

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: P309575

Luminaire Tested: **24FCZ2-50-UNV-L82765-HRP-CP187-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: P309575
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-4000K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.187"
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: 3240.0 lumens
Efficiency: N/A
Efficacy: 75.0 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

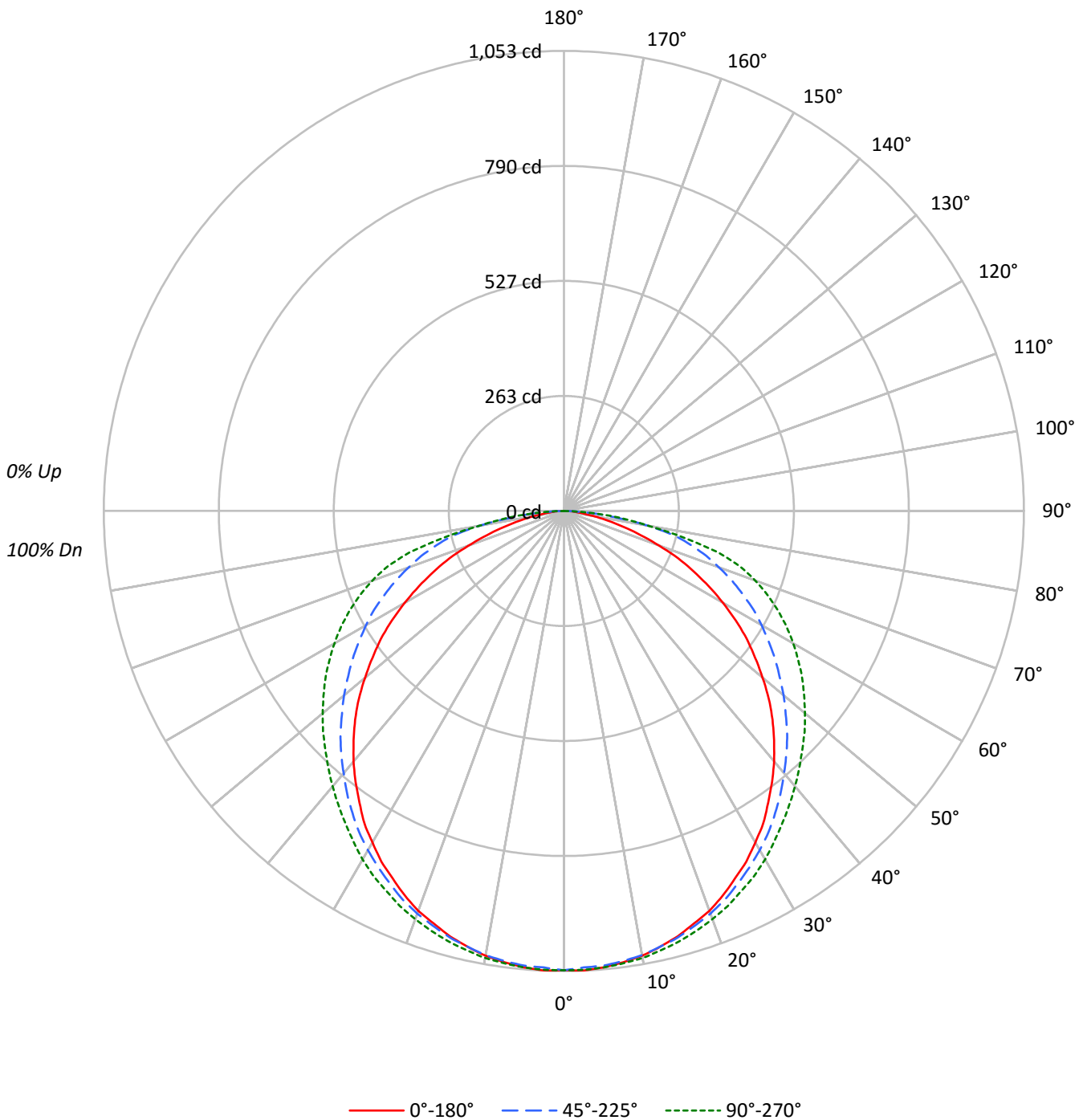
Input Watts (W): 43.2
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1414	1414	1414
5°	1416	1411	1416
10°	1412	1410	1420
15°	1404	1408	1421
20°	1394	1404	1424
25°	1377	1398	1426
30°	1361	1393	1431
35°	1339	1386	1433
40°	1315	1377	1446
45°	1285	1376	1469
50°	1244	1374	1508
55°	1200	1384	1562
60°	1132	1405	1632
65°	1045	1438	1723
70°	912	1489	1836
75°	740	1565	1897
80°	546	1534	1534
85°	418	1130	1277



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	99.6	3.1
10°-20°	286.0	8.8
20°-30°	435.3	13.4
30°-40°	528.6	16.3
40°-50°	558.5	17.2
50°-60°	527.0	16.3
60°-70°	438.2	13.5
70°-80°	288.3	8.9
80°-90°	78.6	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°	820.9	25.3
0°-40°	1349.5	41.7
0°-60°	2435.0	75.2
0°-90°	3240.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3240.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1051	1051	1051	1051	1051	
5°	1048	1048	1044	1048	1048	100
15°	1008	1009	1010	1020	1020	284
25°	928	933	941	958	960	428
35°	815	825	844	865	872	510
45°	676	689	723	758	772	520
55°	511	533	590	646	666	455
65°	328	366	452	518	541	325
75°	142	208	301	357	365	153
85°	27	60	73	81	83	33
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1051.2	1051.2	1051.2	1051.2	1051.2
2.5°	1052.6	1051.2	1045.8	1051.2	1051.2
5°	1048.5	1048.5	1044.4	1048.5	1048.5
7.5°	1041.7	1041.7	1039.0	1044.4	1044.4
10°	1033.6	1033.6	1032.2	1039.0	1039.0
12.5°	1021.4	1022.7	1021.4	1029.5	1029.5
15°	1007.8	1009.2	1010.5	1020.0	1020.0
17.5°	990.2	992.9	995.6	1006.5	1007.8
20°	973.9	975.3	980.7	992.9	994.3
22.5°	952.2	956.3	963.1	975.3	979.3
25°	927.8	933.2	941.4	957.6	960.3
27.5°	904.7	908.8	919.6	937.3	942.7
30°	876.2	883.0	896.6	914.2	921.0
32.5°	849.1	855.9	872.2	891.2	896.6
35°	815.2	824.7	843.7	865.4	872.2
37.5°	782.7	792.1	815.2	839.6	847.8
40°	748.7	759.6	784.0	812.5	823.3
42.5°	712.1	727.0	754.2	785.4	797.6
45°	675.5	689.1	723.0	758.2	771.8
47.5°	636.2	652.4	689.1	731.1	747.4
50°	594.1	614.5	656.5	702.6	720.3
52.5°	552.1	575.1	622.6	674.1	693.1
55°	511.4	533.1	590.0	645.7	666.0
57.5°	466.6	493.7	556.1	615.8	636.2
60°	420.5	450.3	522.2	584.6	606.3
62.5°	374.4	408.3	489.7	552.1	575.1
65°	328.3	366.2	451.7	518.1	541.2
67.5°	283.5	325.5	416.4	482.9	505.9
70°	231.9	284.8	378.4	443.5	466.6
72.5°	184.5	245.5	341.8	402.9	423.2
75°	142.4	207.5	301.1	356.7	364.9
77.5°	104.4	169.6	259.1	278.1	279.4
80°	70.5	135.6	198.0	195.3	198.0
82.5°	46.1	101.7	124.8	139.7	141.1
85°	27.1	59.7	73.2	81.4	82.7
87.5°	13.6	20.3	25.8	27.1	29.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)