

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: P311229

Luminaire Tested: **24FCZ2-30-UNV-L82765-S-CP125-W2A-U-3000K**

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: P311229  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-1)  
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-L82765-S-CP125-W2A-U-3000K  
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.125" 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**

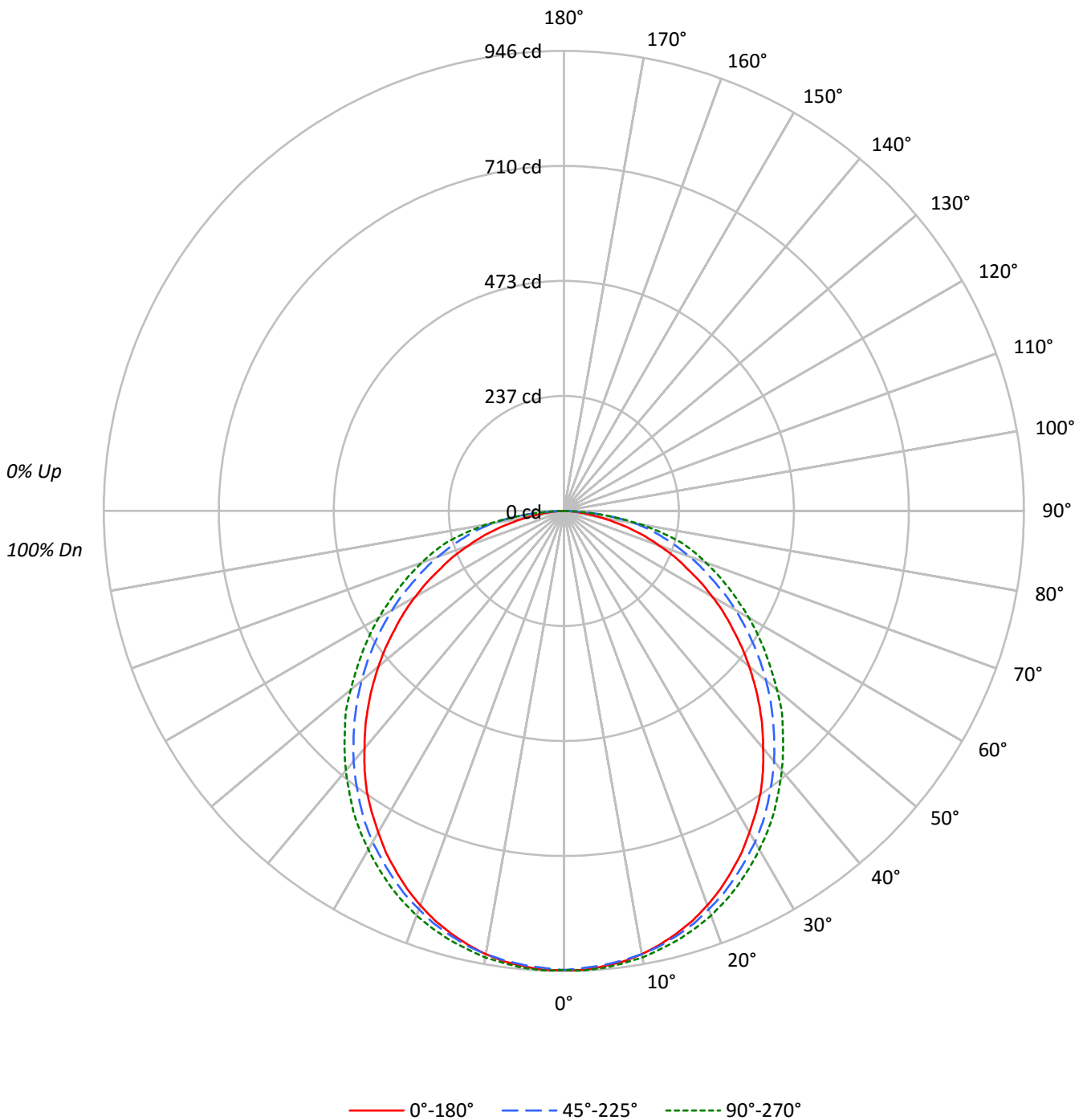
Lumens per Lamp: N/A  
Luminaire Lumens: 2687.0 lumens  
Efficiency: N/A  
Efficacy: 115.8 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 23.2  
Input Voltage (V): NR  
Input Current (A<sub>in</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	93	97	93	90	93	90	88	89	87	85	83
2	98	90	83	77	96	88	81	76	84	79	74	81	76	72	78	74	71	69
3	89	79	70	64	87	77	69	63	74	67	62	71	66	61	69	64	60	58
4	82	70	61	54	80	68	60	54	66	59	53	63	57	52	61	56	51	49
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	42
6	70	56	47	40	68	55	47	40	53	46	40	52	45	40	50	44	39	37
7	64	51	42	36	63	50	42	36	48	41	35	47	40	35	46	39	35	33
8	60	46	38	32	58	46	37	32	44	37	32	43	36	31	42	36	31	29
9	56	43	34	29	55	42	34	29	41	34	28	40	33	28	39	33	28	26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24

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

	0°	45°	90°
0°	1270	1270	1270
5°	1269	1266	1274
10°	1264	1264	1273
15°	1252	1258	1271
20°	1236	1248	1267
25°	1213	1235	1260
30°	1185	1221	1249
35°	1159	1201	1239
40°	1120	1181	1225
45°	1083	1158	1212
50°	1042	1136	1197
55°	995	1115	1185
60°	949	1098	1183
65°	889	1079	1190
70°	823	1085	1222
75°	737	1105	1291
80°	595	1171	1263
85°	448	1028	1002



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	89.4	3.3
10°-20°	255.4	9.5
20°-30°	383.8	14.3
30°-40°	457.2	17.0
40°-50°	467.9	17.4
50°-60°	421.3	15.7
60°-70°	330.8	12.3
70°-80°	214.7	8.0
80°-90°	66.4	2.5
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°	728.6	27.1
0°-40°	1185.8	44.1
0°-60°	2075.0	77.2
0°-90°	2687.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2687.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	944	944	944	944	944	
5°	940	941	937	942	943	89
15°	899	901	903	911	912	253
25°	817	824	832	846	848	376
35°	706	714	731	749	754	440
45°	569	583	608	632	637	439
55°	424	443	475	500	505	380
65°	279	300	339	367	374	278
75°	142	169	212	242	248	150
85°	29	54	67	65	65	35
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	944.0	944.0	944.0	944.0	944.0
2.5°	944.8	944.8	940.5	944.8	945.7
5°	939.7	941.4	937.1	942.3	943.1
7.5°	934.6	934.6	932.0	937.1	938.0
10°	925.2	926.0	925.2	931.2	932.0
12.5°	913.2	914.9	915.8	921.8	922.6
15°	898.7	901.3	903.0	910.7	912.4
17.5°	882.5	885.1	889.3	897.9	899.6
20°	862.9	866.3	871.4	882.5	885.1
22.5°	841.5	845.0	853.5	863.7	868.0
25°	816.8	823.6	832.2	845.8	848.4
27.5°	792.0	798.0	809.1	823.6	827.0
30°	763.0	772.4	786.1	800.6	804.0
32.5°	734.9	744.2	760.5	775.8	780.1
35°	705.8	714.4	731.4	749.4	754.5
37.5°	672.6	683.6	702.4	720.3	725.5
40°	637.6	651.2	672.6	691.3	697.3
42.5°	604.3	618.8	640.1	660.6	667.4
45°	569.3	582.9	608.5	631.6	636.7
47.5°	533.4	548.8	576.1	599.2	607.7
50°	497.6	513.8	542.8	566.7	571.8
52.5°	461.7	478.8	509.5	535.1	537.7
55°	424.2	443.0	475.4	500.1	505.3
57.5°	390.0	406.3	441.3	466.9	472.8
60°	352.5	370.4	408.0	431.9	439.5
62.5°	316.6	335.4	374.7	398.6	405.4
65°	279.1	300.4	338.8	367.0	373.8
67.5°	246.7	267.1	308.1	335.4	342.2
70°	209.1	232.1	275.7	303.8	310.7
72.5°	176.7	200.6	244.1	271.4	281.7
75°	141.7	169.0	212.5	241.5	248.4
77.5°	107.5	139.1	183.5	205.7	205.7
80°	76.8	110.1	151.1	161.3	163.0
82.5°	50.4	82.8	111.8	111.0	111.0
85°	29.0	53.8	66.6	64.9	64.9
87.5°	11.1	22.2	23.9	23.9	23.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)