

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: P311171

Luminaire Tested: **24FCZ2-30HE-UNV-L82765-S-CA08-W2A-U-5500K**

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: P311171  
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-5500K  
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.08" ACRYLIC SHEET  
Light Source: (336) 5500K 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**

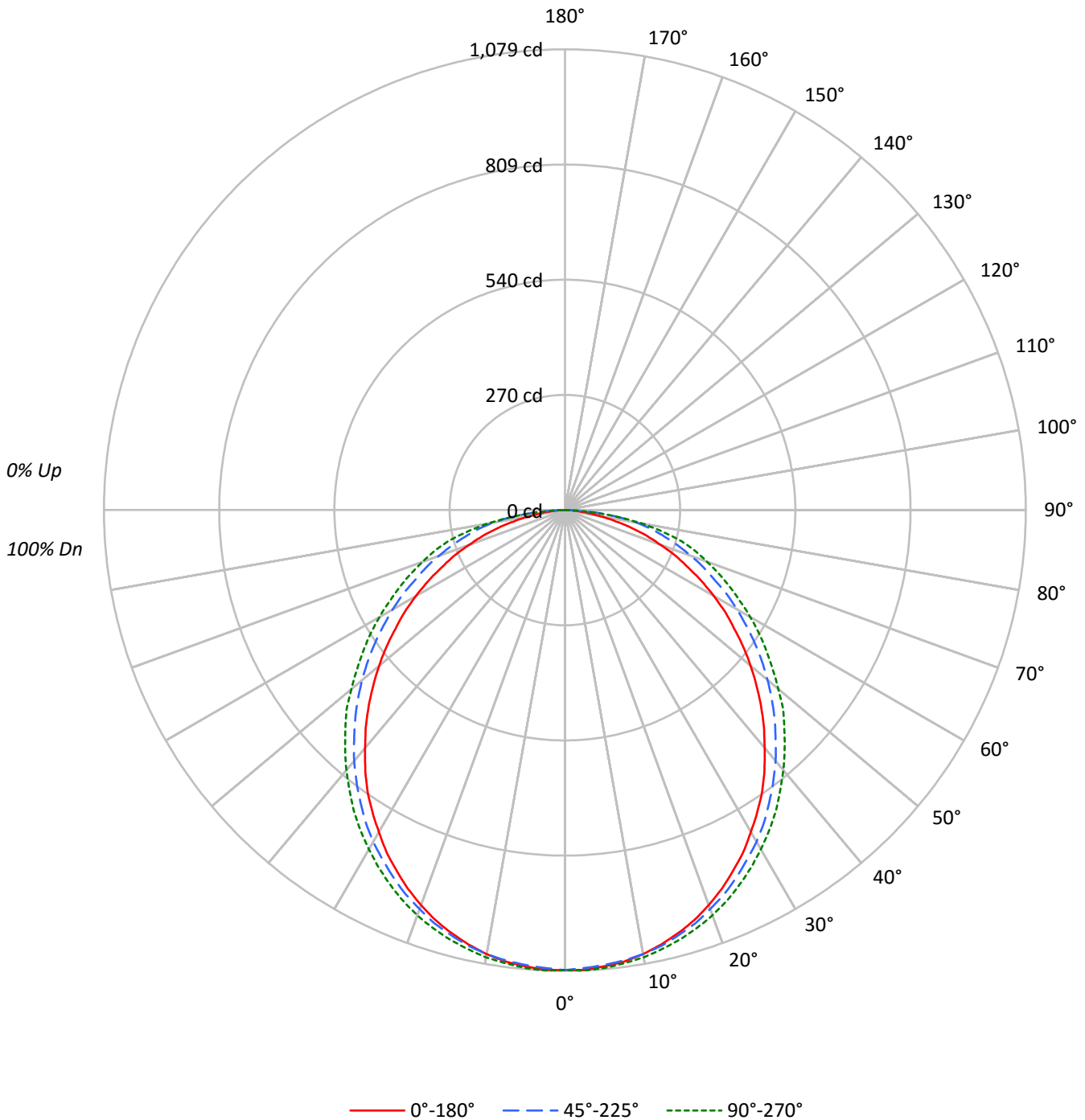
Lumens per Lamp: N/A  
Luminaire Lumens: 3066.0 lumens  
Efficiency: N/A  
Efficacy: 141.3 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 21.7  
Input Voltage (V): NR  
Input Current (A<sub>in</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°	1449	1449	1449
5°	1448	1444	1453
10°	1442	1442	1453
15°	1428	1435	1450
20°	1410	1424	1446
25°	1384	1410	1437
30°	1353	1393	1425
35°	1323	1371	1414
40°	1278	1348	1398
45°	1236	1321	1382
50°	1189	1297	1366
55°	1135	1272	1352
60°	1082	1253	1350
65°	1014	1231	1358
70°	939	1238	1395
75°	841	1261	1473
80°	679	1336	1441
85°	511	1173	1142



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	102.0	3.3
10°-20°	291.4	9.5
20°-30°	438.0	14.3
30°-40°	521.7	17.0
40°-50°	534.0	17.4
50°-60°	480.7	15.7
60°-70°	377.5	12.3
70°-80°	245.0	8.0
80°-90°	75.8	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°	831.3	27.1
0°-40°	1353.0	44.1
0°-60°	2367.7	77.2
0°-90°	3066.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3066.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1077	1077	1077	1077	1077	
5°	1072	1074	1069	1075	1076	102
15°	1026	1028	1030	1039	1041	289
25°	932	940	950	965	968	429
35°	805	815	835	855	861	502
45°	650	665	694	721	726	501
55°	484	505	542	571	576	434
65°	318	343	387	419	427	317
75°	162	193	242	276	283	171
85°	33	61	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°	1077.1	1077.1	1077.1	1077.1	1077.1
2.5°	1078.1	1078.1	1073.2	1078.1	1079.1
5°	1072.2	1074.2	1069.3	1075.2	1076.1
7.5°	1066.4	1066.4	1063.5	1069.3	1070.3
10°	1055.7	1056.7	1055.7	1062.5	1063.5
12.5°	1042.0	1044.0	1045.0	1051.8	1052.8
15°	1025.5	1028.4	1030.4	1039.1	1041.1
17.5°	1007.0	1009.9	1014.8	1024.5	1026.5
20°	984.6	988.5	994.3	1007.0	1009.9
22.5°	960.2	964.1	973.9	985.6	990.4
25°	932.0	939.8	949.5	965.1	968.0
27.5°	903.8	910.6	923.2	939.8	943.7
30°	870.6	881.4	896.9	913.5	917.4
32.5°	838.5	849.2	867.7	885.3	890.1
35°	805.4	815.1	834.6	855.1	860.9
37.5°	767.4	780.1	801.5	822.0	827.8
40°	727.5	743.1	767.4	788.8	795.7
42.5°	689.5	706.1	730.4	753.8	761.6
45°	649.6	665.2	694.4	720.7	726.5
47.5°	608.7	626.2	657.4	683.7	693.4
50°	567.8	586.3	619.4	646.7	652.5
52.5°	526.9	546.3	581.4	610.6	613.5
55°	484.0	505.4	542.4	570.7	576.5
57.5°	445.1	463.6	503.5	532.7	539.5
60°	402.2	422.7	465.5	492.8	501.5
62.5°	361.3	382.7	427.5	454.8	462.6
65°	318.5	342.8	386.6	418.8	426.6
67.5°	281.4	304.8	351.6	382.7	390.5
70°	238.6	264.9	314.6	346.7	354.5
72.5°	201.6	228.9	278.5	309.7	321.4
75°	161.7	192.8	242.5	275.6	283.4
77.5°	122.7	158.7	209.4	234.7	234.7
80°	87.6	125.6	172.4	184.1	186.0
82.5°	57.5	94.5	127.6	126.6	126.6
85°	33.1	61.4	76.0	74.0	74.0
87.5°	12.7	25.3	27.3	27.3	26.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)