

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: P313883

Luminaire Tested: **24FCZ2-35-UNV-L83050-CP187-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: P313883  
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: 24FCZ2-35-UNV-L83050-CP187-W2A-U-4500K  
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.187" 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**

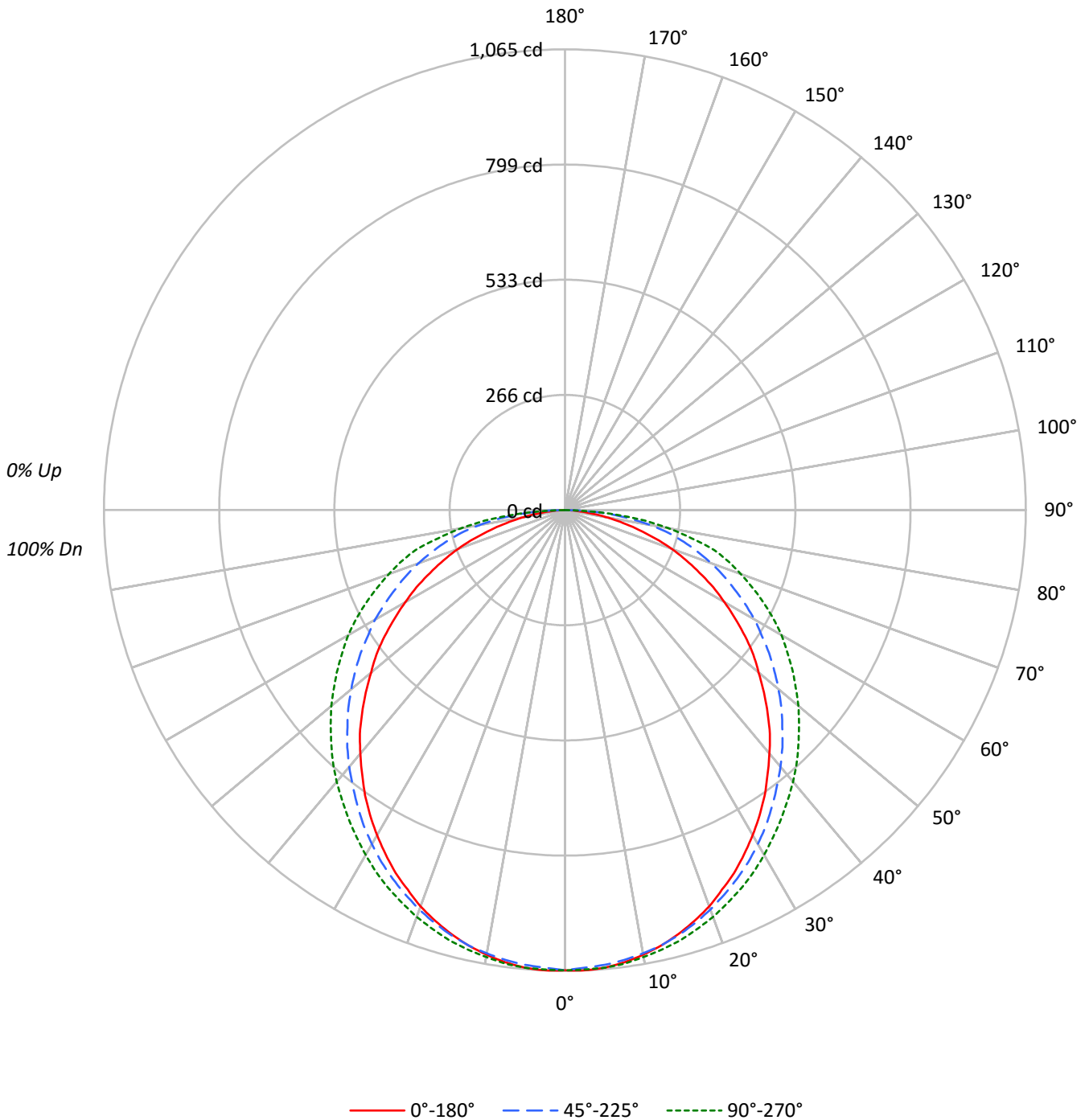
Lumens per Lamp: N/A  
Luminaire Lumens: 3226.0 lumens  
Efficiency: N/A  
Efficacy: 109.7 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.29 / 1.38  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 29.4  
Input Voltage (V): NR  
Input Current (A<sub>in</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°	1431	1431	1431
5°	1434	1425	1434
10°	1426	1421	1433
15°	1413	1416	1434
20°	1396	1407	1433
25°	1374	1397	1432
30°	1349	1385	1430
35°	1322	1371	1431
40°	1291	1361	1440
45°	1261	1352	1452
50°	1223	1349	1474
55°	1193	1351	1504
60°	1146	1362	1555
65°	1094	1377	1612
70°	1036	1419	1701
75°	924	1480	1858
80°	788	1567	1899
85°	562	1553	1817



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	100.7	3.1
10°-20°	287.9	8.9
20°-30°	434.8	13.5
30°-40°	524.1	16.2
40°-50°	550.2	17.1
50°-60°	514.7	16.0
60°-70°	425.1	13.2
70°-80°	289.7	9.0
80°-90°	98.8	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°	823.4	25.5
0°-40°	1347.5	41.8
0°-60°	2412.5	74.8
0°-90°	3226.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3226.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1064	1064	1064	1064	1064	
5°	1062	1061	1055	1062	1062	101
15°	1015	1016	1017	1028	1030	286
25°	926	930	941	959	964	426
35°	805	813	835	863	871	503
45°	662	676	711	749	763	511
55°	508	529	576	623	641	454
65°	344	372	432	487	506	341
75°	178	218	285	338	358	189
85°	36	72	101	114	118	46
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1063.9	1063.9	1063.9	1063.9	1063.9
2.5°	1065.0	1063.9	1058.6	1063.9	1062.8
5°	1061.8	1060.7	1055.3	1061.8	1061.8
7.5°	1054.3	1054.3	1048.9	1056.4	1057.5
10°	1043.6	1043.6	1040.4	1048.9	1048.9
12.5°	1030.7	1030.7	1030.7	1039.3	1040.4
15°	1014.7	1015.7	1016.8	1027.5	1029.7
17.5°	995.4	997.5	1000.8	1013.6	1015.7
20°	975.1	977.2	982.6	997.5	1000.8
22.5°	949.4	954.7	962.2	979.4	982.6
25°	925.8	930.1	940.8	959.0	964.4
27.5°	896.9	903.4	917.3	936.5	944.0
30°	868.0	874.5	891.6	914.1	920.5
32.5°	837.0	846.6	864.8	888.4	895.9
35°	804.9	813.4	834.9	862.7	871.2
37.5°	769.6	781.3	804.9	834.9	845.6
40°	735.3	748.2	774.9	807.0	819.9
42.5°	701.1	713.9	743.9	780.3	793.1
45°	662.5	676.4	710.7	749.2	763.1
47.5°	624.0	641.1	678.6	719.3	734.2
50°	584.4	603.7	644.3	687.2	704.3
52.5°	549.1	567.3	610.1	656.1	672.2
55°	508.4	528.7	575.8	622.9	641.1
57.5°	466.7	489.1	539.4	590.8	609.0
60°	426.0	450.6	506.3	557.6	578.0
62.5°	386.4	411.0	468.8	522.3	542.7
65°	343.6	372.5	432.4	487.0	506.3
67.5°	302.9	333.9	397.1	450.6	469.9
70°	263.3	293.3	360.7	413.1	432.4
72.5°	220.5	254.7	322.2	376.8	397.1
75°	177.7	218.3	284.7	338.2	357.5
77.5°	138.1	179.8	246.2	290.1	299.7
80°	101.7	144.5	202.3	233.3	245.1
82.5°	65.3	108.1	154.1	176.6	186.2
85°	36.4	71.7	100.6	113.5	117.7
87.5°	15.0	31.0	40.7	46.0	46.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)