

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: P313575

Luminaire Tested: **24FCZ2-45HE-UNV-L83050-RDP-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: P313575  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-19)  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: 24FCZ2-45HE-UNV-L83050-RDP-CP125-W2A-U-3000K  
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.125" POLYCARB SHEET  
Light Source: (336) 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**

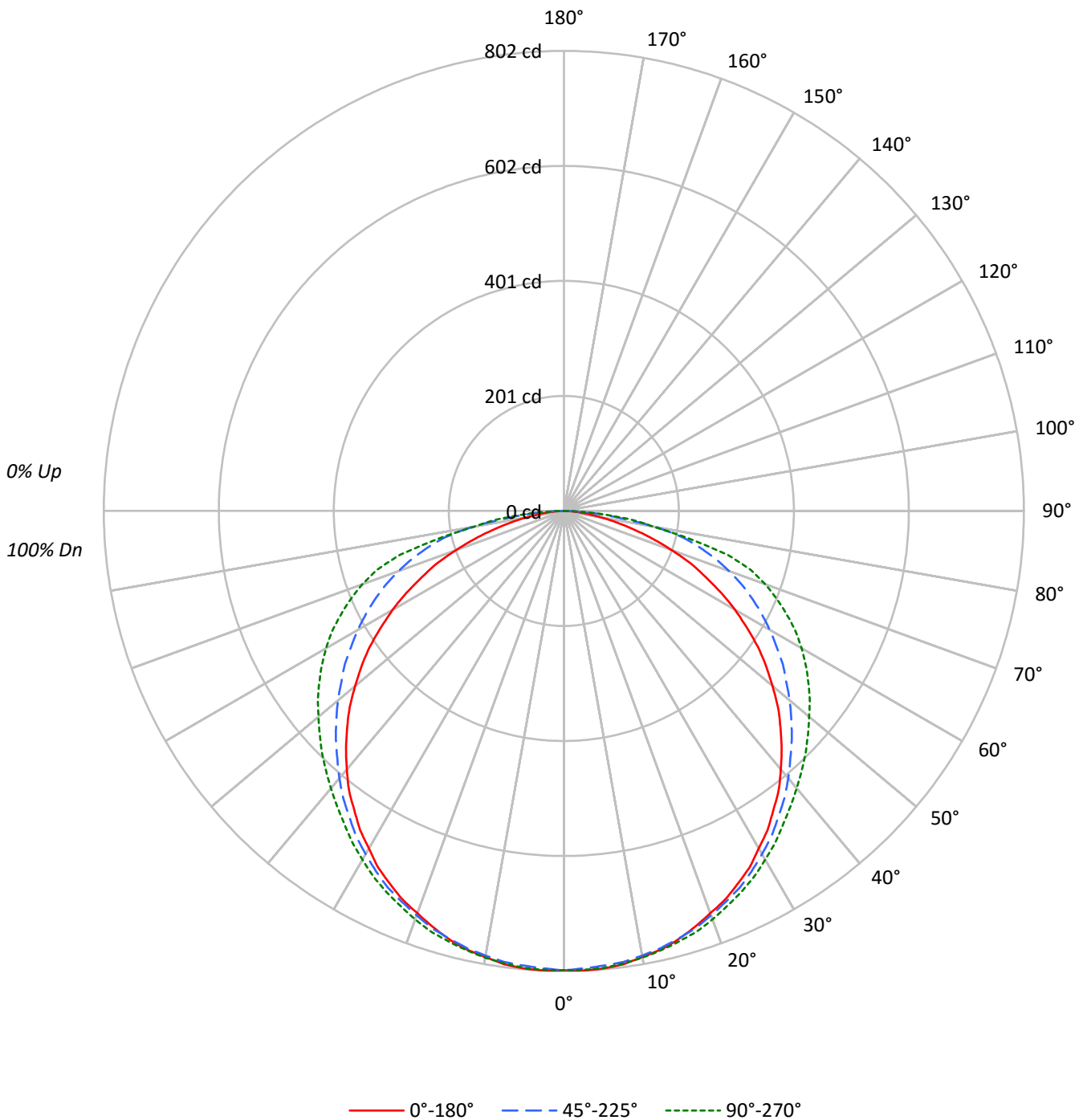
Lumens per Lamp: N/A  
Luminaire Lumens: 2546.0 lumens  
Efficiency: N/A  
Efficacy: 75.5 lumens/watt  
Spacing Criteria (0/90/45): 1.26 / 1.3 / 1.41  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 33.7  
Input Voltage (V): NR  
Input Current (Ain): NR  
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	93	89	92	89	87	88	86	84	82
2	97	89	81	75	95	87	80	74	83	77	72	80	75	71	77	73	69	67
3	88	77	68	62	86	76	67	61	72	66	60	70	64	59	67	62	58	56
4	81	68	59	52	78	67	58	51	64	57	51	62	55	50	59	54	49	47
5	74	60	51	44	72	59	51	44	57	49	43	55	48	43	53	47	42	40
6	68	54	45	38	66	53	45	38	51	44	38	50	43	37	48	42	37	35
7	63	49	40	34	61	48	40	34	47	39	33	45	38	33	44	38	33	31
8	59	45	36	30	57	44	36	30	43	35	30	41	34	29	40	34	29	27
9	55	41	33	27	53	40	32	27	39	32	27	38	31	26	37	31	26	24
10	51	38	30	24	50	37	29	24	36	29	24	35	29	24	34	28	24	22

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	1077	1077	1077
5°	1081	1075	1080
10°	1078	1075	1080
15°	1077	1075	1082
20°	1069	1074	1085
25°	1065	1076	1087
30°	1056	1073	1091
35°	1045	1070	1095
40°	1034	1069	1109
45°	1016	1069	1134
50°	994	1076	1168
55°	969	1093	1221
60°	928	1115	1288
65°	869	1154	1367
70°	790	1207	1471
75°	670	1274	1536
80°	528	1282	1243
85°	391	974	1091



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	75.9	3.0
10°-20°	218.6	8.6
20°-30°	334.3	13.1
30°-40°	408.6	16.0
40°-50°	435.5	17.1
50°-60°	416.4	16.4
60°-70°	352.7	13.9
70°-80°	237.1	9.3
80°-90°	66.9	2.6
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°	628.8	24.7
0°-40°	1037.4	40.7
0°-60°	1889.3	74.2
0°-90°	2546.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2546.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	801	801	801	801	801	
5°	801	799	796	799	799	76
15°	773	773	772	778	777	218
25°	717	720	725	731	732	331
35°	636	642	652	664	667	399
45°	534	543	562	586	596	412
55°	413	428	466	503	520	368
65°	273	301	362	410	429	271
75°	129	176	245	287	296	138
85°	25	52	63	68	71	31
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	800.6	800.6	800.6	800.6	800.6
2.5°	801.9	801.9	798.1	800.6	800.6
5°	800.6	799.4	795.6	799.4	799.4
7.5°	796.9	795.6	793.1	796.9	795.6
10°	789.3	789.3	786.8	790.5	790.5
12.5°	783.0	781.7	780.4	785.5	784.2
15°	772.9	772.9	771.6	777.9	776.7
17.5°	760.2	761.5	762.8	767.8	769.1
20°	746.3	748.9	750.1	757.7	757.7
22.5°	733.7	735.0	737.5	745.1	745.1
25°	717.3	719.8	724.9	731.2	732.5
27.5°	700.9	702.1	708.5	717.3	718.6
30°	679.4	683.2	690.8	700.9	702.1
32.5°	660.5	664.3	673.1	683.2	685.7
35°	636.5	641.5	651.6	664.3	666.8
37.5°	615.0	618.8	631.4	645.3	649.1
40°	588.5	596.1	608.7	625.1	631.4
42.5°	562.0	569.5	584.7	606.2	613.7
45°	534.2	543.0	562.0	586.0	596.1
47.5°	506.4	516.5	538.0	565.8	577.1
50°	474.8	487.5	514.0	545.5	558.2
52.5°	444.5	459.7	488.7	524.1	540.5
55°	413.0	428.1	466.0	502.6	520.3
57.5°	377.6	397.8	439.5	481.1	500.1
60°	344.8	363.7	414.2	459.7	478.6
62.5°	309.4	334.7	389.0	436.9	455.9
65°	272.8	300.6	362.4	410.4	429.4
67.5°	239.9	270.2	335.9	383.9	402.8
70°	200.8	238.7	306.9	354.9	373.8
72.5°	164.2	205.8	276.6	323.3	341.0
75°	128.8	175.5	245.0	286.7	295.5
77.5°	96.0	145.2	212.2	229.8	223.5
80°	68.2	116.2	165.4	156.6	160.4
82.5°	44.2	88.4	102.3	116.2	120.0
85°	25.3	51.8	63.1	68.2	70.7
87.5°	11.4	18.9	25.3	25.3	24.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)