

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: P313750

Luminaire Tested: **24FCZ2-70HE-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: P313750  
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: 24FCZ2-70HE-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**

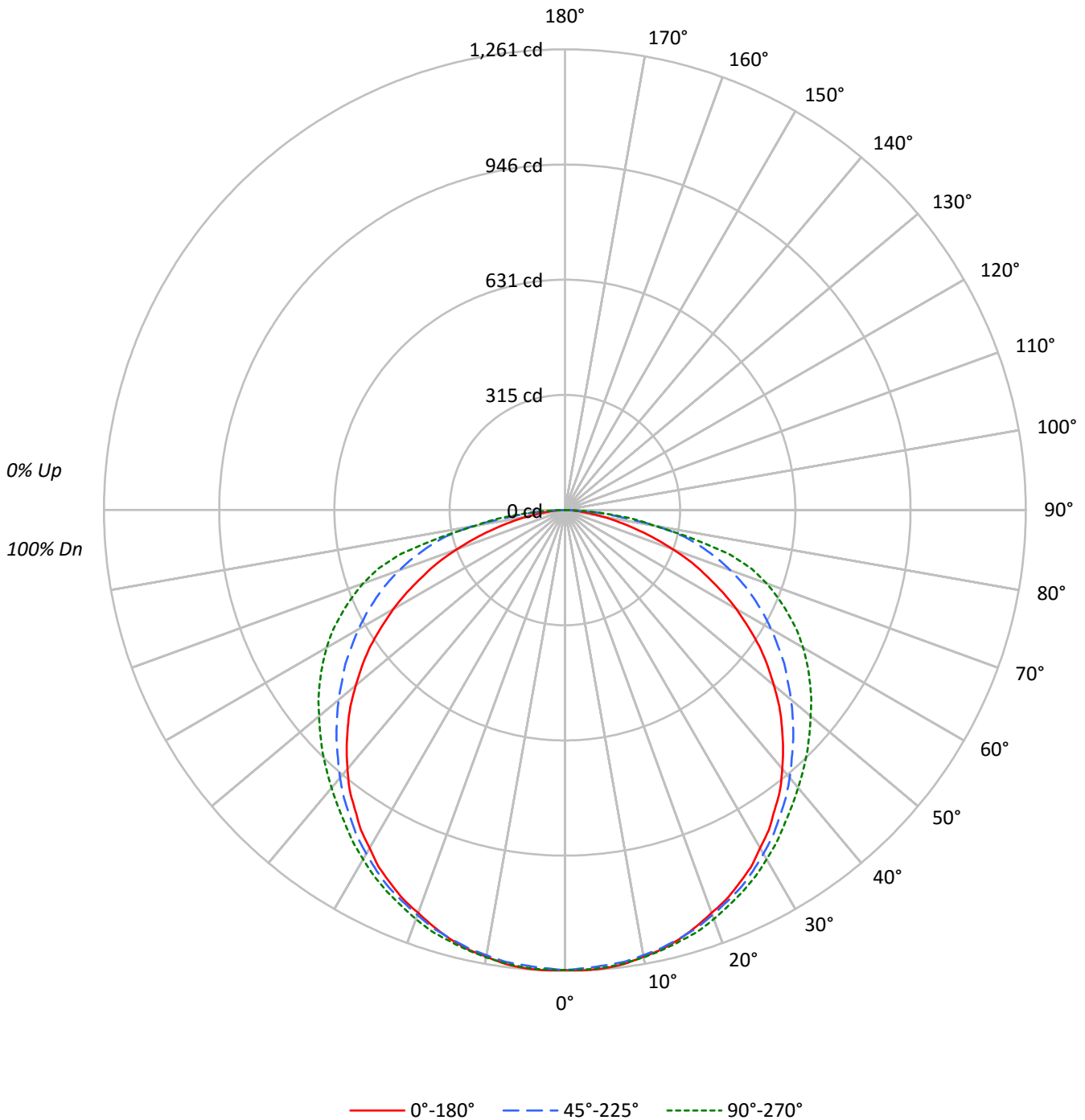
Lumens per Lamp: N/A  
Luminaire Lumens: 4003.0 lumens  
Efficiency: N/A  
Efficacy: 69.5 lumens/watt  
Spacing Criteria (0/90/45): 1.26 / 1.3 / 1.41  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 57.6  
Input Voltage (V): NR  
Input Current (Ain): NR  
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°	1694	1694	1694
5°	1700	1690	1697
10°	1696	1690	1698
15°	1693	1690	1701
20°	1680	1689	1706
25°	1674	1692	1710
30°	1660	1687	1715
35°	1644	1683	1722
40°	1625	1681	1744
45°	1598	1681	1783
50°	1563	1692	1837
55°	1523	1719	1919
60°	1459	1753	2025
65°	1365	1814	2149
70°	1242	1898	2312
75°	1053	2002	2415
80°	831	2015	1954
85°	613	1533	1717



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	119.4	3.0
10°-20°	343.7	8.6
20°-30°	525.5	13.1
30°-40°	642.5	16.0
40°-50°	684.7	17.1
50°-60°	654.7	16.4
60°-70°	554.6	13.9
70°-80°	372.7	9.3
80°-90°	105.1	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°	988.6	24.7
0°-40°	1631.1	40.7
0°-60°	2970.5	74.2
0°-90°	4003.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4003.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1259	1259	1259	1259	1259	
5°	1259	1257	1251	1257	1257	120
15°	1215	1215	1213	1223	1221	343
25°	1128	1132	1140	1150	1152	520
35°	1001	1009	1024	1044	1048	627
45°	840	854	884	921	937	648
55°	649	673	733	790	818	578
65°	429	473	570	645	675	426
75°	202	276	385	451	465	217
85°	40	81	99	107	111	49
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1258.8	1258.8	1258.8	1258.8	1258.8
2.5°	1260.8	1260.8	1254.9	1258.8	1258.8
5°	1258.8	1256.8	1250.9	1256.8	1256.8
7.5°	1252.9	1250.9	1246.9	1252.9	1250.9
10°	1241.0	1241.0	1237.0	1242.9	1242.9
12.5°	1231.0	1229.0	1227.1	1235.0	1233.0
15°	1215.1	1215.1	1213.2	1223.1	1221.1
17.5°	1195.3	1197.3	1199.3	1207.2	1209.2
20°	1173.5	1177.4	1179.4	1191.3	1191.3
22.5°	1153.6	1155.6	1159.6	1171.5	1171.5
25°	1127.8	1131.8	1139.7	1149.6	1151.6
27.5°	1102.0	1104.0	1113.9	1127.8	1129.8
30°	1068.2	1074.2	1086.1	1102.0	1104.0
32.5°	1038.4	1044.4	1058.3	1074.2	1078.1
35°	1000.7	1008.7	1024.5	1044.4	1048.4
37.5°	967.0	972.9	992.8	1014.6	1020.6
40°	925.3	937.2	957.0	982.8	992.8
42.5°	883.6	895.5	919.3	953.1	965.0
45°	839.9	853.8	883.6	921.3	937.2
47.5°	796.2	812.1	845.8	889.5	907.4
50°	746.6	766.4	808.1	857.8	877.6
52.5°	698.9	722.7	768.4	824.0	849.8
55°	649.3	673.1	732.7	790.2	818.0
57.5°	593.7	625.4	691.0	756.5	786.3
60°	542.1	571.8	651.3	722.7	752.5
62.5°	486.5	526.2	611.5	687.0	716.8
65°	428.9	472.6	569.8	645.3	675.1
67.5°	377.3	424.9	528.2	603.6	633.4
70°	315.7	375.3	482.5	557.9	587.7
72.5°	258.1	323.6	434.8	508.3	536.1
75°	202.5	276.0	385.2	450.7	464.6
77.5°	150.9	228.3	333.6	361.4	351.4
80°	107.2	182.7	260.1	246.2	252.2
82.5°	69.5	139.0	160.8	182.7	188.6
85°	39.7	81.4	99.3	107.2	111.2
87.5°	17.9	29.8	39.7	39.7	37.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)