

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: P309580

Luminaire Tested: **24FCZ2-50-UNV-L82765-HRP-CP187-W2A-U-6500K**

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: P309580
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-6500K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.187"
POLYCARB SHEET
Light Source: (168) 6500K 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: 3393.0 lumens
Efficiency: N/A
Efficacy: 76.1 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

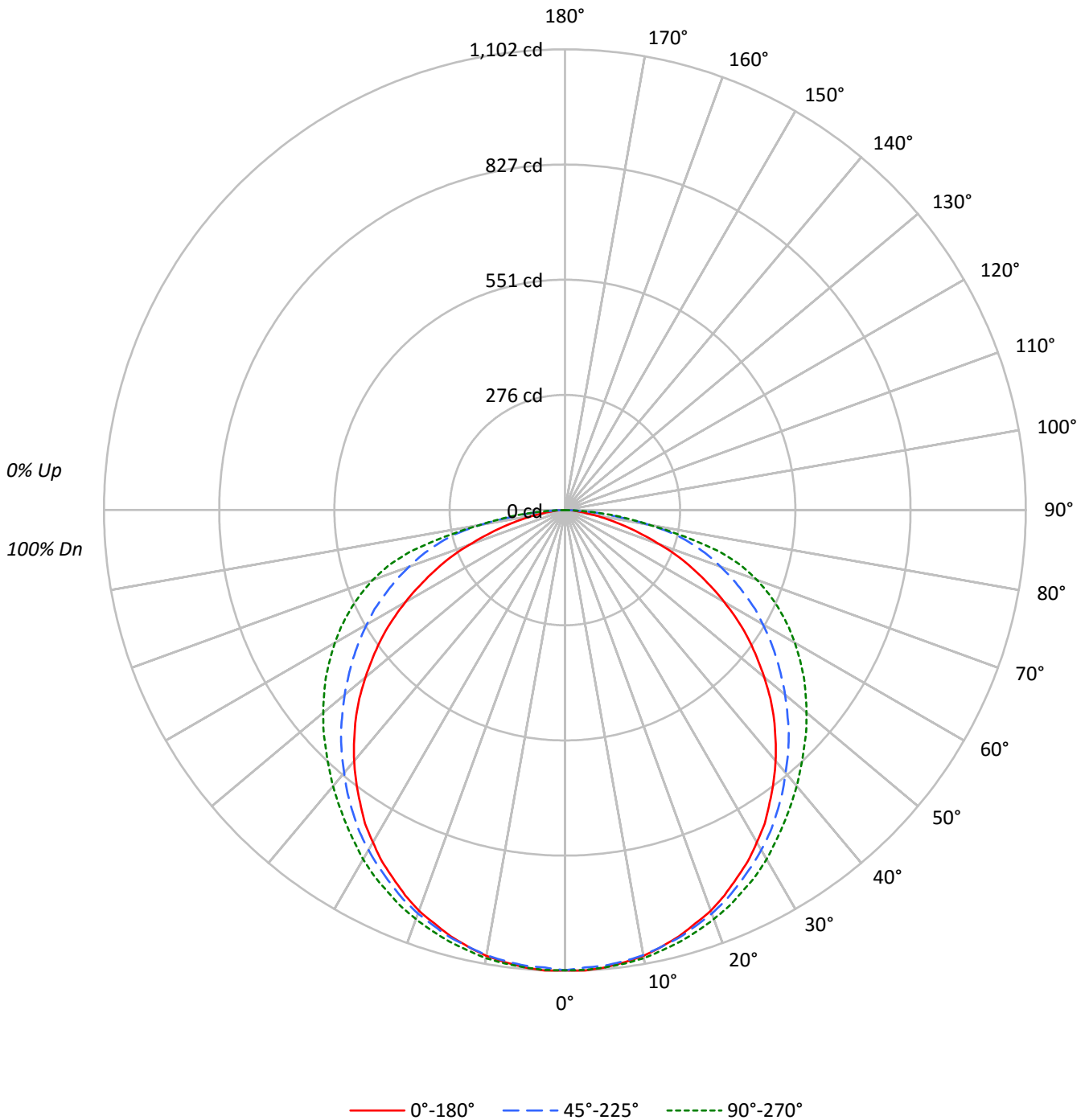
Input Watts (W): 44.6
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	108	103	98	94	105	101	96	93	96	93	90	92	90	87	89	86	84	82
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67
3	89	78	69	62	86	76	68	62	73	66	61	70	64	59	68	63	58	56
4	81	68	59	52	79	67	59	52	65	57	51	62	56	50	60	54	50	48
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36
7	63	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31
8	59	45	36	30	57	44	36	30	43	36	30	42	35	30	41	34	30	28
9	55	41	33	27	54	41	33	27	40	32	27	39	32	27	38	31	27	25
10	52	38	30	25	50	38	30	25	37	30	25	36	29	24	35	29	24	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1481	1481	1481
5°	1483	1477	1483
10°	1479	1477	1487
15°	1470	1474	1488
20°	1460	1470	1491
25°	1442	1464	1493
30°	1426	1459	1498
35°	1402	1451	1500
40°	1377	1442	1514
45°	1346	1441	1538
50°	1302	1439	1579
55°	1256	1449	1636
60°	1185	1472	1709
65°	1095	1506	1805
70°	956	1559	1922
75°	775	1639	1986
80°	573	1607	1607
85°	438	1184	1337



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	104.3	3.1
10°-20°	299.5	8.8
20°-30°	455.9	13.4
30°-40°	553.6	16.3
40°-50°	584.9	17.2
50°-60°	551.9	16.3
60°-70°	458.9	13.5
70°-80°	301.9	8.9
80°-90°	82.3	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°	859.7	25.3
0°-40°	1413.2	41.7
0°-60°	2550.0	75.2
0°-90°	3393.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3393.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1101	1101	1101	1101	1101	
5°	1098	1098	1094	1098	1098	104
15°	1055	1057	1058	1068	1068	298
25°	972	977	986	1003	1006	448
35°	854	864	884	906	913	534
45°	707	722	757	794	808	545
55°	536	558	618	676	697	477
65°	344	384	473	543	567	340
75°	149	217	315	374	382	161
85°	28	62	77	85	87	35
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1100.9	1100.9	1100.9	1100.9	1100.9
2.5°	1102.3	1100.9	1095.2	1100.9	1100.9
5°	1098.0	1098.0	1093.8	1098.0	1098.0
7.5°	1090.9	1090.9	1088.1	1093.8	1093.8
10°	1082.4	1082.4	1081.0	1088.1	1088.1
12.5°	1069.6	1071.0	1069.6	1078.1	1078.1
15°	1055.4	1056.8	1058.2	1068.2	1068.2
17.5°	1036.9	1039.8	1042.6	1054.0	1055.4
20°	1019.9	1021.3	1027.0	1039.8	1041.2
22.5°	997.2	1001.4	1008.5	1021.3	1025.6
25°	971.6	977.3	985.8	1002.8	1005.7
27.5°	947.5	951.7	963.1	981.5	987.2
30°	917.6	924.7	938.9	957.4	964.5
32.5°	889.2	896.3	913.4	933.2	938.9
35°	853.7	863.6	883.5	906.3	913.4
37.5°	819.6	829.6	853.7	879.3	887.8
40°	784.1	795.5	821.0	850.9	862.2
42.5°	745.7	761.4	789.8	822.5	835.2
45°	707.4	721.6	757.1	794.0	808.2
47.5°	666.2	683.2	721.6	765.6	782.7
50°	622.2	643.5	687.5	735.8	754.3
52.5°	578.1	602.3	652.0	706.0	725.9
55°	535.5	558.2	617.9	676.1	697.4
57.5°	488.6	517.0	582.4	644.9	666.2
60°	440.3	471.6	546.9	612.2	634.9
62.5°	392.0	427.6	512.8	578.1	602.3
65°	343.8	383.5	473.0	542.6	566.8
67.5°	296.9	340.9	436.1	505.7	529.8
70°	242.9	298.3	396.3	464.5	488.6
72.5°	193.2	257.1	358.0	421.9	443.2
75°	149.1	217.3	315.3	373.6	382.1
77.5°	109.4	177.6	271.3	291.2	292.6
80°	73.9	142.0	207.4	204.5	207.4
82.5°	48.3	106.5	130.7	146.3	147.7
85°	28.4	62.5	76.7	85.2	86.6
87.5°	14.2	21.3	27.0	28.4	31.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)