

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: P310843

Luminaire Tested: **24FCZ2-45-UNV-L82765-CP250-W2A-U-3500K**

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: P310843
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: 24FCZ2-45-UNV-L82765-CP250-W2A-U-3500K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.250" POLYCARB SHEET
Light Source: (168) 3500K 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: 3755.0 lumens
Efficiency: N/A
Efficacy: 99.3 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

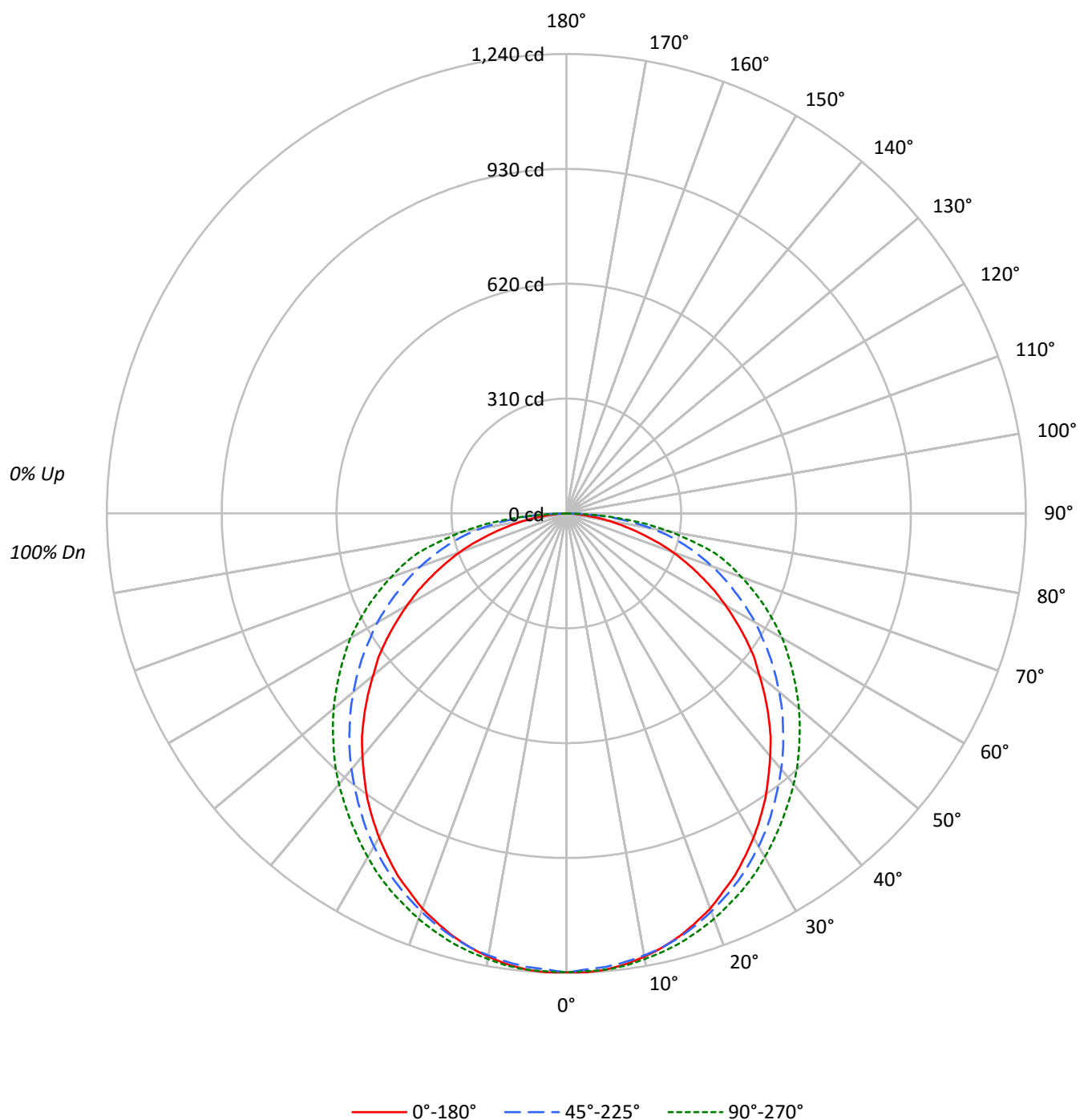
Input Watts (W): 37.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1666	1666	1666
5°	1669	1659	1669
10°	1660	1655	1668
15°	1645	1649	1669
20°	1625	1638	1668
25°	1600	1626	1666
30°	1570	1612	1665
35°	1539	1596	1666
40°	1503	1584	1676
45°	1467	1574	1690
50°	1424	1570	1716
55°	1388	1572	1751
60°	1334	1586	1810
65°	1273	1602	1876
70°	1206	1651	1980
75°	1075	1723	2163
80°	917	1825	2211
85°	655	1808	2115



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	117.2	3.1
10°-20°	335.1	8.9
20°-30°	506.2	13.5
30°-40°	610.0	16.2
40°-50°	640.4	17.1
50°-60°	599.2	16.0
60°-70°	494.8	13.2
70°-80°	337.2	9.0
80°-90°	115.0	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°	958.5	25.5
0°-40°	1568.5	41.8
0°-60°	2808.1	74.8
0°-90°	3755.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3755.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1238	1238	1238	1238	1238	
5°	1236	1235	1228	1236	1236	117
15°	1181	1182	1184	1196	1198	333
25°	1078	1083	1095	1116	1122	496
35°	937	947	972	1004	1014	585
45°	771	787	827	872	888	595
55°	592	615	670	725	746	528
65°	400	434	503	567	589	397
75°	207	254	331	394	416	221
85°	42	84	117	132	137	53
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1238.4	1238.4	1238.4	1238.4	1238.4
2.5°	1239.6	1238.4	1232.1	1238.4	1237.1
5°	1235.9	1234.6	1228.4	1235.9	1235.9
7.5°	1227.2	1227.2	1220.9	1229.6	1230.9
10°	1214.7	1214.7	1211.0	1220.9	1220.9
12.5°	1199.7	1199.7	1199.7	1209.7	1211.0
15°	1181.1	1182.3	1183.5	1196.0	1198.5
17.5°	1158.6	1161.1	1164.9	1179.8	1182.3
20°	1135.0	1137.5	1143.7	1161.1	1164.9
22.5°	1105.1	1111.3	1120.0	1139.9	1143.7
25°	1077.7	1082.6	1095.1	1116.3	1122.5
27.5°	1044.0	1051.5	1067.7	1090.1	1098.8
30°	1010.4	1017.9	1037.8	1063.9	1071.4
32.5°	974.2	985.5	1006.6	1034.0	1042.8
35°	936.9	946.8	971.8	1004.1	1014.1
37.5°	895.8	909.5	936.9	971.8	984.2
40°	855.9	870.8	902.0	939.4	954.3
42.5°	816.0	831.0	865.9	908.2	923.2
45°	771.2	787.4	827.2	872.1	888.3
47.5°	726.3	746.3	789.9	837.2	854.6
50°	680.2	702.7	750.0	799.8	819.8
52.5°	639.1	660.3	710.1	763.7	782.4
55°	591.8	615.4	670.3	725.1	746.3
57.5°	543.2	569.3	627.9	687.7	708.9
60°	495.8	524.5	589.3	649.1	672.8
62.5°	449.7	478.4	545.7	608.0	631.6
65°	399.9	433.6	503.3	566.9	589.3
67.5°	352.6	388.7	462.2	524.5	546.9
70°	306.5	341.4	419.8	480.9	503.3
72.5°	256.6	296.5	375.0	438.5	462.2
75°	206.8	254.2	331.4	393.7	416.1
77.5°	160.7	209.3	286.5	337.6	348.8
80°	118.4	168.2	235.5	271.6	285.3
82.5°	76.0	125.8	179.4	205.6	216.8
85°	42.4	83.5	117.1	132.1	137.0
87.5°	17.4	36.1	47.3	53.6	53.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)