

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: P312881

Luminaire Tested: **22FCZ2-44HE-UNV-L83050-CP187-W2A-U-3500K**

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: P312881
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-L83050-CP187-W2A-U-3500K
Description: 2'X2' TROFFER LED MODULE, RIBBED LENS, 0.187" POLYCARB SHEET
Light Source: (168) 3500K 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: 3724.0 lumens
Efficiency: N/A
Efficacy: 100.1 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

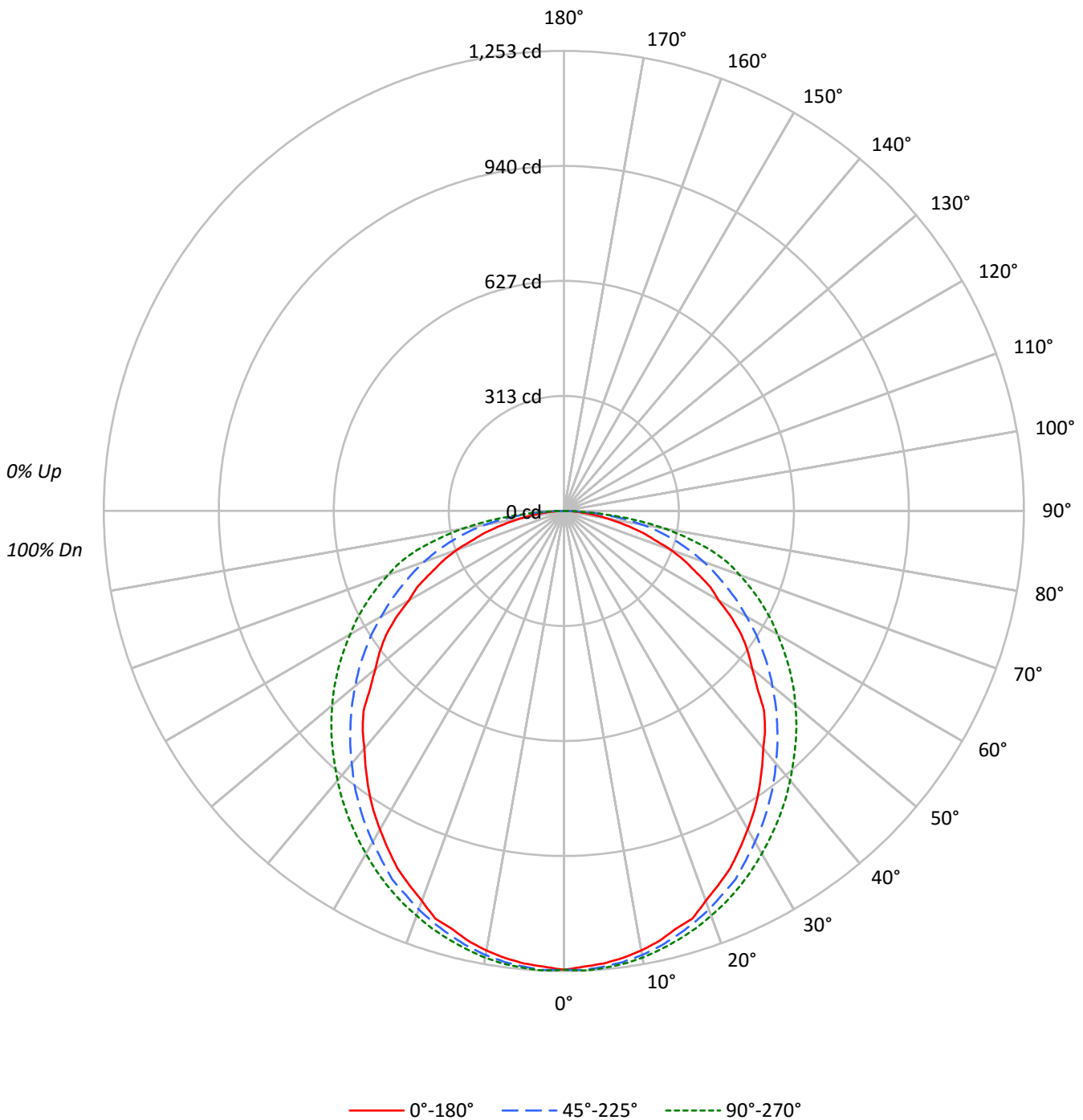
Input Watts (W): 37.2
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	3362	3362	3362
5°	3341	3365	3375
10°	3322	3355	3375
15°	3282	3332	3366
20°	3236	3308	3359
25°	3186	3286	3355
30°	3113	3234	3351
35°	3045	3197	3355
40°	2968	3156	3368
45°	2937	3127	3398
50°	2806	3104	3447
55°	2776	3094	3521
60°	2619	3089	3616
65°	2542	3110	3779
70°	2440	3183	4011
75°	2224	3280	4318
80°	1906	3397	4364
85°	1541	3248	3742



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	118.2	3.2
10°-20°	337.3	9.1
20°-30°	507.6	13.6
30°-40°	609.2	16.4
40°-50°	636.8	17.1
50°-60°	593.4	15.9
60°-70°	486.7	13.1
70°-80°	328.0	8.8
80°-90°	106.8	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°	963.1	25.9
0°-40°	1572.3	42.2
0°-60°	2802.5	75.3
0°-90°	3724.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3724.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1249	1249	1249	1249	1249	
5°	1237	1240	1246	1248	1249	117
15°	1178	1185	1196	1207	1208	333
25°	1073	1080	1107	1123	1130	493
35°	927	939	973	1007	1021	579
45°	772	777	822	872	893	590
55°	592	602	660	722	750	524
65°	399	417	488	560	594	397
75°	214	237	316	387	415	225
85°	50	71	105	123	121	59
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1249.4	1249.4	1249.4	1249.4	1249.4
2.5°	1242.3	1245.9	1251.2	1253.0	1253.0
5°	1237.0	1240.5	1245.9	1247.7	1249.4
7.5°	1228.0	1231.6	1238.7	1242.3	1244.1
10°	1215.6	1219.1	1228.0	1233.4	1235.2
12.5°	1199.5	1203.1	1213.8	1220.9	1222.7
15°	1178.1	1185.3	1196.0	1206.7	1208.4
17.5°	1163.9	1162.1	1176.4	1188.8	1192.4
20°	1130.0	1138.9	1155.0	1169.2	1172.8
22.5°	1101.5	1108.6	1130.0	1146.1	1153.2
25°	1073.0	1080.1	1106.8	1122.9	1130.0
27.5°	1037.3	1048.0	1073.0	1096.2	1105.1
30°	1001.7	1012.4	1040.9	1067.6	1078.3
32.5°	966.0	978.5	1008.8	1037.3	1049.8
35°	926.8	939.3	973.2	1007.0	1021.3
37.5°	885.8	901.9	937.5	975.0	991.0
40°	844.8	860.9	898.3	941.1	958.9
42.5°	811.0	818.1	860.9	907.2	925.0
45°	771.8	777.1	821.7	871.6	893.0
47.5°	714.7	734.3	782.5	837.7	859.1
50°	670.2	691.6	741.5	800.3	823.4
52.5°	632.7	647.0	702.2	761.1	787.8
55°	591.7	602.4	659.5	721.9	750.4
57.5°	541.8	561.4	618.5	682.6	711.2
60°	486.6	511.5	573.9	643.4	671.9
62.5°	450.9	465.2	532.9	602.4	634.5
65°	399.2	417.1	488.4	559.7	593.5
67.5°	356.5	374.3	447.4	518.7	552.5
70°	310.1	328.0	404.6	475.9	509.8
72.5°	256.7	281.6	361.8	433.1	468.8
75°	213.9	237.1	315.5	386.8	415.3
77.5°	165.8	196.1	269.1	328.0	349.3
80°	123.0	153.3	219.2	262.0	281.6
82.5°	83.8	114.1	164.0	196.1	206.8
85°	49.9	71.3	105.2	123.0	121.2
87.5°	23.2	30.3	42.8	42.8	41.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)