

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: P313828

Luminaire Tested: **24FCZ2-30-UNV-L83050-CP125-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: P313828  
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: 24FCZ2-30-UNV-L83050-CP125-W2A-U-4500K  
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.125" POLYCARB SHEET  
Light Source: (168) 4500K 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: 2872.0 lumens  
Efficiency: N/A  
Efficacy: 117.2 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

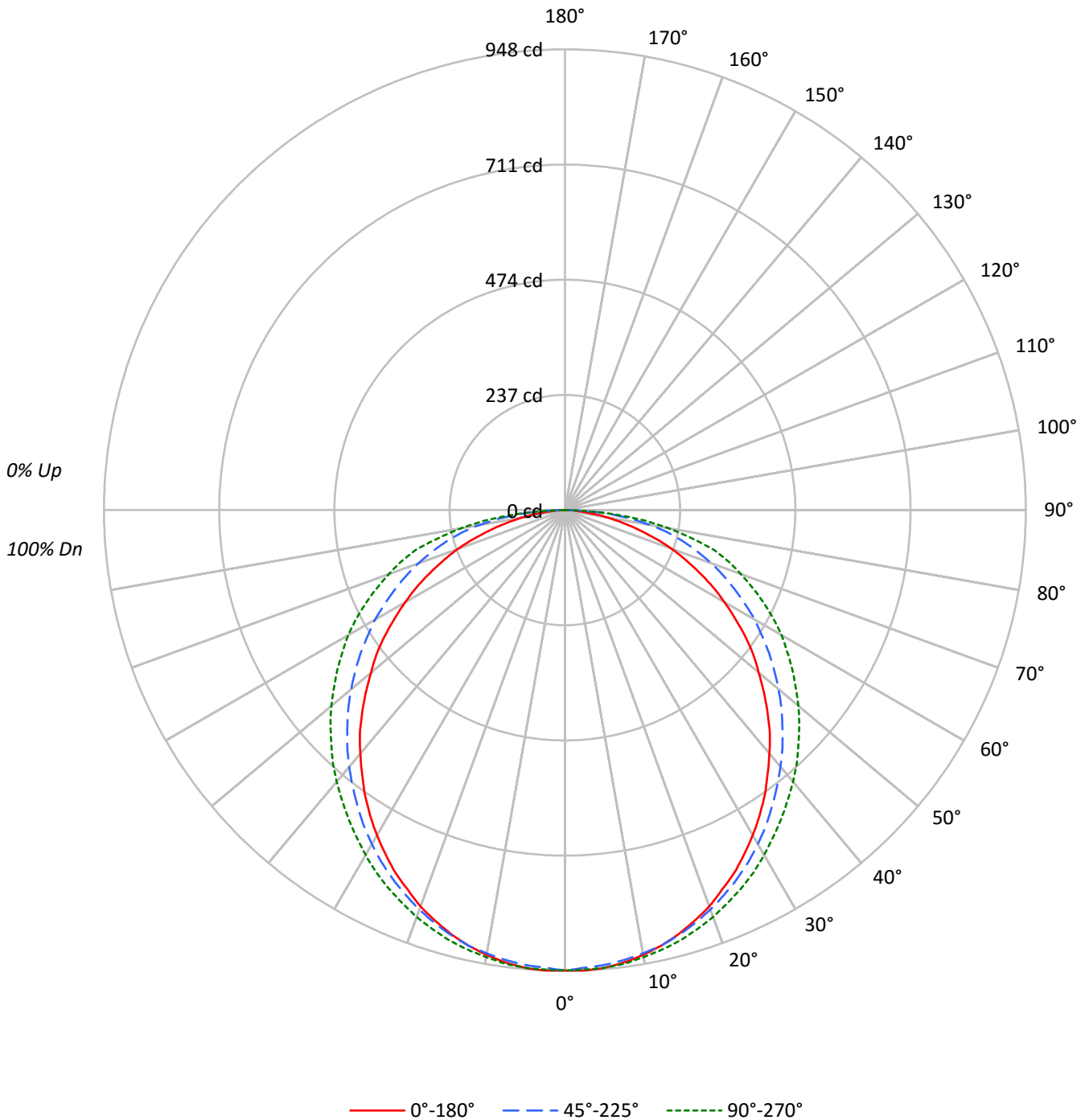
Input Watts (W): 24.5  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	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°	1274	1274	1274
5°	1277	1269	1277
10°	1269	1265	1276
15°	1258	1261	1277
20°	1243	1252	1276
25°	1224	1243	1275
30°	1201	1233	1273
35°	1177	1221	1274
40°	1150	1212	1282
45°	1122	1204	1293
50°	1089	1201	1312
55°	1062	1202	1339
60°	1020	1213	1385
65°	974	1226	1435
70°	922	1263	1515
75°	822	1318	1655
80°	701	1395	1691
85°	500	1383	1618



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	89.6	3.1
10°-20°	256.3	8.9
20°-30°	387.1	13.5
30°-40°	466.6	16.2
40°-50°	489.8	17.1
50°-60°	458.3	16.0
60°-70°	378.4	13.2
70°-80°	257.9	9.0
80°-90°	87.9	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°	733.1	25.5
0°-40°	1199.7	41.8
0°-60°	2147.7	74.8
0°-90°	2872.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2872.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	947	947	947	947	947	
5°	945	944	940	945	945	90
15°	903	904	905	915	917	255
25°	824	828	838	854	858	379
35°	717	724	743	768	776	448
45°	590	602	633	667	679	455
55°	453	471	513	555	571	404
65°	306	332	385	434	451	303
75°	158	194	254	301	318	169
85°	32	64	90	101	105	41
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	947.2	947.2	947.2	947.2	947.2
2.5°	948.1	947.2	942.4	947.2	946.2
5°	945.3	944.3	939.5	945.3	945.3
7.5°	938.6	938.6	933.8	940.5	941.4
10°	929.1	929.1	926.2	933.8	933.8
12.5°	917.6	917.6	917.6	925.2	926.2
15°	903.3	904.3	905.2	914.8	916.7
17.5°	886.2	888.1	890.9	902.4	904.3
20°	868.1	870.0	874.7	888.1	890.9
22.5°	845.2	850.0	856.6	871.9	874.7
25°	824.2	828.1	837.6	853.8	858.5
27.5°	798.5	804.2	816.6	833.8	840.4
30°	772.8	778.5	793.7	813.8	819.5
32.5°	745.2	753.7	769.9	790.9	797.6
35°	716.6	724.2	743.2	768.0	775.6
37.5°	685.1	695.6	716.6	743.2	752.8
40°	654.6	666.1	689.9	718.5	729.9
42.5°	624.1	635.6	662.3	694.6	706.1
45°	589.8	602.2	632.7	667.0	679.4
47.5°	555.5	570.8	604.1	640.3	653.7
50°	520.3	537.4	573.6	611.7	627.0
52.5°	488.8	505.0	543.1	584.1	598.4
55°	452.6	470.7	512.6	554.6	570.8
57.5°	415.5	435.5	480.3	526.0	542.2
60°	379.2	401.2	450.7	496.4	514.6
62.5°	344.0	365.9	417.4	465.0	483.1
65°	305.9	331.6	385.0	433.6	450.7
67.5°	269.7	297.3	353.5	401.2	418.3
70°	234.4	261.1	321.1	367.8	385.0
72.5°	196.3	226.8	286.8	335.4	353.5
75°	158.2	194.4	253.5	301.1	318.3
77.5°	122.9	160.1	219.2	258.2	266.8
80°	90.5	128.6	180.1	207.7	218.2
82.5°	58.1	96.2	137.2	157.2	165.8
85°	32.4	63.8	89.6	101.0	104.8
87.5°	13.3	27.6	36.2	41.0	41.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)