

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: P311172

Luminaire Tested: **24FCZ2-30HE-UNV-L82765-S-CA08-W2A-U-5700K**

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: P311172  
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: 24FCZ2-30HE-UNV-L82765-S-CA08-W2A-U-5700K  
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.08" ACRYLIC SHEET  
Light Source: (336) 5700K 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**

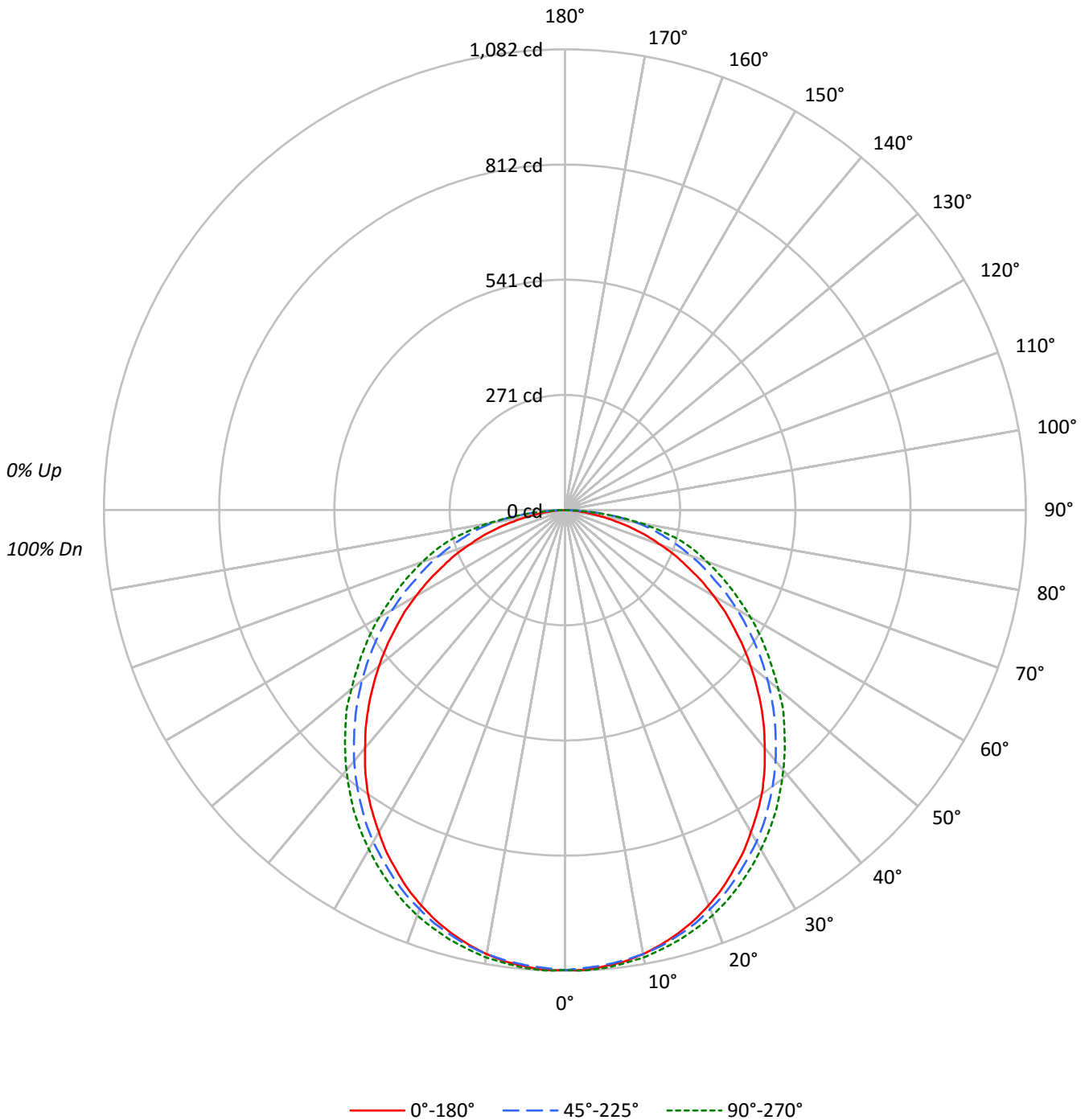
Lumens per Lamp: N/A  
Luminaire Lumens: 3075.0 lumens  
Efficiency: N/A  
Efficacy: 141.7 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 21.7  
Input Voltage (V): NR  
Input Current (A<sub>in</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°	1454	1454	1454
5°	1452	1449	1458
10°	1447	1447	1457
15°	1433	1439	1454
20°	1414	1428	1450
25°	1388	1414	1441
30°	1357	1398	1430
35°	1327	1375	1418
40°	1281	1352	1402
45°	1240	1325	1386
50°	1192	1300	1370
55°	1139	1276	1356
60°	1086	1256	1354
65°	1017	1235	1362
70°	941	1241	1399
75°	843	1264	1477
80°	681	1340	1446
85°	513	1176	1145



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	102.3	3.3
10°-20°	292.2	9.5
20°-30°	439.3	14.3
30°-40°	523.3	17.0
40°-50°	535.5	17.4
50°-60°	482.1	15.7
60°-70°	378.6	12.3
70°-80°	245.7	8.0
80°-90°	76.0	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°	833.8	27.1
0°-40°	1357.0	44.1
0°-60°	2374.6	77.2
0°-90°	3075.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3075.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1080	1080	1080	1080	1080	
5°	1075	1077	1072	1078	1079	102
15°	1028	1031	1033	1042	1044	290
25°	935	942	952	968	971	431
35°	808	818	837	858	863	504
45°	652	667	696	723	729	502
55°	485	507	544	572	578	435
65°	319	344	388	420	428	318
75°	162	193	243	276	284	172
85°	33	62	76	74	74	40
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1080.3	1080.3	1080.3	1080.3	1080.3
2.5°	1081.2	1081.2	1076.4	1081.2	1082.2
5°	1075.4	1077.3	1072.5	1078.3	1079.3
7.5°	1069.5	1069.5	1066.6	1072.5	1073.4
10°	1058.8	1059.8	1058.8	1065.6	1066.6
12.5°	1045.1	1047.1	1048.0	1054.9	1055.8
15°	1028.5	1031.4	1033.4	1042.2	1044.1
17.5°	1009.9	1012.9	1017.8	1027.5	1029.5
20°	987.5	991.4	997.2	1009.9	1012.9
22.5°	963.1	967.0	976.7	988.5	993.3
25°	934.7	942.5	952.3	967.9	970.9
27.5°	906.4	913.2	925.9	942.5	946.5
30°	873.2	883.9	899.6	916.2	920.1
32.5°	841.0	851.7	870.3	887.9	892.7
35°	807.8	817.5	837.1	857.6	863.4
37.5°	769.7	782.4	803.9	824.4	830.2
40°	729.6	745.2	769.7	791.2	798.0
42.5°	691.5	708.1	732.6	756.0	763.8
45°	651.5	667.1	696.4	722.8	728.6
47.5°	610.5	628.0	659.3	685.7	695.4
50°	569.4	588.0	621.2	648.6	654.4
52.5°	528.4	547.9	583.1	612.4	615.3
55°	485.4	506.9	544.0	572.4	578.2
57.5°	446.4	464.9	505.0	534.3	541.1
60°	403.4	423.9	466.9	494.2	503.0
62.5°	362.4	383.9	428.8	456.1	463.9
65°	319.4	343.8	387.8	420.0	427.8
67.5°	282.3	305.7	352.6	383.9	391.7
70°	239.3	265.7	315.5	347.7	355.5
72.5°	202.2	229.5	279.3	310.6	322.3
75°	162.1	193.4	243.2	276.4	284.2
77.5°	123.1	159.2	210.0	235.4	235.4
80°	87.9	126.0	172.9	184.6	186.6
82.5°	57.6	94.7	128.0	127.0	127.0
85°	33.2	61.5	76.2	74.2	74.2
87.5°	12.7	25.4	27.3	27.3	26.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)