

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: P313860

Luminaire Tested: **24FCZ2-35HE-UNV-L83050-CP250-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: P313860  
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: 24FCZ2-35HE-UNV-L83050-CP250-W2A-U-3000K  
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.250" POLYCARB SHEET  
Light Source: (336) 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**

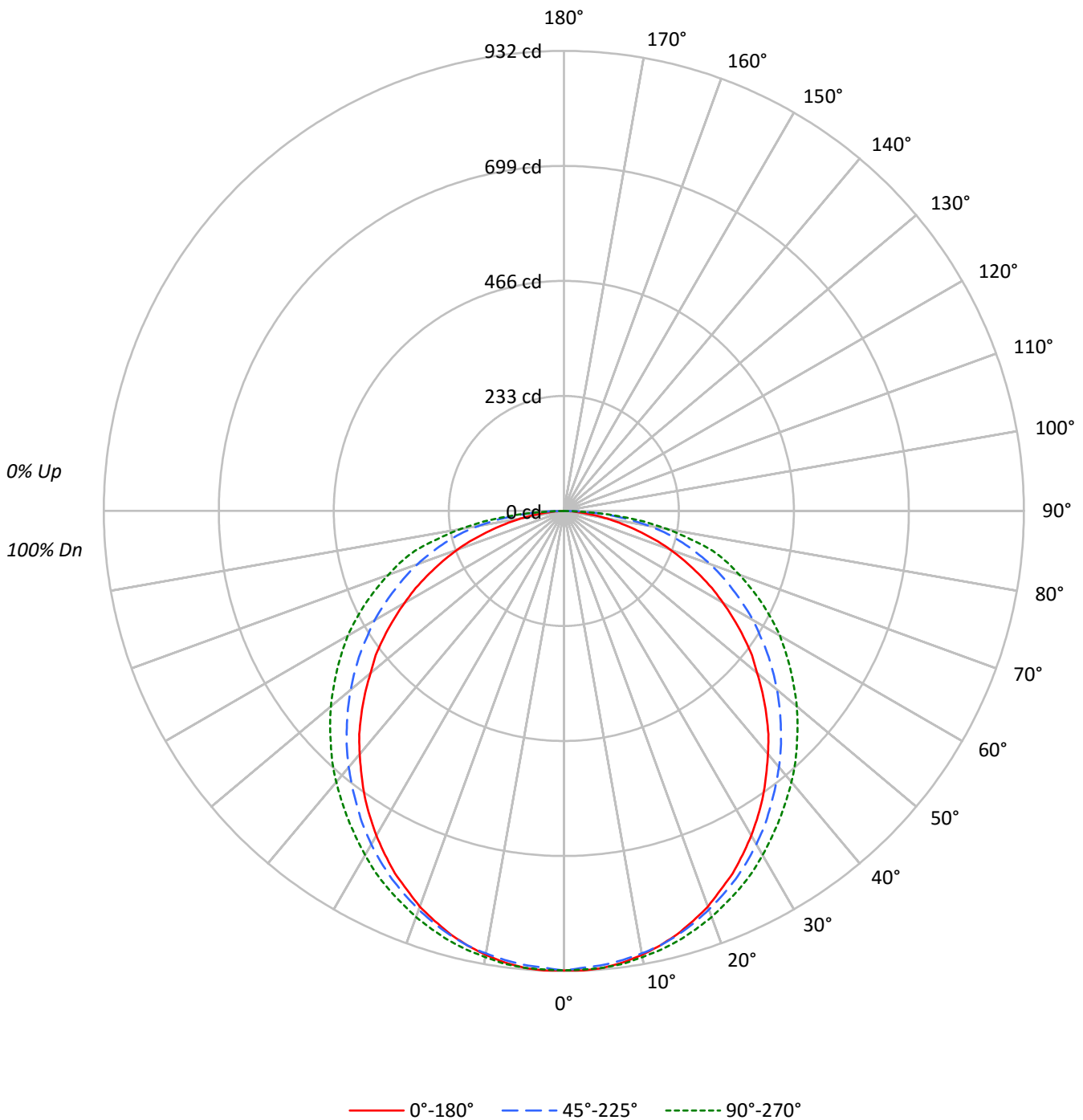
Lumens per Lamp: N/A  
Luminaire Lumens: 2822.0 lumens  
Efficiency: N/A  
Efficacy: 109.0 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.29 / 1.38  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 25.9  
Input Voltage (V): NR  
Input Current (A<sub>in</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°	1252	1252	1252
5°	1254	1247	1254
10°	1247	1243	1254
15°	1236	1239	1255
20°	1221	1231	1253
25°	1202	1222	1252
30°	1180	1212	1251
35°	1157	1200	1252
40°	1130	1191	1260
45°	1103	1183	1270
50°	1070	1180	1290
55°	1043	1182	1316
60°	1003	1192	1361
65°	957	1204	1410
70°	906	1241	1488
75°	808	1295	1626
80°	689	1371	1661
85°	491	1359	1590



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	88.1	3.1
10°-20°	251.8	8.9
20°-30°	380.4	13.5
30°-40°	458.5	16.2
40°-50°	481.3	17.1
50°-60°	450.3	16.0
60°-70°	371.8	13.2
70°-80°	253.4	9.0
80°-90°	86.4	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°	720.3	25.5
0°-40°	1178.8	41.8
0°-60°	2110.3	74.8
0°-90°	2822.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2822.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	931	931	931	931	931	
5°	929	928	923	929	929	88
15°	888	888	890	899	901	250
25°	810	814	823	839	844	373
35°	704	712	730	755	762	440
45°	580	592	622	655	668	447
55°	445	462	504	545	561	397
65°	300	326	378	426	443	298
75°	155	191	249	296	313	166
85°	32	63	88	99	103	40
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	930.7	930.7	930.7	930.7	930.7
2.5°	931.6	930.7	926.0	930.7	929.7
5°	928.8	927.9	923.2	928.8	928.8
7.5°	922.2	922.2	917.6	924.1	925.1
10°	912.9	912.9	910.1	917.6	917.6
12.5°	901.6	901.6	901.6	909.1	910.1
15°	887.6	888.5	889.5	898.8	900.7
17.5°	870.7	872.6	875.4	886.7	888.5
20°	853.0	854.8	859.5	872.6	875.4
22.5°	830.5	835.2	841.7	856.7	859.5
25°	809.9	813.6	823.0	838.9	843.6
27.5°	784.6	790.2	802.4	819.3	825.8
30°	759.3	764.9	779.9	799.6	805.2
32.5°	732.2	740.6	756.5	777.1	783.7
35°	704.1	711.6	730.3	754.6	762.1
37.5°	673.2	683.5	704.1	730.3	739.7
40°	643.2	654.5	677.9	706.0	717.2
42.5°	613.3	624.5	650.7	682.6	693.8
45°	579.6	591.7	621.7	655.4	667.6
47.5°	545.9	560.8	593.6	629.2	642.3
50°	511.2	528.1	563.6	601.1	616.1
52.5°	480.3	496.2	533.7	573.9	588.0
55°	444.7	462.5	503.7	544.9	560.8
57.5°	408.2	427.9	471.9	516.8	532.7
60°	372.6	394.2	442.9	487.8	505.6
62.5°	338.0	359.5	410.1	456.9	474.7
65°	300.5	325.8	378.3	426.0	442.9
67.5°	265.0	292.1	347.4	394.2	411.0
70°	230.3	256.5	315.5	361.4	378.3
72.5°	192.9	222.8	281.8	329.6	347.4
75°	155.4	191.0	249.1	295.9	312.7
77.5°	120.8	157.3	215.3	253.7	262.2
80°	88.9	126.4	177.0	204.1	214.4
82.5°	57.1	94.6	134.8	154.5	162.9
85°	31.8	62.7	88.0	99.2	103.0
87.5°	13.1	27.2	35.6	40.3	40.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)