

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: P310934

Luminaire Tested: **24FCZ2-50-UNV-L82765-CP250-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: P310934
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-4000K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.250" 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: 4237.0 lumens
Efficiency: N/A
Efficacy: 98.1 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

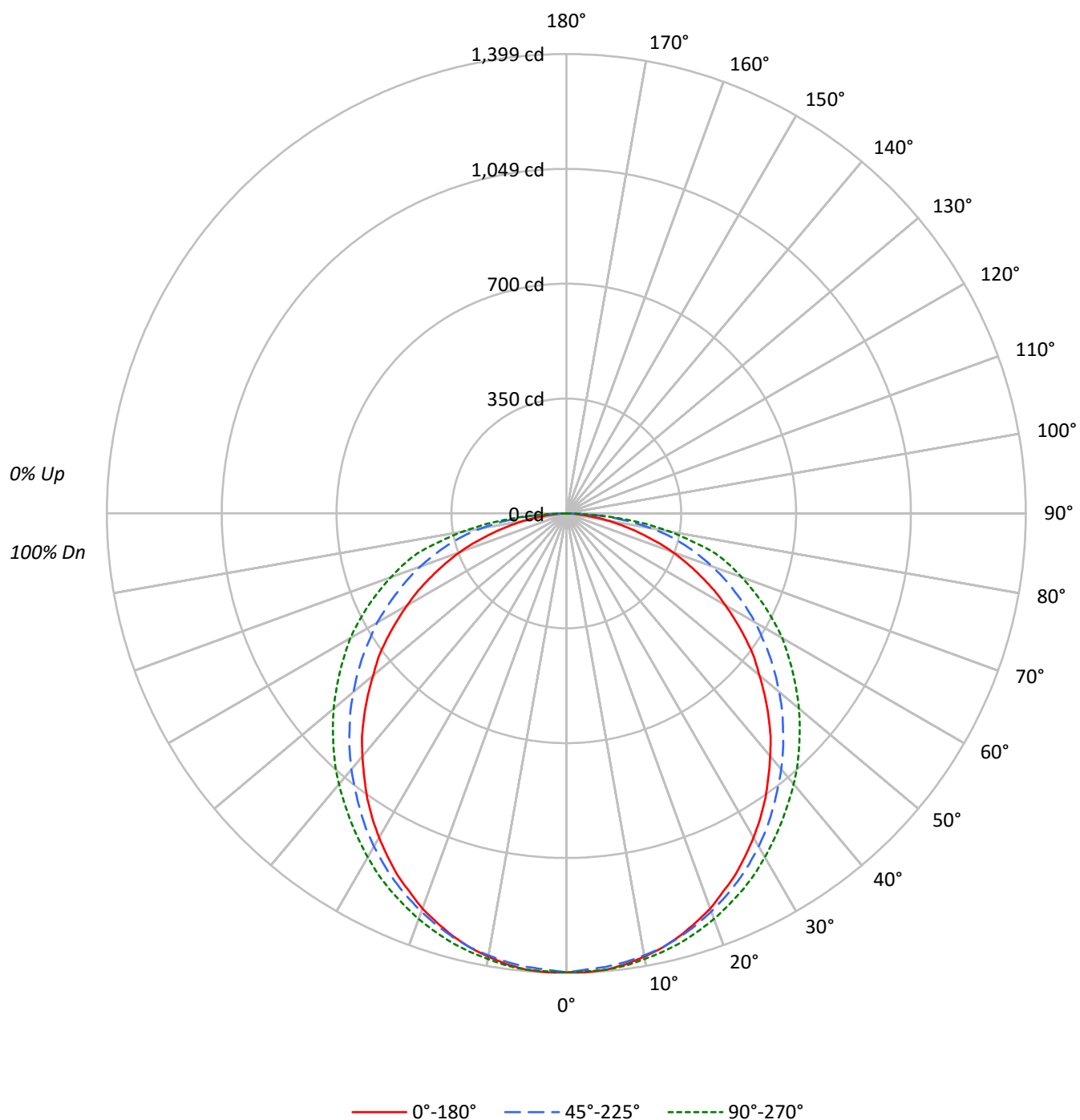
Input Watts (W): 43.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1880	1880	1880
5°	1883	1872	1883
10°	1873	1867	1882
15°	1856	1860	1884
20°	1834	1848	1882
25°	1805	1834	1880
30°	1771	1819	1878
35°	1736	1801	1880
40°	1696	1788	1891
45°	1656	1776	1907
50°	1607	1771	1936
55°	1566	1774	1975
60°	1506	1789	2043
65°	1436	1808	2117
70°	1360	1864	2234
75°	1213	1944	2441
80°	1034	2059	2494
85°	738	2039	2387



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	132.2	3.1
10°-20°	378.1	8.9
20°-30°	571.1	13.5
30°-40°	688.3	16.2
40°-50°	722.6	17.1
50°-60°	676.1	16.0
60°-70°	558.3	13.2
70°-80°	380.4	9.0
80°-90°	129.7	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°	1081.5	25.5
0°-40°	1769.8	41.8
0°-60°	3168.5	74.8
0°-90°	4237.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4237.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1397	1397	1397	1397	1397	
5°	1394	1393	1386	1394	1394	132
15°	1333	1334	1336	1350	1352	376
25°	1216	1222	1236	1260	1267	559
35°	1057	1068	1096	1133	1144	661
45°	870	888	933	984	1002	671
55°	668	694	756	818	842	596
65°	451	489	568	640	665	448
75°	233	287	374	444	470	249
85°	48	94	132	149	155	60
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1397.3	1397.3	1397.3	1397.3	1397.3
2.5°	1398.7	1397.3	1390.3	1397.3	1395.9
5°	1394.5	1393.1	1386.1	1394.5	1394.5
7.5°	1384.7	1384.7	1377.6	1387.5	1388.9
10°	1370.6	1370.6	1366.4	1377.6	1377.6
12.5°	1353.7	1353.7	1353.7	1365.0	1366.4
15°	1332.7	1334.1	1335.5	1349.5	1352.3
17.5°	1307.4	1310.2	1314.4	1331.3	1334.1
20°	1280.6	1283.5	1290.5	1310.2	1314.4
22.5°	1246.9	1253.9	1263.8	1286.3	1290.5
25°	1216.0	1221.6	1235.7	1259.6	1266.6
27.5°	1178.0	1186.5	1204.7	1230.0	1239.9
30°	1140.1	1148.5	1171.0	1200.5	1209.0
32.5°	1099.3	1112.0	1135.9	1166.8	1176.6
35°	1057.1	1068.4	1096.5	1133.0	1144.3
37.5°	1010.7	1026.2	1057.1	1096.5	1110.6
40°	965.8	982.6	1017.8	1059.9	1076.8
42.5°	920.8	937.6	977.0	1024.8	1041.7
45°	870.2	888.4	933.4	984.0	1002.3
47.5°	819.6	842.1	891.3	944.7	964.4
50°	767.5	792.8	846.3	902.5	925.0
52.5°	721.2	745.1	801.3	861.7	882.8
55°	667.7	694.4	756.3	818.2	842.1
57.5°	612.9	642.4	708.5	776.0	799.9
60°	559.5	591.8	664.9	732.4	759.1
62.5°	507.5	539.8	615.7	686.0	712.7
65°	451.2	489.2	567.9	639.6	664.9
67.5°	397.8	438.6	521.5	591.8	617.1
70°	345.8	385.2	473.7	542.6	567.9
72.5°	289.6	334.6	423.1	494.8	521.5
75°	233.4	286.8	373.9	444.2	469.5
77.5°	181.3	236.2	323.3	381.0	393.6
80°	133.5	189.8	265.7	306.5	321.9
82.5°	85.8	142.0	202.4	232.0	244.6
85°	47.8	94.2	132.1	149.0	154.6
87.5°	19.7	40.8	53.4	60.4	60.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)