

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: P314172

Luminaire Tested: **24FCZ2-30HE-UNV-L83050-S-CA125-W2A-U-4000K**

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: P314172  
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-L83050-S-CA125-W2A-U-4000K  
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.125" ACRYLIC SHEET  
Light Source: (336) 4000K 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**

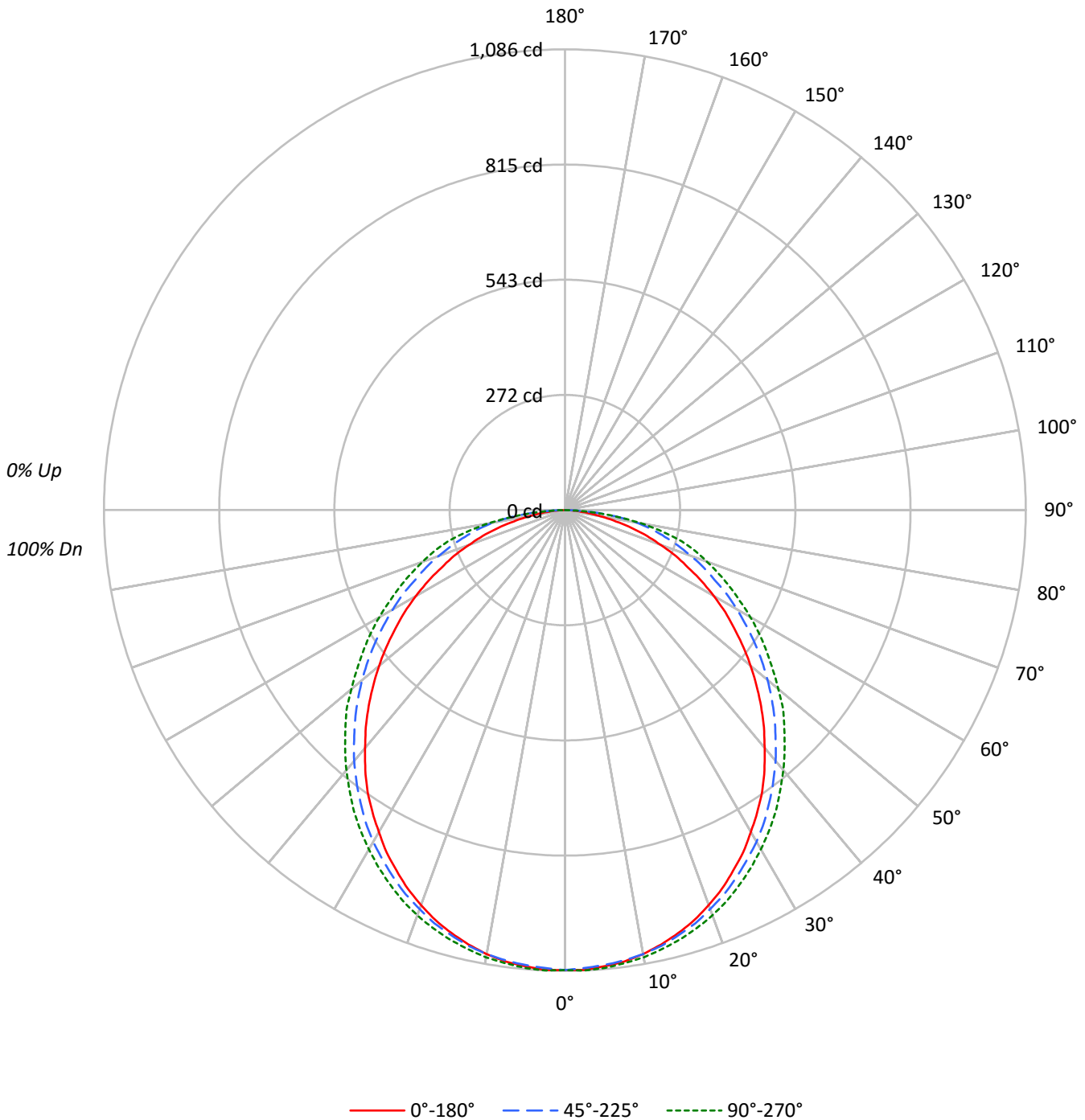
Lumens per Lamp: N/A  
Luminaire Lumens: 3086.0 lumens  
Efficiency: N/A  
Efficacy: 142.9 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 21.6  
Input Voltage (V): NR  
Input Current (A<sub>in</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°	1459	1459	1459
5°	1458	1454	1463
10°	1452	1452	1462
15°	1438	1445	1460
20°	1419	1433	1455
25°	1393	1419	1446
30°	1361	1403	1435
35°	1331	1380	1423
40°	1286	1357	1407
45°	1244	1330	1391
50°	1196	1305	1375
55°	1143	1281	1361
60°	1089	1261	1358
65°	1020	1239	1367
70°	945	1245	1404
75°	846	1269	1483
80°	683	1344	1450
85°	514	1181	1150



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	102.6	3.3
10°-20°	293.3	9.5
20°-30°	440.8	14.3
30°-40°	525.1	17.0
40°-50°	537.4	17.4
50°-60°	483.8	15.7
60°-70°	380.0	12.3
70°-80°	246.6	8.0
80°-90°	76.3	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°	836.7	27.1
0°-40°	1361.9	44.1
0°-60°	2383.1	77.2
0°-90°	3086.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3086.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1084	1084	1084	1084	1084	
5°	1079	1081	1076	1082	1083	103
15°	1032	1035	1037	1046	1048	291
25°	938	946	956	971	974	432
35°	811	820	840	861	866	506
45°	654	670	699	725	731	504
55°	487	509	546	574	580	437
65°	320	345	389	422	429	319
75°	163	194	244	277	285	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°	1084.1	1084.1	1084.1	1084.1	1084.1
2.5°	1085.1	1085.1	1080.2	1085.1	1086.1
5°	1079.2	1081.2	1076.3	1082.2	1083.2
7.5°	1073.3	1073.3	1070.4	1076.3	1077.3
10°	1062.6	1063.5	1062.6	1069.4	1070.4
12.5°	1048.8	1050.8	1051.8	1058.6	1059.6
15°	1032.2	1035.1	1037.1	1045.9	1047.9
17.5°	1013.6	1016.5	1021.4	1031.2	1033.2
20°	991.0	994.9	1000.8	1013.6	1016.5
22.5°	966.5	970.4	980.2	992.0	996.9
25°	938.1	945.9	955.7	971.4	974.3
27.5°	909.7	916.5	929.3	945.9	949.8
30°	876.3	887.1	902.8	919.5	923.4
32.5°	844.0	854.8	873.4	891.0	895.9
35°	810.6	820.5	840.1	860.6	866.5
37.5°	772.4	785.2	806.7	827.3	833.2
40°	732.2	747.9	772.4	794.0	800.8
42.5°	694.0	710.7	735.2	758.7	766.5
45°	653.8	669.5	698.9	725.4	731.2
47.5°	612.6	630.3	661.7	688.1	697.9
50°	571.5	590.1	623.4	650.9	656.8
52.5°	530.3	549.9	585.2	614.6	617.5
55°	487.2	508.7	546.0	574.4	580.3
57.5°	448.0	466.6	506.8	536.2	543.0
60°	404.8	425.4	468.5	496.0	504.8
62.5°	363.7	385.2	430.3	457.8	465.6
65°	320.5	345.0	389.2	421.5	429.3
67.5°	283.3	306.8	353.9	385.2	393.1
70°	240.2	266.6	316.6	349.0	356.8
72.5°	202.9	230.4	280.3	311.7	323.5
75°	162.7	194.1	244.1	277.4	285.2
77.5°	123.5	159.8	210.7	236.2	236.2
80°	88.2	126.4	173.5	185.3	187.2
82.5°	57.8	95.1	128.4	127.4	127.4
85°	33.3	61.8	76.5	74.5	74.5
87.5°	12.7	25.5	27.4	27.4	26.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)