

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: P308856

Luminaire Tested: **22FCZ2-44HE-UNV-L82765-CP187-W2A-U-4500K**

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: P308856
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-33)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 22FCZ2-44HE-UNV-L82765-CP187-W2A-U-4500K
Description: 2'X2' TROFFER LED MODULE, RIBBED LENS, 0.187" POLYCARB SHEET
Light Source: (168) 3000K 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: 3783.0 lumens
Efficiency: N/A
Efficacy: 99.8 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.28 / 1.37
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

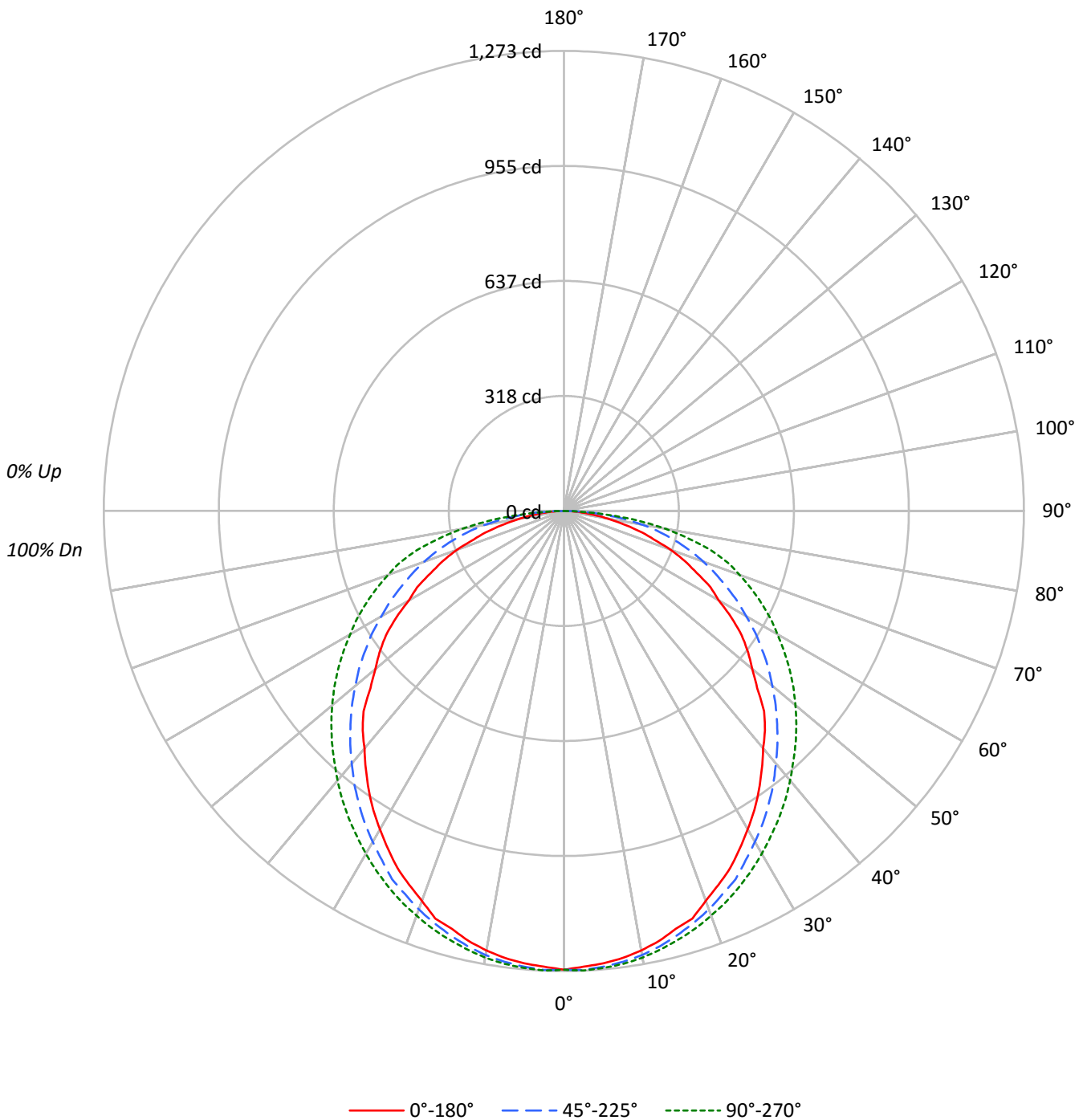
Input Watts (W): 37.9
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	93	90	92	89	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	60	68	63	59	56
4	81	69	60	53	79	67	59	52	65	57	51	62	56	51	60	55	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	39	51	44	38	49	43	38	36
7	64	50	41	35	62	49	40	34	47	40	34	46	39	34	45	38	34	32
8	59	45	37	31	58	45	36	31	43	36	30	42	35	30	41	35	30	28
9	55	42	33	28	54	41	33	28	40	33	27	39	32	27	38	32	27	25
10	52	38	30	25	51	38	30	25	37	30	25	36	29	25	35	29	25	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3415	3415	3415
5°	3394	3419	3428
10°	3374	3409	3428
15°	3334	3385	3420
20°	3287	3360	3412
25°	3236	3339	3408
30°	3162	3286	3404
35°	3093	3248	3408
40°	3015	3205	3422
45°	2984	3177	3452
50°	2850	3153	3502
55°	2820	3143	3576
60°	2660	3138	3674
65°	2583	3159	3839
70°	2478	3234	4074
75°	2259	3332	4387
80°	1936	3451	4434
85°	1565	3298	3801



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	120.1	3.2
10°-20°	342.6	9.1
20°-30°	515.7	13.6
30°-40°	618.9	16.4
40°-50°	646.9	17.1
50°-60°	602.8	15.9
60°-70°	494.4	13.1
70°-80°	333.2	8.8
80°-90°	108.5	2.9
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°	978.4	25.9
0°-40°	1597.2	42.2
0°-60°	2846.9	75.3
0°-90°	3783.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3783.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1269	1269	1269	1269	1269	
5°	1257	1260	1266	1267	1269	119
15°	1197	1204	1215	1226	1228	338
25°	1090	1097	1124	1141	1148	501
35°	942	954	989	1023	1038	589
45°	784	789	835	885	907	599
55°	601	612	670	733	762	533
65°	406	424	496	568	603	403
75°	217	241	320	393	422	228
85°	51	72	107	125	123	60
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1269.2	1269.2	1269.2	1269.2	1269.2
2.5°	1262.0	1265.6	1271.0	1272.8	1272.8
5°	1256.6	1260.2	1265.6	1267.4	1269.2
7.5°	1247.5	1251.1	1258.4	1262.0	1263.8
10°	1234.8	1238.4	1247.5	1252.9	1254.7
12.5°	1218.5	1222.2	1233.0	1240.3	1242.1
15°	1196.8	1204.0	1214.9	1225.8	1227.6
17.5°	1182.3	1180.5	1195.0	1207.7	1211.3
20°	1147.9	1157.0	1173.3	1187.8	1191.4
22.5°	1118.9	1126.2	1147.9	1164.2	1171.5
25°	1090.0	1097.2	1124.4	1140.7	1147.9
27.5°	1053.8	1064.6	1090.0	1113.5	1122.6
30°	1017.6	1028.4	1057.4	1084.5	1095.4
32.5°	981.3	994.0	1024.8	1053.8	1066.4
35°	941.5	954.2	988.6	1023.0	1037.5
37.5°	899.9	916.2	952.4	990.4	1006.7
40°	858.2	874.5	912.5	956.0	974.1
42.5°	823.8	831.1	874.5	921.6	939.7
45°	784.0	789.4	834.7	885.4	907.1
47.5°	726.0	746.0	794.9	851.0	872.7
50°	680.8	702.5	753.2	813.0	836.5
52.5°	642.8	657.2	713.4	773.1	800.3
55°	601.1	612.0	669.9	733.3	762.3
57.5°	550.4	570.3	628.3	693.5	722.4
60°	494.3	519.6	583.0	653.6	682.6
62.5°	458.1	472.6	541.4	612.0	644.6
65°	405.6	423.7	496.1	568.5	602.9
67.5°	362.1	380.2	454.5	526.9	561.3
70°	315.0	333.1	411.0	483.4	517.8
72.5°	260.7	286.1	367.6	440.0	476.2
75°	217.3	240.8	320.5	392.9	421.9
77.5°	168.4	199.2	273.4	333.1	354.9
80°	124.9	155.7	222.7	266.2	286.1
82.5°	85.1	115.9	166.6	199.2	210.0
85°	50.7	72.4	106.8	124.9	123.1
87.5°	23.5	30.8	43.5	43.5	41.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)