

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: P309577

Luminaire Tested: **24FCZ2-50-UNV-L82765-HRP-CP187-W2A-U-5000K**

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: P309577
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-5000K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.187" POLYCARB SHEET
Light Source: (168) 5000K 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: 3342.0 lumens
Efficiency: N/A
Efficacy: 76.5 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

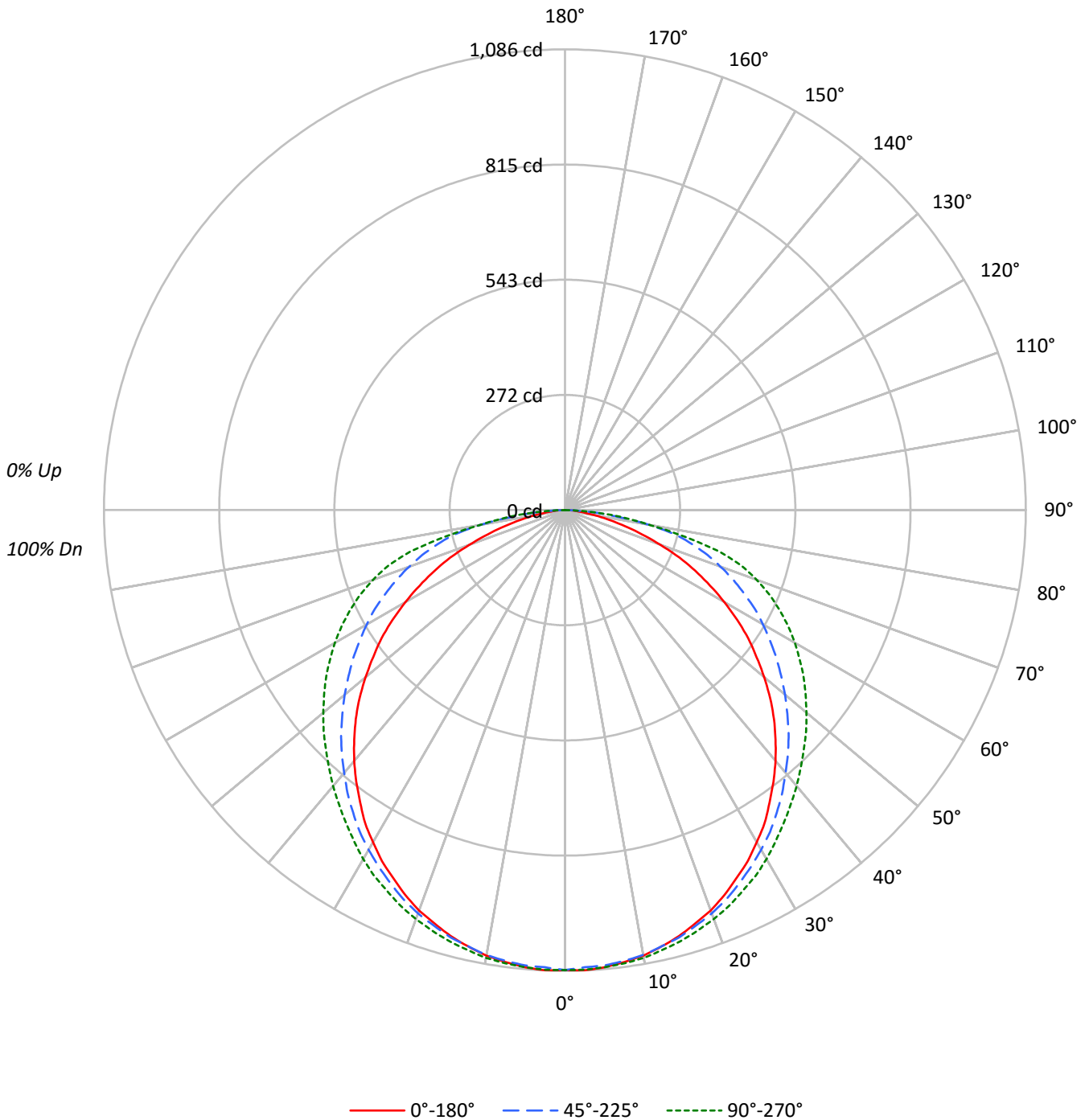
Input Watts (W): 43.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1459	1459	1459
5°	1461	1455	1461
10°	1457	1455	1464
15°	1448	1452	1466
20°	1438	1448	1468
25°	1421	1442	1471
30°	1404	1437	1476
35°	1381	1429	1478
40°	1356	1420	1492
45°	1326	1419	1515
50°	1283	1418	1555
55°	1237	1428	1612
60°	1167	1450	1683
65°	1078	1483	1777
70°	941	1536	1893
75°	764	1615	1957
80°	564	1583	1583
85°	432	1167	1317



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	102.7	3.1
10°-20°	295.0	8.8
20°-30°	449.1	13.4
30°-40°	545.3	16.3
40°-50°	576.1	17.2
50°-60°	543.6	16.3
60°-70°	452.0	13.5
70°-80°	297.3	8.9
80°-90°	81.1	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°	846.7	25.3
0°-40°	1392.0	41.7
0°-60°	2511.6	75.2
0°-90°	3342.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3342.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1084	1084	1084	1084	1084	
5°	1082	1082	1077	1082	1082	103
15°	1040	1041	1042	1052	1052	293
25°	957	963	971	988	991	441
35°	841	851	870	893	900	526
45°	697	711	746	782	796	537
55°	528	550	609	666	687	470
65°	339	378	466	534	558	335
75°	147	214	311	368	376	158
85°	28	62	76	84	85	34
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1084.3	1084.3	1084.3	1084.3	1084.3
2.5°	1085.7	1084.3	1078.7	1084.3	1084.3
5°	1081.5	1081.5	1077.3	1081.5	1081.5
7.5°	1074.5	1074.5	1071.7	1077.3	1077.3
10°	1066.1	1066.1	1064.7	1071.7	1071.7
12.5°	1053.5	1054.9	1053.5	1061.9	1061.9
15°	1039.5	1040.9	1042.3	1052.1	1052.1
17.5°	1021.4	1024.2	1027.0	1038.1	1039.5
20°	1004.6	1006.0	1011.6	1024.2	1025.6
22.5°	982.2	986.4	993.4	1006.0	1010.2
25°	957.0	962.6	971.0	987.8	990.6
27.5°	933.2	937.4	948.6	966.8	972.4
30°	903.8	910.8	924.8	943.0	950.0
32.5°	875.8	882.8	899.6	919.2	924.8
35°	840.9	850.7	870.2	892.6	899.6
37.5°	807.3	817.1	840.9	866.1	874.4
40°	772.3	783.5	808.7	838.1	849.3
42.5°	734.5	749.9	777.9	810.1	822.7
45°	696.8	710.8	745.7	782.1	796.1
47.5°	656.2	673.0	710.8	754.1	770.9
50°	612.8	633.8	677.2	724.7	742.9
52.5°	569.4	593.2	642.2	695.4	714.9
55°	527.5	549.9	608.6	666.0	687.0
57.5°	481.3	509.3	573.6	635.2	656.2
60°	433.7	464.5	538.7	603.0	625.4
62.5°	386.2	421.1	505.1	569.4	593.2
65°	338.6	377.8	465.9	534.5	558.2
67.5°	292.4	335.8	429.5	498.1	521.9
70°	239.2	293.8	390.4	457.5	481.3
72.5°	190.3	253.2	352.6	415.5	436.5
75°	146.9	214.1	310.6	368.0	376.4
77.5°	107.7	174.9	267.2	286.8	288.2
80°	72.8	139.9	204.3	201.5	204.3
82.5°	47.6	104.9	128.7	144.1	145.5
85°	28.0	61.6	75.6	83.9	85.3
87.5°	14.0	21.0	26.6	28.0	30.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)