

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: P310925

Luminaire Tested: **24FCZ2-50-UNV-L82765-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: P310925
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-4000K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 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: 4272.0 lumens
Efficiency: N/A
Efficacy: 98.9 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

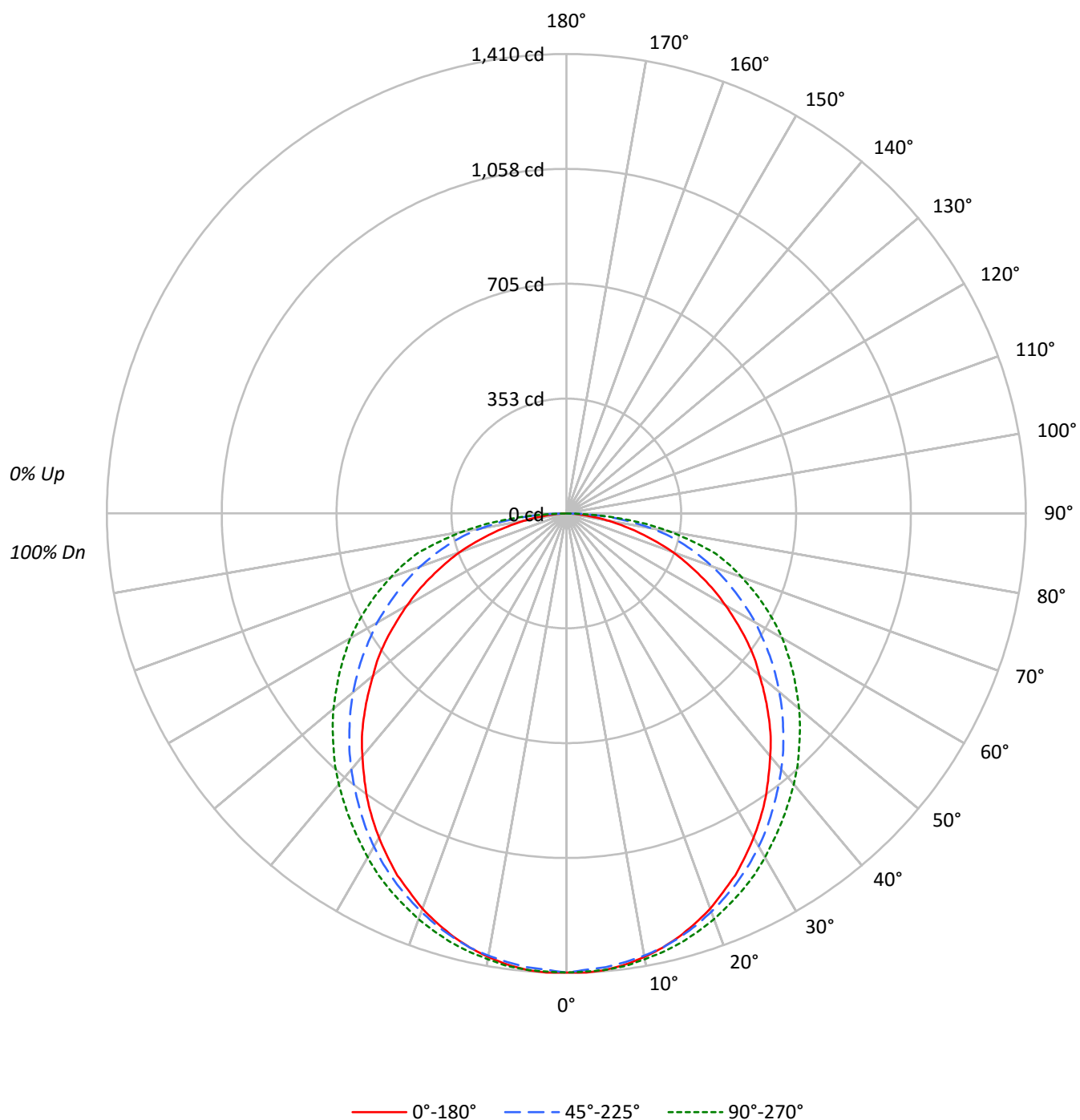
Input Watts (W): 43.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	1896	1896	1896
5°	1899	1888	1899
10°	1888	1882	1898
15°	1872	1876	1899
20°	1849	1863	1897
25°	1820	1850	1896
30°	1786	1834	1894
35°	1751	1816	1895
40°	1710	1802	1907
45°	1670	1791	1923
50°	1620	1786	1952
55°	1579	1789	1992
60°	1518	1804	2060
65°	1449	1823	2134
70°	1372	1879	2253
75°	1223	1960	2461
80°	1044	2076	2515
85°	744	2056	2407



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	133.3	3.1
10°-20°	381.2	8.9
20°-30°	575.8	13.5
30°-40°	694.0	16.2
40°-50°	728.6	17.1
50°-60°	681.6	16.0
60°-70°	562.9	13.2
70°-80°	383.6	9.0
80°-90°	130.8	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°	1090.4	25.5
0°-40°	1784.4	41.8
0°-60°	3194.7	74.8
0°-90°	4272.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4272.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1409	1409	1409	1409	1409	
5°	1406	1405	1398	1406	1406	133
15°	1344	1345	1346	1361	1364	379
25°	1226	1232	1246	1270	1277	564
35°	1066	1077	1106	1142	1154	666
45°	877	896	941	992	1011	677
55°	673	700	762	825	849	601
65°	455	493	573	645	670	451
75°	235	289	377	448	473	251
85°	48	95	133	150	156	60
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1408.9	1408.9	1408.9	1408.9	1408.9
2.5°	1410.3	1408.9	1401.8	1408.9	1407.5
5°	1406.0	1404.6	1397.5	1406.0	1406.0
7.5°	1396.1	1396.1	1389.0	1398.9	1400.4
10°	1381.9	1381.9	1377.7	1389.0	1389.0
12.5°	1364.9	1364.9	1364.9	1376.3	1377.7
15°	1343.7	1345.1	1346.5	1360.7	1363.5
17.5°	1318.2	1321.0	1325.2	1342.3	1345.1
20°	1291.2	1294.1	1301.1	1321.0	1325.2
22.5°	1257.2	1264.3	1274.2	1296.9	1301.1
25°	1226.0	1231.7	1245.9	1270.0	1277.1
27.5°	1187.8	1196.3	1214.7	1240.2	1250.1
30°	1149.5	1158.0	1180.7	1210.4	1218.9
32.5°	1108.4	1121.1	1145.2	1176.4	1186.3
35°	1065.9	1077.2	1105.6	1142.4	1153.7
37.5°	1019.1	1034.7	1065.9	1105.6	1119.7
40°	973.7	990.7	1026.2	1068.7	1085.7
42.5°	928.4	945.4	985.1	1033.3	1050.3
45°	877.4	895.8	941.1	992.2	1010.6
47.5°	826.3	849.0	898.6	952.5	972.3
50°	773.9	799.4	853.3	910.0	932.6
52.5°	727.1	751.2	807.9	868.8	890.1
55°	673.3	700.2	762.5	824.9	849.0
57.5°	618.0	647.7	714.4	782.4	806.5
60°	564.1	596.7	670.4	738.5	765.4
62.5°	511.7	544.3	620.8	691.7	718.6
65°	455.0	493.2	572.6	644.9	670.4
67.5°	401.1	442.2	525.8	596.7	622.2
70°	348.7	388.4	477.7	547.1	572.6
72.5°	292.0	337.3	426.6	498.9	525.8
75°	235.3	289.1	377.0	447.9	473.4
77.5°	182.8	238.1	326.0	384.1	396.9
80°	134.7	191.3	267.9	309.0	324.6
82.5°	86.5	143.2	204.1	233.9	246.6
85°	48.2	95.0	133.2	150.2	155.9
87.5°	19.8	41.1	53.9	60.9	60.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)