

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: P309579

Luminaire Tested: **24FCZ2-50-UNV-L82765-HRP-CP187-W2A-U-5700K**

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: P309579
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-20)
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-HRP-CP187-W2A-U-5700K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.187"
POLYCARB SHEET
Light Source: (168) 5700K 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: 3384.0 lumens
Efficiency: N/A
Efficacy: 77.1 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.3 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

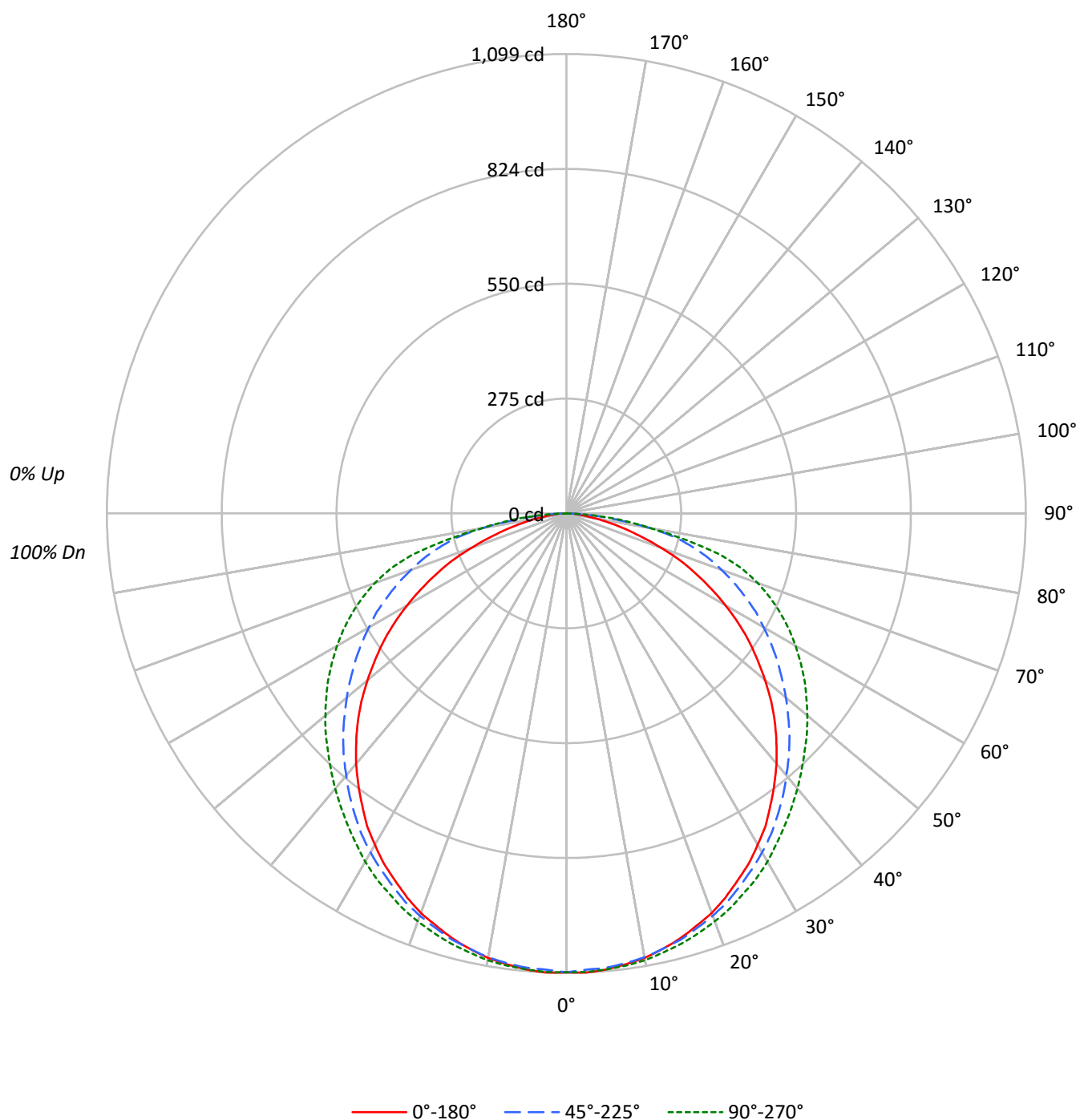
Input Watts (W): 43.9
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	101	96	93	96	93	90		92	90	87		82
2	98	89	82	76	95	87	80	75	83	78	73		80	75	71		67
3	89	78	69	62	86	76	68	62	73	66	61		70	64	59		56
4	81	68	59	52	79	67	59	52	65	57	51		62	56	50		48
5	74	61	52	45	72	60	51	45	58	50	44		56	49	44		41
6	69	55	46	39	67	54	45	39	52	44	38		50	43	38		36
7	63	50	41	34	62	49	40	34	47	39	34		46	39	34		31
8	59	45	36	30	57	44	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	24		23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1477	1477	1477
5°	1479	1473	1479
10°	1475	1473	1483
15°	1466	1470	1484
20°	1456	1467	1487
25°	1439	1460	1489
30°	1422	1455	1494
35°	1398	1447	1496
40°	1374	1438	1510
45°	1342	1437	1534
50°	1299	1435	1575
55°	1253	1446	1632
60°	1182	1468	1704
65°	1091	1502	1800
70°	953	1555	1917
75°	774	1635	1981
80°	571	1602	1602
85°	437	1181	1334



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	104.0	3.1
10°-20°	298.7	8.8
20°-30°	454.7	13.4
30°-40°	552.1	16.3
40°-50°	583.3	17.2
50°-60°	550.4	16.3
60°-70°	457.6	13.5
70°-80°	301.1	8.9
80°-90°	82.1	2.4
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°	857.4	25.3
0°-40°	1409.5	41.7
0°-60°	2543.2	75.2
0°-90°	3384.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3384.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1098	1098	1098	1098	1098	
5°	1095	1095	1091	1095	1095	104
15°	1053	1054	1055	1065	1065	297
25°	969	975	983	1000	1003	447
35°	851	861	881	904	911	533
45°	706	720	755	792	806	543
55°	534	557	616	674	696	476
65°	343	382	472	541	565	339
75°	149	217	314	373	381	160
85°	28	62	76	85	86	35
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1097.9	1097.9	1097.9	1097.9	1097.9
2.5°	1099.4	1097.9	1092.3	1097.9	1097.9
5°	1095.1	1095.1	1090.9	1095.1	1095.1
7.5°	1088.0	1088.0	1085.2	1090.9	1090.9
10°	1079.5	1079.5	1078.1	1085.2	1085.2
12.5°	1066.8	1068.2	1066.8	1075.3	1075.3
15°	1052.6	1054.0	1055.4	1065.4	1065.4
17.5°	1034.2	1037.0	1039.9	1051.2	1052.6
20°	1017.2	1018.6	1024.3	1037.0	1038.4
22.5°	994.5	998.8	1005.9	1018.6	1022.9
25°	969.0	974.7	983.2	1000.2	1003.0
27.5°	944.9	949.2	960.5	978.9	984.6
30°	915.2	922.3	936.4	954.9	961.9
32.5°	886.9	893.9	910.9	930.8	936.4
35°	851.4	861.4	881.2	903.9	910.9
37.5°	817.4	827.4	851.4	876.9	885.4
40°	782.0	793.4	818.9	848.6	859.9
42.5°	743.8	759.4	787.7	820.3	833.0
45°	705.5	719.7	755.1	791.9	806.1
47.5°	664.4	681.4	719.7	763.6	780.6
50°	620.5	641.8	685.7	733.8	752.3
52.5°	576.6	600.7	650.3	704.1	723.9
55°	534.1	556.8	616.3	674.3	695.6
57.5°	487.3	515.7	580.8	643.2	664.4
60°	439.2	470.3	545.4	610.6	633.3
62.5°	391.0	426.4	511.4	576.6	600.7
65°	342.8	382.5	471.8	541.2	565.3
67.5°	296.1	340.0	434.9	504.3	528.4
70°	242.3	297.5	395.3	463.3	487.3
72.5°	192.7	256.4	357.0	420.8	442.0
75°	148.8	216.8	314.5	372.6	381.1
77.5°	109.1	177.1	270.6	290.4	291.8
80°	73.7	141.7	206.8	204.0	206.8
82.5°	48.2	106.3	130.3	145.9	147.3
85°	28.3	62.3	76.5	85.0	86.4
87.5°	14.2	21.3	26.9	28.3	31.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)