

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: P310932

Luminaire Tested: **24FCZ2-50-UNV-L82765-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: P310932
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-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: 4007.0 lumens
Efficiency: N/A
Efficacy: 94.5 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

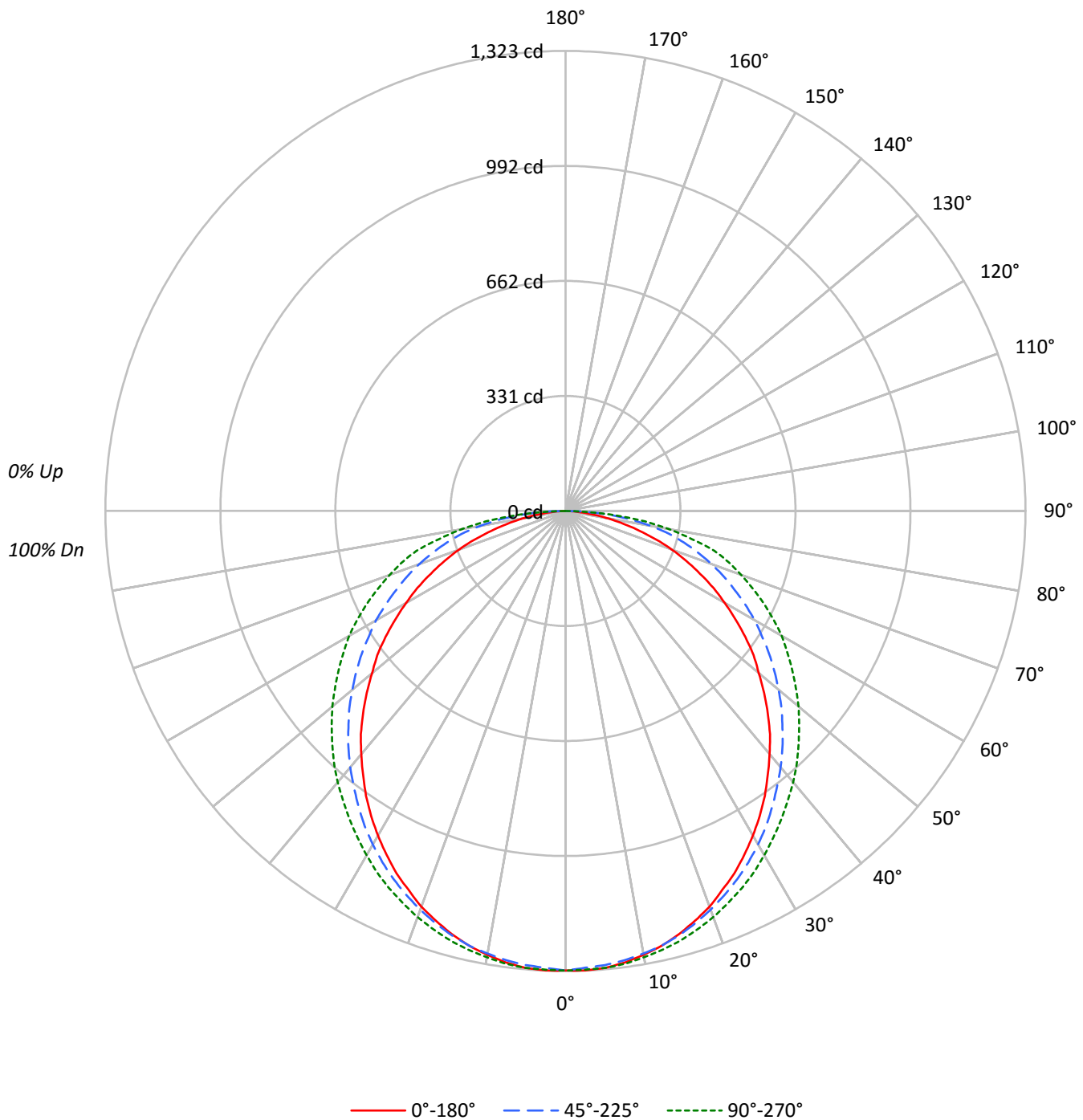
Input Watts (W): 42.4
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1778	1778	1778
5°	1781	1770	1781
10°	1771	1765	1780
15°	1756	1759	1781
20°	1734	1747	1780
25°	1707	1735	1778
30°	1675	1720	1776
35°	1642	1703	1778
40°	1604	1691	1789
45°	1566	1680	1804
50°	1519	1675	1831
55°	1481	1678	1868
60°	1424	1692	1932
65°	1359	1710	2002
70°	1286	1762	2113
75°	1147	1838	2308
80°	979	1947	2359
85°	698	1930	2257



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	125.1	3.1
10°-20°	357.6	8.9
20°-30°	540.1	13.5
30°-40°	651.0	16.2
40°-50°	683.4	17.1
50°-60°	639.4	16.0
60°-70°	528.0	13.2
70°-80°	359.8	9.0
80°-90°	122.7	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°	1022.8	25.5
0°-40°	1673.8	41.8
0°-60°	2996.5	74.8
0°-90°	4007.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4007.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1322	1322	1322	1322	1322	
5°	1319	1318	1311	1319	1319	125
15°	1260	1262	1263	1276	1279	355
25°	1150	1155	1169	1191	1198	529
35°	1000	1010	1037	1072	1082	625
45°	823	840	883	931	948	635
55°	632	657	715	774	796	564
65°	427	463	537	605	629	423
75°	221	271	354	420	444	235
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°	1321.5	1321.5	1321.5	1321.5	1321.5
2.5°	1322.8	1321.5	1314.8	1321.5	1320.1
5°	1318.8	1317.5	1310.8	1318.8	1318.8
7.5°	1309.5	1309.5	1302.9	1312.2	1313.5
10°	1296.2	1296.2	1292.2	1302.9	1302.9
12.5°	1280.3	1280.3	1280.3	1290.9	1292.2
15°	1260.3	1261.6	1263.0	1276.3	1278.9
17.5°	1236.4	1239.0	1243.0	1259.0	1261.6
20°	1211.1	1213.8	1220.4	1239.0	1243.0
22.5°	1179.2	1185.9	1195.2	1216.4	1220.4
25°	1150.0	1155.3	1168.6	1191.2	1197.8
27.5°	1114.1	1122.1	1139.3	1163.3	1172.6
30°	1078.2	1086.2	1107.4	1135.4	1143.3
32.5°	1039.6	1051.6	1074.2	1103.4	1112.8
35°	999.7	1010.4	1037.0	1071.5	1082.2
37.5°	955.9	970.5	999.7	1037.0	1050.3
40°	913.3	929.3	962.5	1002.4	1018.4
42.5°	870.8	886.7	924.0	969.2	985.1
45°	822.9	840.2	882.8	930.6	947.9
47.5°	775.1	796.3	842.9	893.4	912.0
50°	725.9	749.8	800.3	853.5	874.8
52.5°	682.0	704.6	757.8	815.0	834.9
55°	631.5	656.7	715.2	773.7	796.3
57.5°	579.6	607.6	670.0	733.9	756.5
60°	529.1	559.7	628.8	692.6	717.9
62.5°	479.9	510.5	582.3	648.8	674.0
65°	426.8	462.6	537.1	604.9	628.8
67.5°	376.2	414.8	493.2	559.7	583.6
70°	327.0	364.3	448.0	513.2	537.1
72.5°	273.9	316.4	400.2	468.0	493.2
75°	220.7	271.2	353.6	420.1	444.0
77.5°	171.5	223.3	305.8	360.3	372.2
80°	126.3	179.5	251.3	289.8	304.4
82.5°	81.1	134.3	191.4	219.4	231.3
85°	45.2	89.1	125.0	140.9	146.2
87.5°	18.6	38.6	50.5	57.2	57.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)