

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: P310896

Luminaire Tested: **24FCZ2-50-UNV-L82765-CA08-W2A-U-3000K**

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: P310896
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-CA08-W2A-U-3000K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.08" ACRYLIC SHEET
Light Source: (168) 3000K 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: 4317.0 lumens
Efficiency: N/A
Efficacy: 101.8 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

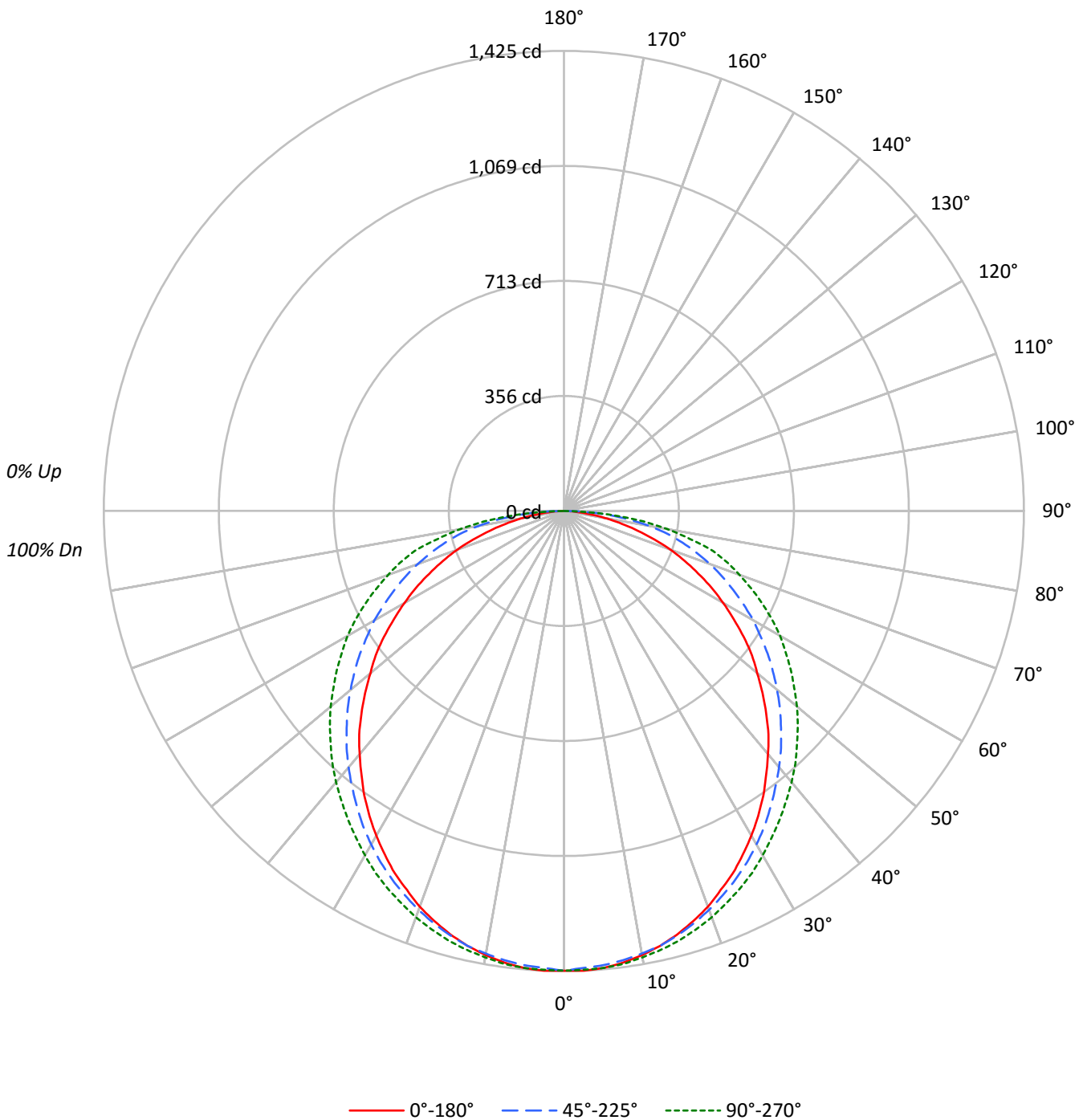
Input Watts (W): 42.4
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				10	0
RW	70	50	30	10	70	50	30	10	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	102	102	102	100
1	108	103	98	94	105	100	96	92	96	92	89	92	89	87	88	86	84	82
2	98	89	81	75	95	87	80	74	83	78	73	80	75	71	77	73	69	67
3	89	77	69	62	86	76	68	61	73	66	60	70	64	59	67	62	58	56
4	81	68	59	52	79	67	58	52	64	57	51	62	56	50	60	54	50	47
5	74	61	52	45	72	60	51	44	58	50	44	56	49	43	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36
7	64	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31
8	59	45	37	31	57	45	36	30	43	36	30	42	35	30	41	34	30	28
9	55	41	33	27	54	41	33	27	40	32	27	39	32	27	38	31	27	25
10	52	38	30	25	50	38	30	25	37	30	25	36	29	25	35	29	24	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1916	1916	1916
5°	1919	1907	1919
10°	1908	1902	1918
15°	1891	1895	1919
20°	1868	1883	1918
25°	1839	1869	1916
30°	1805	1854	1914
35°	1769	1835	1915
40°	1728	1821	1927
45°	1687	1810	1943
50°	1637	1805	1973
55°	1596	1808	2012
60°	1534	1823	2081
65°	1464	1842	2157
70°	1386	1899	2277
75°	1236	1981	2487
80°	1055	2097	2541
85°	752	2078	2433



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	134.7	3.1
10°-20°	385.3	8.9
20°-30°	581.9	13.5
30°-40°	701.3	16.2
40°-50°	736.3	17.1
50°-60°	688.8	16.0
60°-70°	568.9	13.2
70°-80°	387.6	9.0
80°-90°	132.2	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°	1101.9	25.5
0°-40°	1803.3	41.8
0°-60°	3228.3	74.8
0°-90°	4317.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4317.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1424	1424	1424	1424	1424	
5°	1421	1419	1412	1421	1421	135
15°	1358	1359	1361	1375	1378	383
25°	1239	1245	1259	1283	1290	570
35°	1077	1089	1117	1154	1166	673
45°	887	905	951	1003	1021	684
55°	680	708	771	834	858	607
65°	460	498	579	652	678	456
75°	238	292	381	453	478	254
85°	49	96	135	152	158	61
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1423.7	1423.7	1423.7	1423.7	1423.7
2.5°	1425.1	1423.7	1416.5	1423.7	1422.3
5°	1420.8	1419.4	1412.3	1420.8	1420.8
7.5°	1410.8	1410.8	1403.7	1413.7	1415.1
10°	1396.5	1396.5	1392.2	1403.7	1403.7
12.5°	1379.3	1379.3	1379.3	1390.8	1392.2
15°	1357.8	1359.3	1360.7	1375.0	1377.9
17.5°	1332.0	1334.9	1339.2	1356.4	1359.3
20°	1304.8	1307.7	1314.9	1334.9	1339.2
22.5°	1270.5	1277.6	1287.6	1310.6	1314.9
25°	1238.9	1244.7	1259.0	1283.3	1290.5
27.5°	1200.3	1208.9	1227.5	1253.3	1263.3
30°	1161.6	1170.2	1193.1	1223.2	1231.8
32.5°	1120.1	1133.0	1157.3	1188.8	1198.8
35°	1077.1	1088.6	1117.2	1154.4	1165.9
37.5°	1029.8	1045.6	1077.1	1117.2	1131.5
40°	984.0	1001.2	1037.0	1080.0	1097.1
42.5°	938.2	955.3	995.5	1044.1	1061.3
45°	886.6	905.2	951.0	1002.6	1021.2
47.5°	835.0	857.9	908.1	962.5	982.6
50°	782.0	807.8	862.2	919.5	942.5
52.5°	734.8	759.1	816.4	878.0	899.5
55°	680.3	707.6	770.6	833.6	857.9
57.5°	624.5	654.6	721.9	790.6	815.0
60°	570.1	603.0	677.5	746.2	773.4
62.5°	517.1	550.0	627.3	699.0	726.2
65°	459.8	498.4	578.7	651.7	677.5
67.5°	405.3	446.9	531.4	603.0	628.8
70°	352.3	392.5	482.7	552.9	578.7
72.5°	295.1	340.9	431.1	504.2	531.4
75°	237.8	292.2	381.0	452.6	478.4
77.5°	184.8	240.6	329.4	388.2	401.0
80°	136.1	193.4	270.7	312.2	328.0
82.5°	87.4	144.7	206.3	236.3	249.2
85°	48.7	96.0	134.6	151.8	157.6
87.5°	20.1	41.5	54.4	61.6	61.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)