

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: P311319

Luminaire Tested: **24FCZ2-35-UNV-L82765-S-CP125-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: P311319  
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: 24FCZ2-35-UNV-L82765-S-CP125-W2A-U-3000K  
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.125" POLYCARB SHEET  
Light Source: (168) 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: 3152.0 lumens  
Efficiency: N/A  
Efficacy: 113.4 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

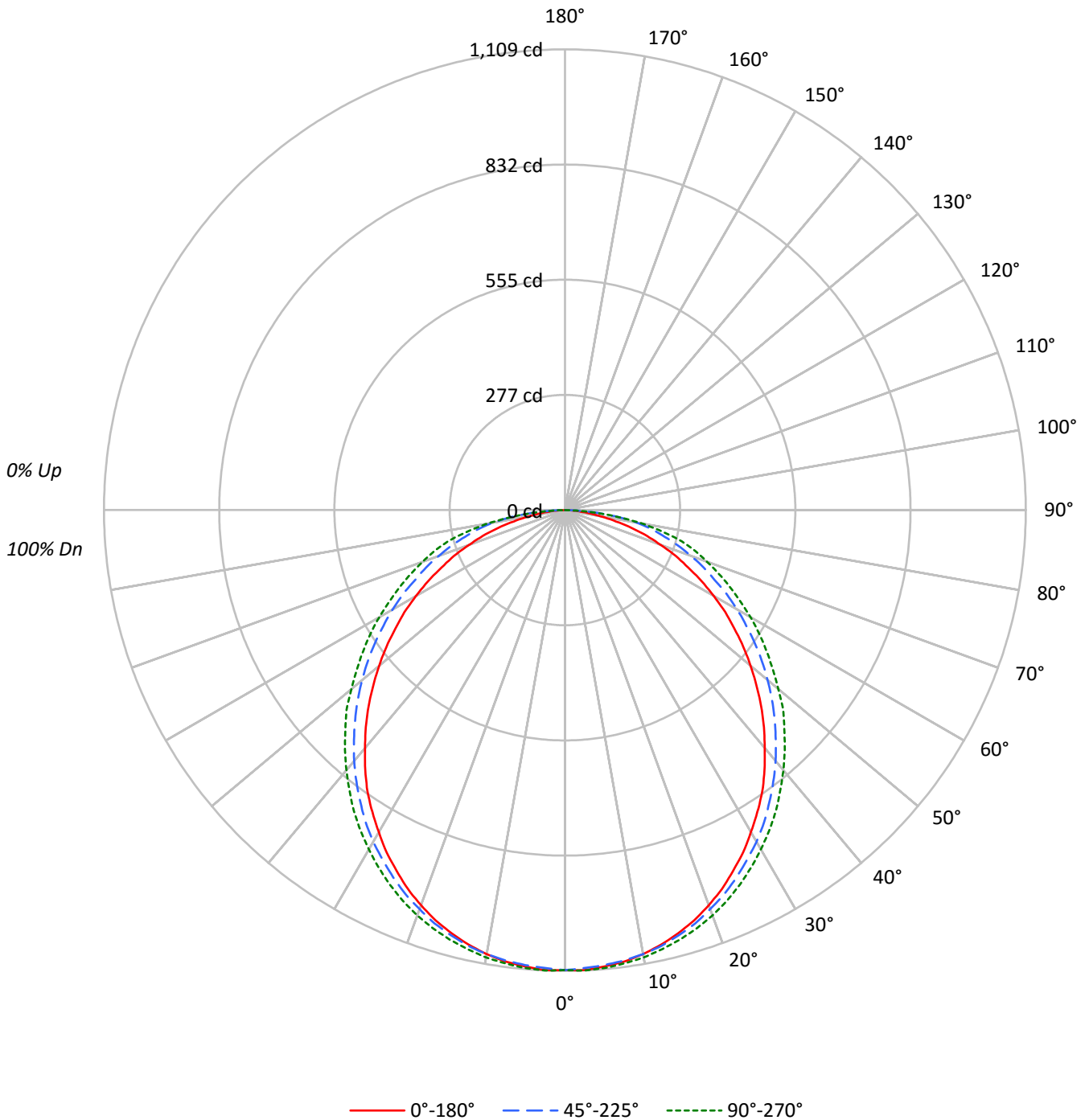
Input Watts (W): 27.8  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	1490	1490	1490
5°	1489	1485	1494
10°	1483	1483	1494
15°	1469	1476	1491
20°	1449	1464	1487
25°	1422	1449	1477
30°	1391	1433	1465
35°	1360	1409	1454
40°	1314	1386	1437
45°	1271	1358	1421
50°	1222	1333	1404
55°	1167	1308	1390
60°	1113	1288	1387
65°	1042	1266	1396
70°	965	1272	1434
75°	864	1296	1514
80°	698	1373	1481
85°	525	1206	1175



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	104.8	3.3
10°-20°	299.5	9.5
20°-30°	450.3	14.3
30°-40°	536.3	17.0
40°-50°	548.9	17.4
50°-60°	494.2	15.7
60°-70°	388.1	12.3
70°-80°	251.9	8.0
80°-90°	77.9	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°	854.6	27.1
0°-40°	1391.0	44.1
0°-60°	2434.1	77.2
0°-90°	3152.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3152.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1107	1107	1107	1107	1107	
5°	1102	1104	1099	1105	1106	105
15°	1054	1057	1059	1068	1070	297
25°	958	966	976	992	995	441
35°	828	838	858	879	885	517
45°	668	684	714	741	747	515
55°	498	520	558	587	593	446
65°	327	352	398	430	438	326
75°	166	198	249	283	291	176
85°	34	63	78	76	76	41
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1107.3	1107.3	1107.3	1107.3	1107.3
2.5°	1108.3	1108.3	1103.3	1108.3	1109.3
5°	1102.3	1104.3	1099.3	1105.3	1106.3
7.5°	1096.3	1096.3	1093.3	1099.3	1100.3
10°	1085.3	1086.3	1085.3	1092.3	1093.3
12.5°	1071.3	1073.3	1074.3	1081.3	1082.3
15°	1054.3	1057.3	1059.3	1068.3	1070.3
17.5°	1035.2	1038.2	1043.2	1053.3	1055.3
20°	1012.2	1016.2	1022.2	1035.2	1038.2
22.5°	987.2	991.2	1001.2	1013.2	1018.2
25°	958.1	966.2	976.2	992.2	995.2
27.5°	929.1	936.1	949.1	966.2	970.2
30°	895.1	906.1	922.1	939.1	943.1
32.5°	862.0	873.0	892.1	910.1	915.1
35°	828.0	838.0	858.0	879.0	885.1
37.5°	788.9	802.0	824.0	845.0	851.0
40°	747.9	763.9	788.9	811.0	818.0
42.5°	708.8	725.9	750.9	774.9	782.9
45°	667.8	683.8	713.8	740.9	746.9
47.5°	625.7	643.8	675.8	702.8	712.8
50°	583.7	602.7	636.8	664.8	670.8
52.5°	541.6	561.7	597.7	627.7	630.8
55°	497.6	519.6	557.7	586.7	592.7
57.5°	457.5	476.6	517.6	547.7	554.7
60°	413.5	434.5	478.6	506.6	515.6
62.5°	371.4	393.5	439.5	467.6	475.6
65°	327.4	352.4	397.5	430.5	438.5
67.5°	289.3	313.4	361.4	393.5	401.5
70°	245.3	272.3	323.4	356.4	364.4
72.5°	207.2	235.3	286.3	318.4	330.4
75°	166.2	198.2	249.3	283.3	291.3
77.5°	126.2	163.2	215.3	241.3	241.3
80°	90.1	129.2	177.2	189.2	191.2
82.5°	59.1	97.1	131.2	130.2	130.2
85°	34.0	63.1	78.1	76.1	76.1
87.5°	13.0	26.0	28.0	28.0	27.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)