85°	767	2121	2482



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	137.5	3.1
10°-20°	393.2	8.9
20°-30°	593.9	13.5
30°-40°	715.8	16.2
40°-50°	751.5	17.1
50°-60°	703.0	16.0
60°-70°	580.6	13.2
70°-80°	395.6	9.0
80°-90°	134.9	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°	1124.6	25.5
0°-40°	1840.4	41.8
0°-60°	3294.9	74.8
0°-90°	4406.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4406.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1453	1453	1453	1453	1453	
5°	1450	1449	1441	1450	1450	138
15°	1386	1387	1389	1403	1406	391
25°	1264	1270	1285	1310	1317	582
35°	1099	1111	1140	1178	1190	687
45°	905	924	971	1023	1042	698
55°	694	722	786	851	876	620
65°	469	509	591	665	691	465
75°	243	298	389	462	488	259
85°	50	98	137	155	161	62
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1453.1	1453.1	1453.1	1453.1	1453.1
2.5°	1454.5	1453.1	1445.8	1453.1	1451.6
5°	1450.1	1448.7	1441.4	1450.1	1450.1
7.5°	1439.9	1439.9	1432.6	1442.8	1444.3
10°	1425.3	1425.3	1420.9	1432.6	1432.6
12.5°	1407.7	1407.7	1407.7	1419.4	1420.9
15°	1385.8	1387.3	1388.7	1403.4	1406.3
17.5°	1359.5	1362.4	1366.8	1384.4	1387.3
20°	1331.7	1334.7	1342.0	1362.4	1366.8
22.5°	1296.6	1304.0	1314.2	1337.6	1342.0
25°	1264.5	1270.3	1284.9	1309.8	1317.1
27.5°	1225.0	1233.8	1252.8	1279.1	1289.3
30°	1185.5	1194.3	1217.7	1248.4	1257.2
32.5°	1143.2	1156.3	1181.2	1213.3	1223.6
35°	1099.3	1111.0	1140.2	1178.2	1189.9
37.5°	1051.1	1067.1	1099.3	1140.2	1154.8
40°	1004.3	1021.8	1058.4	1102.2	1119.8
42.5°	957.5	975.0	1016.0	1065.7	1083.2
45°	904.9	923.9	970.7	1023.3	1042.3
47.5°	852.2	875.6	926.8	982.4	1002.8
50°	798.2	824.5	880.0	938.5	961.9
52.5°	749.9	774.8	833.2	896.1	918.0
55°	694.4	722.1	786.5	850.8	875.6
57.5°	637.4	668.1	736.8	806.9	831.8
60°	581.8	615.4	691.4	761.6	789.4
62.5°	527.7	561.3	640.3	713.4	741.1
65°	469.2	508.7	590.6	665.1	691.4
67.5°	413.7	456.1	542.3	615.4	641.7
70°	359.6	400.5	492.6	564.3	590.6
72.5°	301.1	347.9	440.0	514.6	542.3
75°	242.7	298.2	388.8	461.9	488.3
77.5°	188.6	245.6	336.2	396.2	409.3
80°	138.9	197.3	276.3	318.7	334.8
82.5°	89.2	147.6	210.5	241.2	254.4
85°	49.7	97.9	137.4	155.0	160.8
87.5°	20.5	42.4	55.5	62.9	62.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)