

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: P314035

Luminaire Tested: **24FCZ2-50-UNV-L83050-CP250-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: P314035
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-L83050-CP250-W2A-U-3000K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.250" POLYCARB 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: 4011.0 lumens
Efficiency: N/A
Efficacy: 94.2 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.29 / 1.38
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

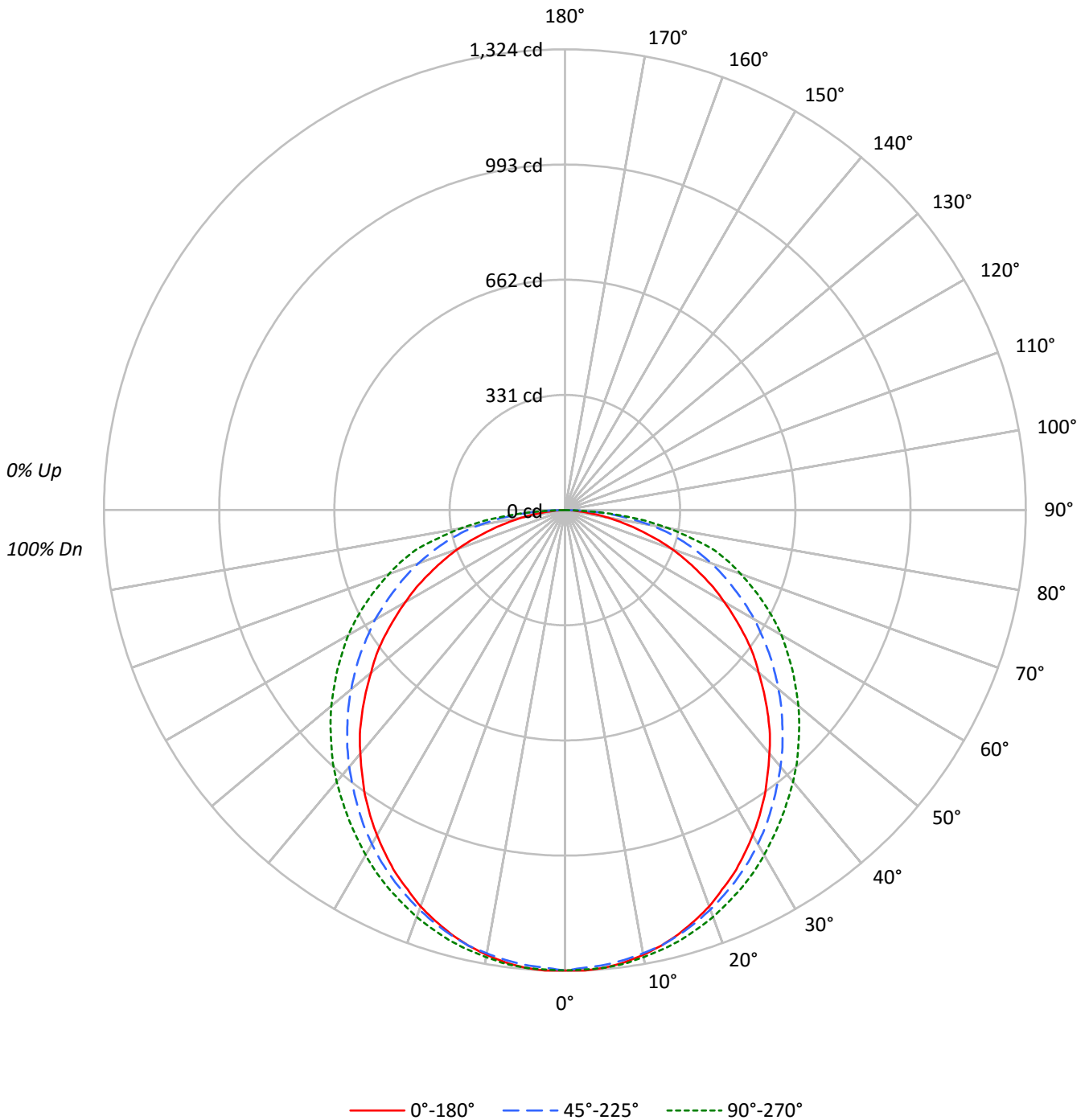
Input Watts (W): 42.6
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1780	1780	1780
5°	1783	1772	1783
10°	1773	1767	1782
15°	1757	1761	1783
20°	1736	1749	1782
25°	1709	1737	1780
30°	1677	1722	1778
35°	1644	1705	1779
40°	1606	1692	1790
45°	1568	1681	1805
50°	1521	1677	1833
55°	1483	1680	1870
60°	1425	1694	1934
65°	1360	1712	2004
70°	1288	1764	2115
75°	1148	1840	2311
80°	979	1949	2361
85°	698	1931	2260



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	125.2	3.1
10°-20°	358.0	8.9
20°-30°	540.7	13.5
30°-40°	651.6	16.2
40°-50°	684.1	17.1
50°-60°	640.0	16.0
60°-70°	528.5	13.2
70°-80°	360.1	9.0
80°-90°	122.8	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°	1023.8	25.5
0°-40°	1675.4	41.8
0°-60°	2999.5	74.8
0°-90°	4011.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4011.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1323	1323	1323	1323	1323	
5°	1320	1319	1312	1320	1320	125
15°	1262	1263	1264	1278	1280	356
25°	1151	1156	1170	1192	1199	530
35°	1001	1011	1038	1073	1083	625
45°	824	841	884	932	949	635
55°	632	657	716	774	797	564
65°	427	463	538	606	630	424
75°	221	272	354	420	444	236
85°	45	89	125	141	146	57
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1322.8	1322.8	1322.8	1322.8	1322.8
2.5°	1324.1	1322.8	1316.1	1322.8	1321.5
5°	1320.1	1318.8	1312.1	1320.1	1320.1
7.5°	1310.8	1310.8	1304.2	1313.5	1314.8
10°	1297.5	1297.5	1293.5	1304.2	1304.2
12.5°	1281.5	1281.5	1281.5	1292.2	1293.5
15°	1261.6	1262.9	1264.2	1277.5	1280.2
17.5°	1237.6	1240.3	1244.3	1260.2	1262.9
20°	1212.3	1215.0	1221.7	1240.3	1244.3
22.5°	1180.4	1187.1	1196.4	1217.7	1221.7
25°	1151.1	1156.4	1169.8	1192.4	1199.0
27.5°	1115.2	1123.2	1140.5	1164.4	1173.7
30°	1079.3	1087.2	1108.5	1136.5	1144.5
32.5°	1040.7	1052.6	1075.3	1104.5	1113.9
35°	1000.7	1011.4	1038.0	1072.6	1083.3
37.5°	956.8	971.5	1000.7	1038.0	1051.3
40°	914.2	930.2	963.5	1003.4	1019.4
42.5°	871.7	887.6	924.9	970.1	986.1
45°	823.8	841.1	883.6	931.5	948.8
47.5°	775.8	797.1	843.7	894.3	912.9
50°	726.6	750.6	801.1	854.4	875.7
52.5°	682.7	705.3	758.5	815.8	835.7
55°	632.1	657.4	716.0	774.5	797.1
57.5°	580.2	608.2	670.7	734.6	757.2
60°	529.6	560.3	629.5	693.3	718.6
62.5°	480.4	511.0	582.9	649.4	674.7
65°	427.2	463.1	537.6	605.5	629.5
67.5°	376.6	415.2	493.7	560.3	584.2
70°	327.4	364.6	448.5	513.7	537.6
72.5°	274.1	316.7	400.6	468.4	493.7
75°	220.9	271.5	354.0	420.5	444.5
77.5°	171.7	223.6	306.1	360.6	372.6
80°	126.4	179.7	251.5	290.1	304.7
82.5°	81.2	134.4	191.6	219.6	231.6
85°	45.2	89.2	125.1	141.1	146.4
87.5°	18.6	38.6	50.6	57.2	57.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)