

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: P312882

Luminaire Tested: **22FCZ2-44HE-UNV-L83050-CP187-W2A-U-4000K**

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: P312882  
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-4000K  
Description: 2'X2' TROFFER LED MODULE, RIBBED LENS, 0.187" POLYCARB SHEET  
Light Source: (168) 4000K 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**

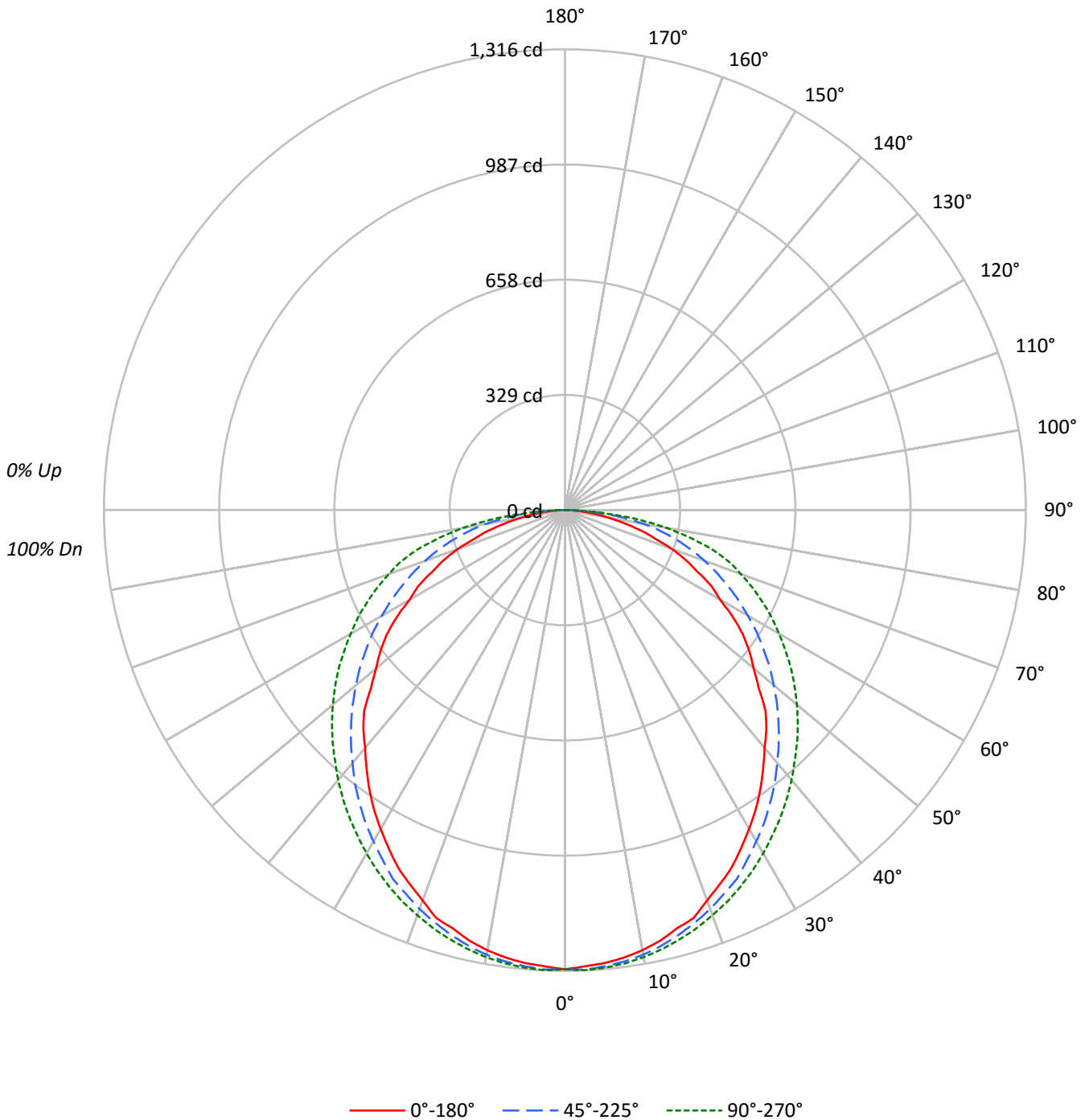
Lumens per Lamp: N/A  
Luminaire Lumens: 3910.0 lumens  
Efficiency: N/A  
Efficacy: 102.6 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.28 / 1.37  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 38.1  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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°	3530	3530	3530
5°	3508	3534	3544
10°	3487	3523	3544
15°	3446	3498	3535
20°	3398	3473	3526
25°	3345	3450	3523
30°	3268	3396	3518
35°	3197	3357	3523
40°	3116	3313	3537
45°	3084	3283	3568
50°	2946	3259	3620
55°	2915	3248	3696
60°	2750	3243	3797
65°	2669	3265	3968
70°	2562	3342	4211
75°	2335	3444	4533
80°	2001	3567	4582
85°	1618	3409	3930



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	124.1	3.2
10°-20°	354.1	9.1
20°-30°	533.0	13.6
30°-40°	639.7	16.4
40°-50°	668.6	17.1
50°-60°	623.1	15.9
60°-70°	511.0	13.1
70°-80°	344.3	8.8
80°-90°	112.2	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°	1011.2	25.9
0°-40°	1650.9	42.2
0°-60°	2942.5	75.3
0°-90°	3910.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3910.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1312	1312	1312	1312	1312	
5°	1299	1302	1308	1310	1312	123
15°	1237	1244	1256	1267	1269	350
25°	1127	1134	1162	1179	1186	518
35°	973	986	1022	1057	1072	608
45°	810	816	863	915	938	619
55°	621	632	692	758	788	551
65°	419	438	513	588	623	417
75°	225	249	331	406	436	236
85°	52	75	110	129	127	62
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1311.8	1311.8	1311.8	1311.8	1311.8
2.5°	1304.4	1308.1	1313.7	1315.6	1315.6
5°	1298.7	1302.5	1308.1	1310.0	1311.8
7.5°	1289.4	1293.1	1300.6	1304.4	1306.2
10°	1276.3	1280.0	1289.4	1295.0	1296.9
12.5°	1259.4	1263.2	1274.4	1281.9	1283.8
15°	1237.0	1244.5	1255.7	1266.9	1268.8
17.5°	1222.0	1220.1	1235.1	1248.2	1252.0
20°	1186.5	1195.8	1212.7	1227.6	1231.4
22.5°	1156.5	1164.0	1186.5	1203.3	1210.8
25°	1126.6	1134.1	1162.1	1179.0	1186.5
27.5°	1089.1	1100.4	1126.6	1150.9	1160.3
30°	1051.7	1062.9	1092.9	1121.0	1132.2
32.5°	1014.3	1027.4	1059.2	1089.1	1102.2
35°	973.1	986.2	1021.8	1057.3	1072.3
37.5°	930.1	946.9	984.3	1023.6	1040.5
40°	887.0	903.9	943.2	988.1	1006.8
42.5°	851.5	859.0	903.9	952.5	971.2
45°	810.3	815.9	862.7	915.1	937.6
47.5°	750.4	771.0	821.5	879.5	902.0
50°	703.6	726.1	778.5	840.3	864.6
52.5°	664.3	679.3	737.3	799.1	827.2
55°	621.3	632.5	692.4	757.9	787.9
57.5°	568.9	589.5	649.4	716.7	746.7
60°	510.9	537.1	602.6	675.6	705.5
62.5°	473.5	488.4	559.5	632.5	666.2
65°	419.2	437.9	512.8	587.6	623.2
67.5°	374.3	393.0	469.7	544.6	580.1
70°	325.6	344.3	424.8	499.7	535.2
72.5°	269.5	295.7	379.9	454.7	492.2
75°	224.6	248.9	331.2	406.1	436.0
77.5°	174.0	205.9	282.6	344.3	366.8
80°	129.1	160.9	230.2	275.1	295.7
82.5°	88.0	119.8	172.2	205.9	217.1
85°	52.4	74.9	110.4	129.1	127.3
87.5°	24.3	31.8	44.9	44.9	43.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)