

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: P309573

Luminaire Tested: **24FCZ2-50-UNV-L82765-HRP-CP187-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: P309573
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-3000K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.187"
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: 3064.0 lumens
Efficiency: N/A
Efficacy: 72.3 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

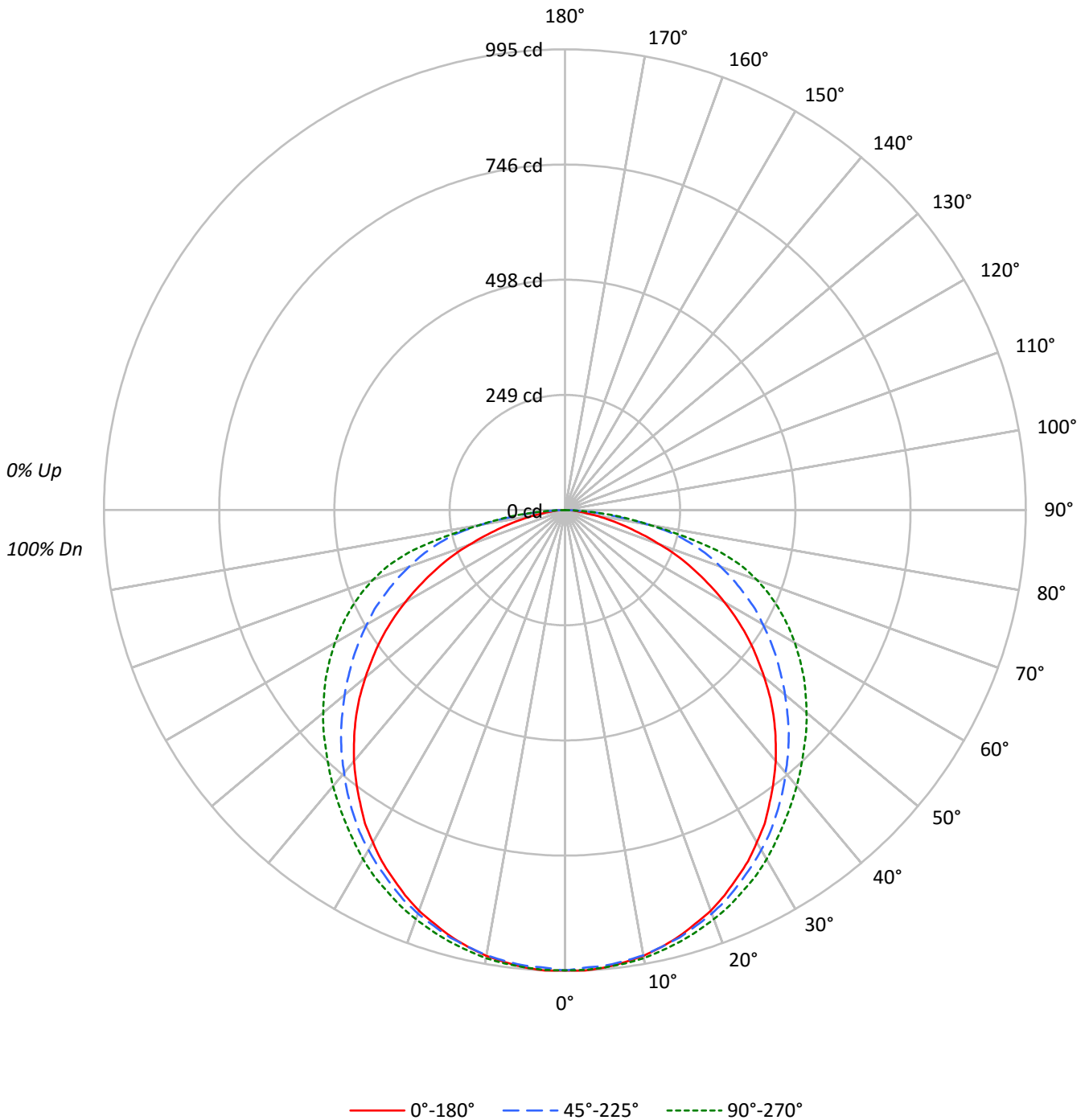
Input Watts (W): 42.4
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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					10	0
RW	70	50	30	10	70	50	30	10	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				100
1	108	103	98	94	105	101	96	93	96	93	90	92	90	87	89	86	84	82				82
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67				67
3	89	78	69	62	86	76	68	62	73	66	61	70	64	59	68	63	58	56				56
4	81	68	59	52	79	67	59	52	65	57	51	62	56	50	60	54	50	48				48
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41				41
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36				36
7	63	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31				31
8	59	45	36	30	57	44	36	30	43	36	30	42	35	30	41	34	30	28				28
9	55	41	33	27	54	41	33	27	40	32	27	39	32	27	38	31	27	25				25
10	52	38	30	25	50	38	30	25	37	30	25	36	29	24	35	29	24	23				23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1338	1338	1338
5°	1339	1334	1339
10°	1335	1334	1342
15°	1328	1331	1344
20°	1319	1328	1346
25°	1303	1322	1348
30°	1287	1317	1353
35°	1266	1311	1355
40°	1244	1302	1368
45°	1216	1301	1389
50°	1176	1299	1426
55°	1134	1309	1477
60°	1070	1329	1543
65°	988	1360	1629
70°	863	1408	1736
75°	700	1481	1794
80°	517	1451	1451
85°	397	1070	1207



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	94.2	3.1
10°-20°	270.4	8.8
20°-30°	411.7	13.4
30°-40°	499.9	16.3
40°-50°	528.1	17.2
50°-60°	498.4	16.3
60°-70°	414.4	13.5
70°-80°	272.6	8.9
80°-90°	74.3	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°	776.3	25.3
0°-40°	1276.2	41.7
0°-60°	2302.7	75.2
0°-90°	3064.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3064.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	994	994	994	994	994	
5°	992	992	988	992	992	94
15°	953	954	956	965	965	269
25°	877	882	890	906	908	405
35°	771	780	798	818	825	483
45°	639	652	684	717	730	492
55°	484	504	558	611	630	431
65°	310	346	427	490	512	307
75°	135	196	285	337	345	145
85°	26	56	69	77	78	31
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	994.1	994.1	994.1	994.1	994.1
2.5°	995.4	994.1	989.0	994.1	994.1
5°	991.6	991.6	987.7	991.6	991.6
7.5°	985.1	985.1	982.6	987.7	987.7
10°	977.4	977.4	976.2	982.6	982.6
12.5°	965.9	967.2	965.9	973.6	973.6
15°	953.1	954.4	955.6	964.6	964.6
17.5°	936.4	939.0	941.5	951.8	953.1
20°	921.0	922.3	927.4	939.0	940.2
22.5°	900.5	904.3	910.7	922.3	926.1
25°	877.4	882.5	890.2	905.6	908.2
27.5°	855.6	859.4	869.7	886.4	891.5
30°	828.6	835.1	847.9	864.6	871.0
32.5°	803.0	809.4	824.8	842.8	847.9
35°	770.9	779.9	797.9	818.4	824.8
37.5°	740.1	749.1	770.9	794.0	801.7
40°	708.1	718.3	741.4	768.4	778.6
42.5°	673.4	687.5	713.2	742.7	754.2
45°	638.8	651.6	683.7	717.0	729.9
47.5°	601.6	617.0	651.6	691.4	706.8
50°	561.8	581.1	620.8	664.5	681.1
52.5°	522.1	543.9	588.8	637.5	655.5
55°	483.6	504.1	558.0	610.6	629.8
57.5°	441.3	466.9	525.9	582.4	601.6
60°	397.6	425.9	493.9	552.9	573.4
62.5°	354.0	386.1	463.1	522.1	543.9
65°	310.4	346.3	427.1	490.0	511.8
67.5°	268.1	307.9	393.8	456.7	478.5
70°	219.3	269.4	357.9	419.5	441.3
72.5°	174.5	232.2	323.2	381.0	400.2
75°	134.7	196.3	284.8	337.4	345.1
77.5°	98.8	160.3	245.0	263.0	264.2
80°	66.7	128.3	187.3	184.7	187.3
82.5°	43.6	96.2	118.0	132.1	133.4
85°	25.7	56.4	69.3	77.0	78.2
87.5°	12.8	19.2	24.4	25.7	28.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)