

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: P310652

Luminaire Tested: **24FCZ2-35-UNV-L82765-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: P310652
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: 24FCZ2-35-UNV-L82765-CP187-W2A-U-2700K
Description: 2'X4' TROFFER LED MODULE, RIBBED 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: 2792.0 lumens
Efficiency: N/A
Efficacy: 99.7 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.29 / 1.38
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

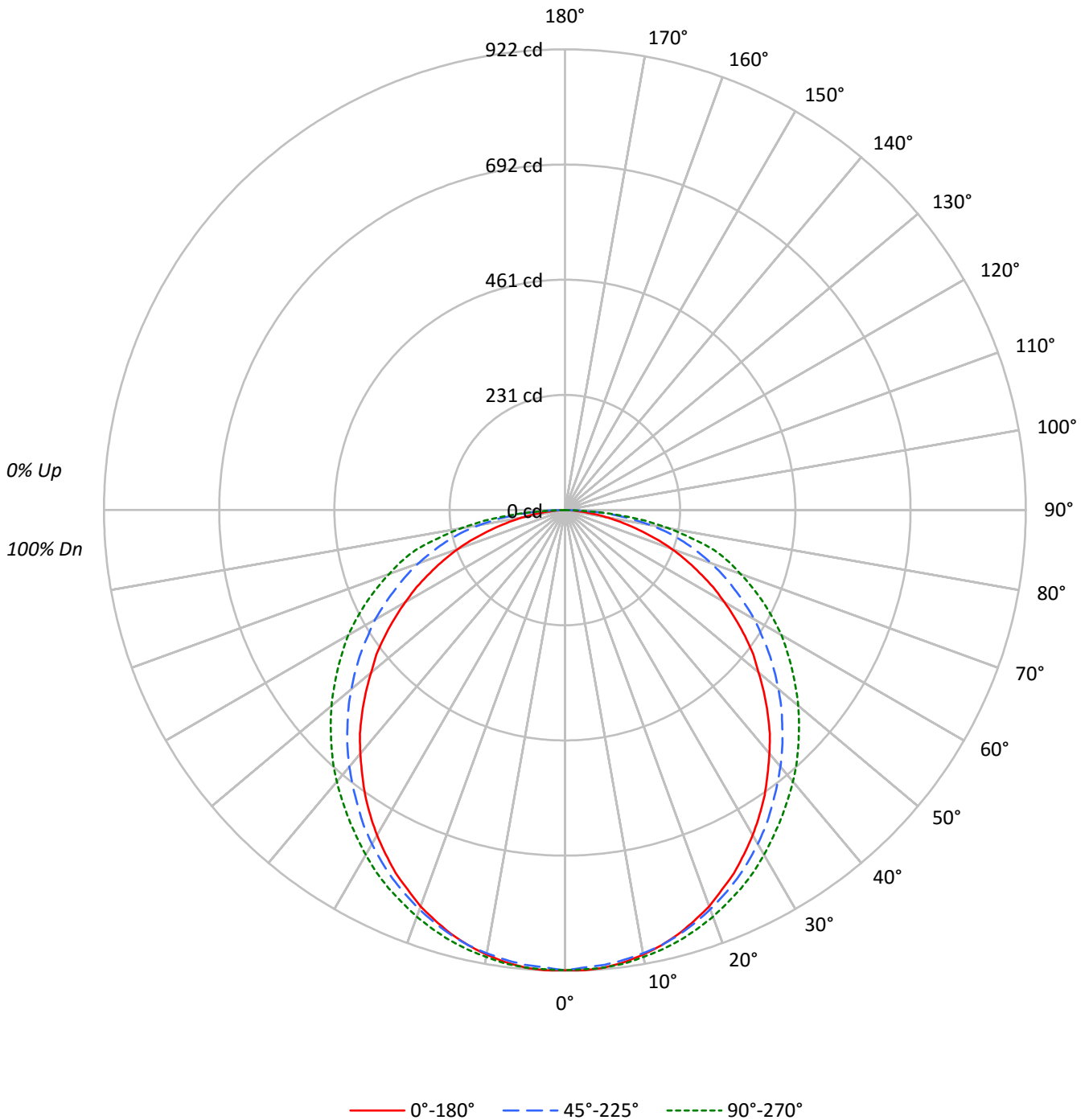
Input Watts (W): 28
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	100	96	92	96	92	89	92	89	87	88	86	84	82
2	98	89	81	75	95	87	80	74	83	78	73	80	75	71	77	73	69	67
3	89	77	69	62	86	76	68	61	73	66	60	70	64	59	67	62	58	56
4	81	68	59	52	79	67	58	52	64	57	51	62	56	50	60	54	50	47
5	74	61	52	45	72	60	51	44	58	50	44	56	49	43	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36
7	64	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31
8	59	45	37	31	57	45	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	25	35	29	24	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1239	1239	1239
5°	1241	1234	1241
10°	1234	1230	1240
15°	1223	1226	1241
20°	1208	1218	1240
25°	1190	1209	1239
30°	1167	1199	1238
35°	1144	1187	1238
40°	1118	1178	1246
45°	1091	1170	1257
50°	1059	1167	1276
55°	1032	1169	1302
60°	992	1179	1346
65°	947	1191	1395
70°	897	1228	1472
75°	800	1281	1608
80°	682	1357	1643
85°	486	1345	1573



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	87.1	3.1
10°-20°	249.2	8.9
20°-30°	376.3	13.5
30°-40°	453.6	16.2
40°-50°	476.2	17.1
50°-60°	445.5	16.0
60°-70°	367.9	13.2
70°-80°	250.7	9.0
80°-90°	85.5	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°	712.7	25.5
0°-40°	1166.2	41.8
0°-60°	2087.9	74.8
0°-90°	2792.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2792.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	921	921	921	921	921	
5°	919	918	913	919	919	87
15°	878	879	880	889	891	248
25°	801	805	814	830	835	369
35°	697	704	722	747	754	435
45°	573	585	615	648	660	442
55°	440	458	498	539	555	393
65°	297	322	374	422	438	295
75°	154	189	246	293	309	164
85°	32	62	87	98	102	39
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	920.8	920.8	920.8	920.8	920.8
2.5°	921.7	920.8	916.1	920.8	919.9
5°	918.9	918.0	913.4	918.9	918.9
7.5°	912.4	912.4	907.8	914.3	915.2
10°	903.2	903.2	900.4	907.8	907.8
12.5°	892.1	892.1	892.1	899.5	900.4
15°	878.2	879.1	880.0	889.3	891.1
17.5°	861.5	863.3	866.1	877.2	879.1
20°	843.9	845.7	850.4	863.3	866.1
22.5°	821.7	826.3	832.8	847.6	850.4
25°	801.3	805.0	814.2	830.0	834.6
27.5°	776.3	781.8	793.9	810.5	817.0
30°	751.3	756.8	771.6	791.1	796.6
32.5°	724.4	732.7	748.5	768.9	775.3
35°	696.6	704.0	722.5	746.6	754.0
37.5°	666.0	676.2	696.6	722.5	731.8
40°	636.4	647.5	670.7	698.5	709.6
42.5°	606.7	617.9	643.8	675.3	686.4
45°	573.4	585.4	615.1	648.4	660.5
47.5°	540.1	554.9	587.3	622.5	635.5
50°	505.8	522.5	557.7	594.7	609.5
52.5°	475.2	491.0	528.0	567.8	581.7
55°	440.0	457.6	498.4	539.1	554.9
57.5°	403.9	423.3	466.9	511.3	527.1
60°	368.7	390.0	438.2	482.6	500.2
62.5°	334.4	355.7	405.7	452.1	469.7
65°	297.4	322.4	374.2	421.5	438.2
67.5°	262.2	289.0	343.7	390.0	406.7
70°	227.9	253.8	312.2	357.6	374.2
72.5°	190.8	220.5	278.8	326.1	343.7
75°	153.8	189.0	246.4	292.7	309.4
77.5°	119.5	155.6	213.1	251.0	259.4
80°	88.0	125.1	175.1	201.9	212.1
82.5°	56.5	93.6	133.4	152.8	161.2
85°	31.5	62.1	87.1	98.2	101.9
87.5°	13.0	26.9	35.2	39.8	39.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)