

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: P310567

Luminaire Tested: **24FCZ2-30-UNV-L82765-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: P310567
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-15)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 24FCZ2-30-UNV-L82765-CP187-W2A-U-5000K
Description: 2'X4' TROFFER LED MODULE, RIBBED 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: 2672.0 lumens
Efficiency: N/A
Efficacy: 111.8 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.29 / 1.38
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

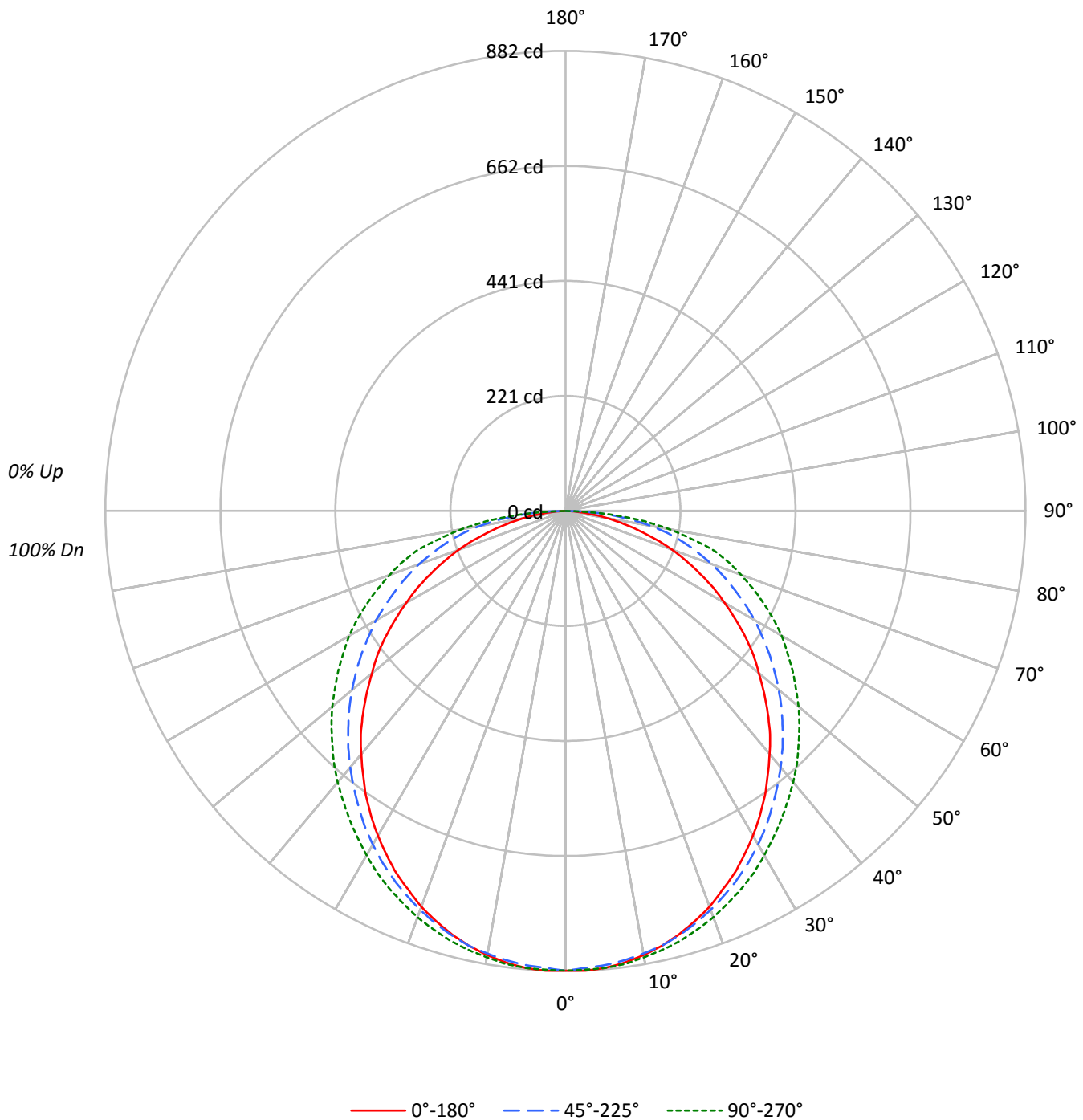
Input Watts (W): 23.9
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	100	96	92	96	92	89		92	89	87		82
2	98	89	81	75	95	87	80	74	83	78	73		80	75	71		67
3	89	77	69	62	86	76	68	61	73	66	60		70	64	59		56
4	81	68	59	52	79	67	58	52	64	57	51		62	56	50		47
5	74	61	52	45	72	60	51	44	58	50	44		56	49	43		41
6	69	55	46	39	67	54	45	39	52	44	38		50	43	38		36
7	64	50	41	34	62	49	40	34	47	39	34		46	39	34		31
8	59	45	37	31	57	45	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	25		23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1186	1186	1186
5°	1188	1181	1188
10°	1181	1177	1187
15°	1171	1173	1188
20°	1156	1165	1187
25°	1138	1157	1186
30°	1117	1147	1184
35°	1095	1136	1185
40°	1070	1127	1193
45°	1044	1120	1203
50°	1013	1117	1221
55°	988	1119	1246
60°	949	1128	1288
65°	906	1140	1335
70°	858	1175	1409
75°	765	1226	1539
80°	652	1299	1573
85°	465	1286	1505



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	83.4	3.1
10°-20°	238.5	8.9
20°-30°	360.2	13.5
30°-40°	434.1	16.2
40°-50°	455.7	17.1
50°-60°	426.3	16.0
60°-70°	352.1	13.2
70°-80°	239.9	9.0
80°-90°	81.8	3.1
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°	682.0	25.5
0°-40°	1116.1	41.8
0°-60°	1998.2	74.8
0°-90°	2672.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2672.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	881	881	881	881	881	
5°	879	878	874	879	879	83
15°	840	841	842	851	853	237
25°	767	770	779	794	799	353
35°	667	674	692	714	722	417
45°	549	560	589	621	632	423
55°	421	438	477	516	531	376
65°	285	308	358	403	419	282
75°	147	181	236	280	296	157
85°	30	59	83	94	98	38
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	881.2	881.2	881.2	881.2	881.2
2.5°	882.1	881.2	876.8	881.2	880.3
5°	879.4	878.5	874.1	879.4	879.4
7.5°	873.2	873.2	868.8	875.0	875.9
10°	864.4	864.4	861.7	868.8	868.8
12.5°	853.7	853.7	853.7	860.8	861.7
15°	840.4	841.3	842.2	851.1	852.8
17.5°	824.5	826.2	828.9	839.5	841.3
20°	807.6	809.4	813.8	826.2	828.9
22.5°	786.3	790.8	797.0	811.2	813.8
25°	766.8	770.4	779.3	794.3	798.8
27.5°	742.9	748.2	759.7	775.7	781.9
30°	719.0	724.3	738.5	757.1	762.4
32.5°	693.3	701.2	716.3	735.8	742.0
35°	666.7	673.8	691.5	714.5	721.6
37.5°	637.4	647.2	666.7	691.5	700.4
40°	609.0	619.7	641.8	668.4	679.1
42.5°	580.7	591.3	616.1	646.3	656.9
45°	548.8	560.3	588.7	620.6	632.1
47.5°	516.8	531.0	562.1	595.7	608.2
50°	484.0	500.0	533.7	569.1	583.3
52.5°	454.8	469.9	505.3	543.4	556.7
55°	421.1	437.9	476.9	516.0	531.0
57.5°	386.5	405.1	446.8	489.4	504.4
60°	352.8	373.2	419.3	461.9	478.7
62.5°	320.0	340.4	388.3	432.6	449.5
65°	284.6	308.5	358.2	403.4	419.3
67.5°	250.9	276.6	328.9	373.2	389.2
70°	218.1	242.9	298.8	342.2	358.2
72.5°	182.6	211.0	266.8	312.1	328.9
75°	147.2	180.9	235.8	280.1	296.1
77.5°	114.4	148.9	203.9	240.2	248.2
80°	84.2	119.7	167.6	193.3	203.0
82.5°	54.1	89.5	127.7	146.3	154.3
85°	30.1	59.4	83.3	94.0	97.5
87.5°	12.4	25.7	33.7	38.1	38.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)