

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: P313032

Luminaire Tested: **22FCZ2-44HE-UNV-L83050-S-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: P313032  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-23)  
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-S-CP187-W2A-U-4000K  
Description: 2'X2' TROFFER LED MODULE, SMOOTH 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**

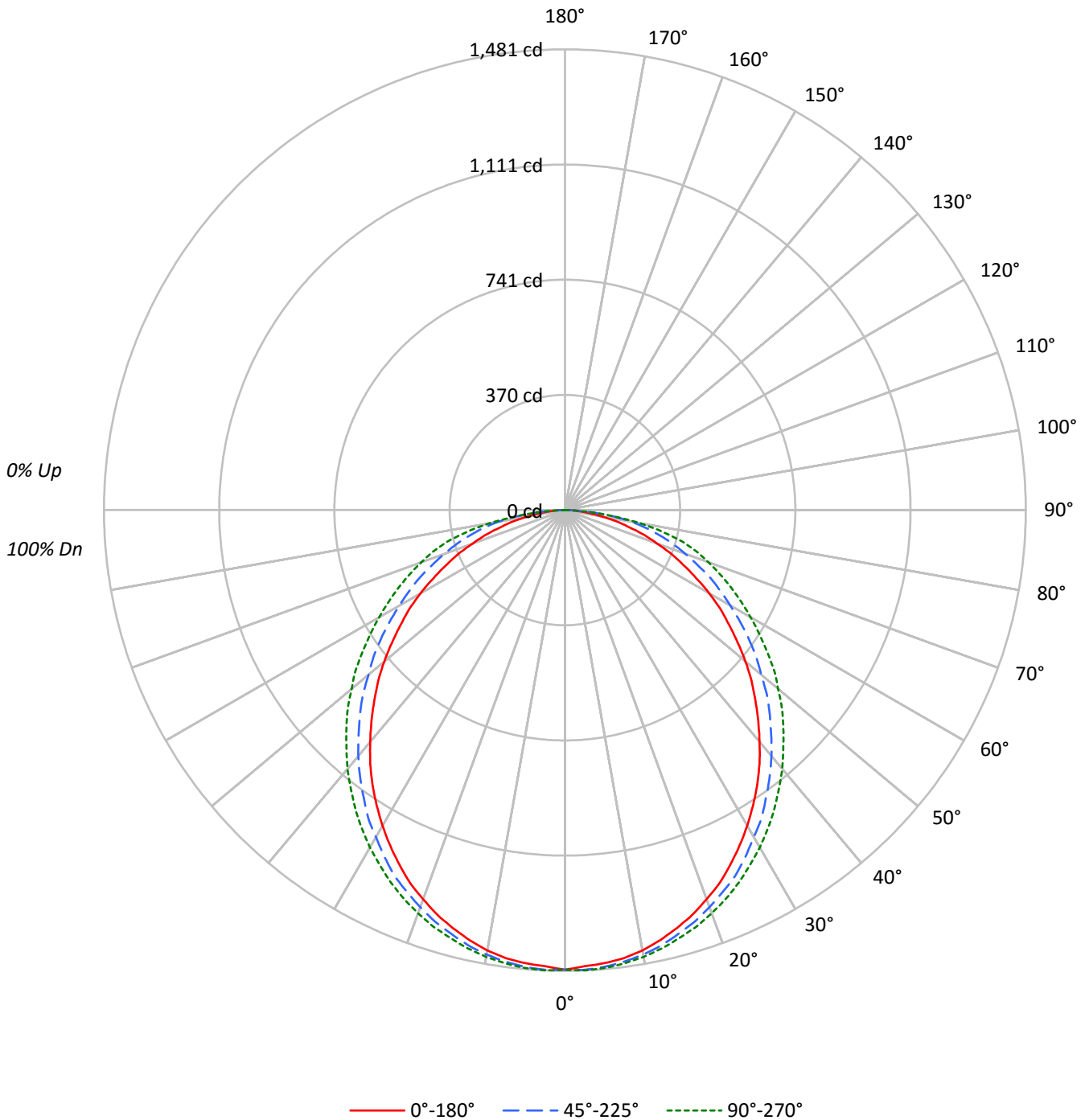
Lumens per Lamp: N/A  
Luminaire Lumens: 4123.0 lumens  
Efficiency: N/A  
Efficacy: 108.2 lumens/watt  
Spacing Criteria (0/90/45): 1.18 / 1.26 / 1.34  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 38.1  
Input Voltage (V): NR  
Input Current (A<sub>in</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	99	95	106	101	97	94	97	94	91	93	90	88	89	87	85	83
2	98	90	83	77	96	88	82	76	84	79	74	81	77	73	78	74	71	69
3	90	79	71	64	87	77	70	63	74	68	62	72	66	61	69	64	60	58
4	82	70	61	54	80	69	60	54	66	59	53	64	57	52	61	56	52	49
5	75	62	53	47	73	61	53	46	59	52	46	57	51	45	55	50	45	43
6	70	56	47	41	68	55	47	41	53	46	40	52	45	40	50	44	39	37
7	65	51	42	36	63	50	42	36	49	41	36	47	40	35	46	40	35	33
8	60	47	38	32	59	46	38	32	45	37	32	43	37	32	42	36	31	30
9	56	43	35	29	55	42	34	29	41	34	29	40	33	29	39	33	28	27
10	53	40	32	26	51	39	31	26	38	31	26	37	31	26	36	30	26	24

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	3976	3976	3976
5°	3949	3981	3991
10°	3927	3963	3985
15°	3875	3928	3966
20°	3812	3889	3950
25°	3736	3850	3924
30°	3640	3772	3891
35°	3539	3703	3855
40°	3419	3629	3818
45°	3295	3543	3777
50°	3173	3447	3745
55°	3023	3385	3719
60°	2888	3303	3707
65°	2695	3283	3748
70°	2482	3254	3859
75°	2241	3300	4060
80°	1937	3398	3815
85°	1602	2850	2850



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	139.7	3.4
10°-20°	397.6	9.6
20°-30°	594.9	14.4
30°-40°	704.5	17.1
40°-50°	718.0	17.4
50°-60°	643.5	15.6
60°-70°	503.8	12.2
70°-80°	324.9	7.9
80°-90°	96.0	2.3
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°	1132.2	27.5
0°-40°	1836.8	44.5
0°-60°	3198.3	77.6
0°-90°	4123.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4123.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1477	1477	1477	1477	1477	
5°	1462	1466	1474	1476	1477	139
15°	1391	1398	1410	1422	1424	392
25°	1258	1270	1297	1314	1322	579
35°	1077	1091	1127	1162	1174	673
45°	866	885	931	979	993	669
55°	644	666	721	771	793	578
65°	423	448	516	566	589	420
75°	216	248	317	371	390	231
85°	52	71	92	92	92	61
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1477.4	1477.4	1477.4	1477.4	1477.4
2.5°	1467.8	1471.6	1479.3	1481.2	1481.2
5°	1462.0	1465.9	1473.6	1475.5	1477.4
7.5°	1452.4	1454.3	1463.9	1467.8	1469.7
10°	1437.0	1440.8	1450.5	1456.2	1458.2
12.5°	1415.8	1421.6	1433.2	1440.8	1442.8
15°	1390.8	1398.5	1410.1	1421.6	1423.5
17.5°	1363.9	1371.6	1387.0	1400.5	1404.3
20°	1331.2	1340.8	1358.1	1373.5	1379.3
22.5°	1298.5	1306.2	1327.4	1346.6	1352.4
25°	1258.1	1269.6	1296.6	1313.9	1321.6
27.5°	1215.8	1229.2	1256.2	1279.3	1287.0
30°	1171.5	1185.0	1213.9	1242.7	1252.3
32.5°	1125.4	1140.8	1175.4	1204.2	1213.9
35°	1077.3	1090.7	1127.3	1161.9	1173.5
37.5°	1027.3	1038.8	1081.1	1117.7	1129.2
40°	973.4	988.8	1033.0	1075.3	1086.9
42.5°	919.5	936.8	981.1	1027.3	1038.8
45°	865.7	884.9	931.1	979.2	992.6
47.5°	813.7	829.1	881.1	927.2	946.5
50°	757.9	773.3	823.3	875.3	894.5
52.5°	700.2	721.4	775.2	825.3	848.4
55°	644.4	665.6	721.4	771.4	792.6
57.5°	592.5	609.8	667.5	719.5	740.6
60°	536.7	552.1	613.7	669.4	688.7
62.5°	477.1	500.2	563.6	615.6	638.7
65°	423.2	448.2	515.6	565.6	588.7
67.5°	373.2	396.3	461.7	515.6	540.6
70°	315.5	346.3	413.6	467.5	490.5
72.5°	269.3	296.2	365.5	419.4	444.4
75°	215.5	248.2	317.4	371.3	390.5
77.5°	171.2	203.9	269.3	311.6	321.3
80°	125.0	157.7	219.3	240.5	246.2
82.5°	84.6	115.4	157.7	163.5	165.4
85°	51.9	71.2	92.3	92.3	92.3
87.5°	25.0	28.9	32.7	30.8	30.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)