

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: P309572

Luminaire Tested: **24FCZ2-50-UNV-L82765-HRP-CP187-W2A-U-2700K**

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: P309572
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-2700K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.187"
POLYCARB SHEET
Light Source: (168) 2700K 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: 2979.0 lumens
Efficiency: N/A
Efficacy: 69.8 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

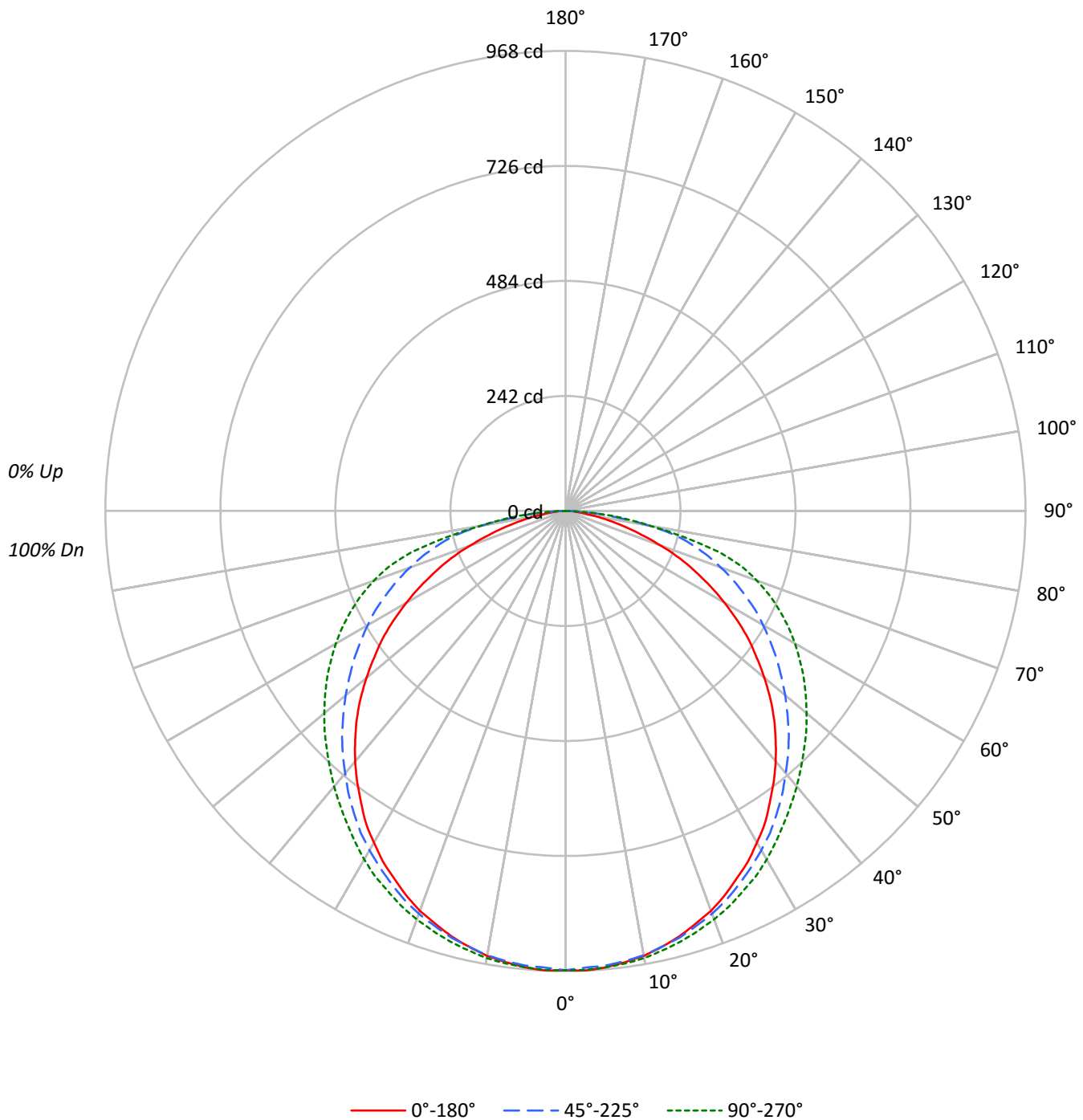
Input Watts (W): 42.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				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°	1300	1300	1300
5°	1302	1297	1302
10°	1298	1297	1305
15°	1291	1294	1306
20°	1282	1291	1309
25°	1266	1285	1311
30°	1252	1281	1316
35°	1231	1274	1317
40°	1209	1266	1330
45°	1182	1265	1350
50°	1144	1263	1386
55°	1103	1273	1436
60°	1040	1292	1500
65°	961	1322	1584
70°	839	1369	1688
75°	681	1439	1744
80°	503	1411	1411
85°	384	1039	1175



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	91.6	3.1
10°-20°	262.9	8.8
20°-30°	400.3	13.4
30°-40°	486.0	16.3
40°-50°	513.5	17.2
50°-60°	484.5	16.3
60°-70°	402.9	13.5
70°-80°	265.1	8.9
80°-90°	72.2	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°	754.8	25.3
0°-40°	1240.8	41.7
0°-60°	2238.8	75.2
0°-90°	2979.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2979.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	966	966	966	966	966	
5°	964	964	960	964	964	92
15°	927	928	929	938	938	261
25°	853	858	866	880	883	393
35°	750	758	776	796	802	469
45°	621	634	665	697	710	478
55°	470	490	542	594	612	419
65°	302	337	415	476	498	298
75°	131	191	277	328	336	141
85°	25	55	67	75	76	31
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	966.5	966.5	966.5	966.5	966.5
2.5°	967.8	966.5	961.6	966.5	966.5
5°	964.0	964.0	960.3	964.0	964.0
7.5°	957.8	957.8	955.3	960.3	960.3
10°	950.3	950.3	949.1	955.3	955.3
12.5°	939.1	940.3	939.1	946.6	946.6
15°	926.6	927.9	929.1	937.9	937.9
17.5°	910.4	912.9	915.4	925.4	926.6
20°	895.5	896.7	901.7	912.9	914.2
22.5°	875.5	879.2	885.5	896.7	900.4
25°	853.0	858.0	865.5	880.5	883.0
27.5°	831.8	835.6	845.6	861.8	866.8
30°	805.7	811.9	824.4	840.6	846.8
32.5°	780.7	786.9	801.9	819.4	824.4
35°	749.5	758.3	775.7	795.7	801.9
37.5°	719.6	728.3	749.5	772.0	779.5
40°	688.4	698.4	720.9	747.0	757.0
42.5°	654.8	668.5	693.4	722.1	733.3
45°	621.1	633.6	664.7	697.2	709.6
47.5°	584.9	599.9	633.6	672.2	687.2
50°	546.3	565.0	603.6	646.0	662.2
52.5°	507.6	528.8	572.4	619.8	637.3
55°	470.2	490.1	542.5	593.6	612.3
57.5°	429.0	454.0	511.3	566.2	584.9
60°	386.6	414.1	480.2	537.5	557.5
62.5°	344.2	375.4	450.2	507.6	528.8
65°	301.8	336.7	415.3	476.4	497.6
67.5°	260.7	299.3	382.9	444.0	465.2
70°	213.3	261.9	348.0	407.8	429.0
72.5°	169.6	225.7	314.3	370.4	389.1
75°	131.0	190.8	276.9	328.0	335.5
77.5°	96.0	155.9	238.2	255.7	256.9
80°	64.9	124.7	182.1	179.6	182.1
82.5°	42.4	93.5	114.7	128.5	129.7
85°	24.9	54.9	67.3	74.8	76.1
87.5°	12.5	18.7	23.7	24.9	27.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)