

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: P310423

Luminaire Tested: **24FCZ2-70HE-UNV-L82765-RDP-CP125-W2A-U-5000K**

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: P310423  
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-L82765-RDP-CP125-W2A-U-5000K  
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.125" POLYCARB SHEET  
Light Source: (336) 5000K 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**

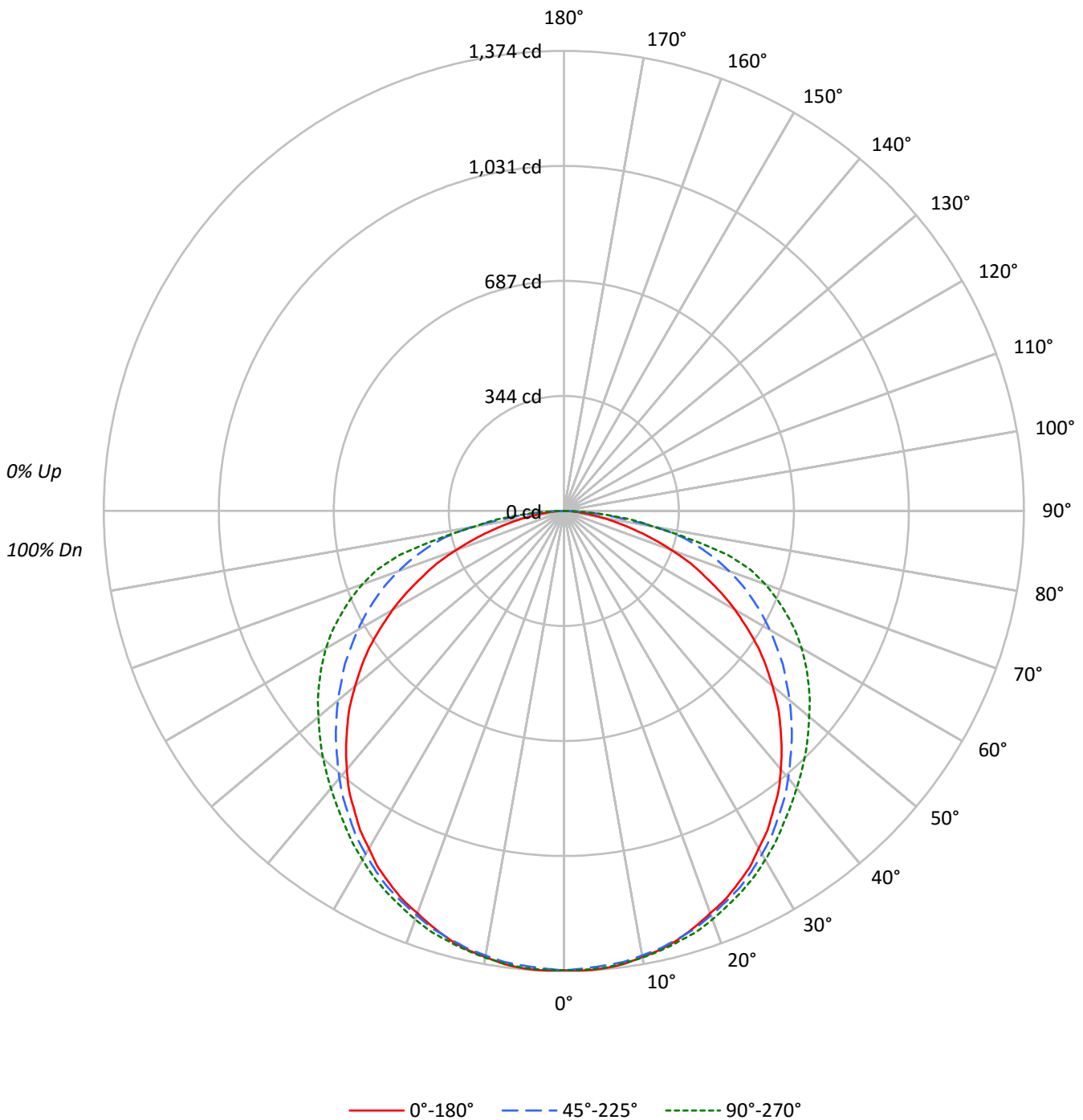
Lumens per Lamp: N/A  
Luminaire Lumens: 4362.0 lumens  
Efficiency: N/A  
Efficacy: 73.8 lumens/watt  
Spacing Criteria (0/90/45): 1.26 / 1.3 / 1.41  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 59.1  
Input Voltage (V): NR  
Input Current (Ain): NR  
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°	1846	1846	1846
5°	1853	1841	1850
10°	1848	1842	1850
15°	1844	1841	1853
20°	1831	1840	1859
25°	1824	1844	1863
30°	1808	1839	1869
35°	1791	1834	1876
40°	1771	1832	1900
45°	1741	1832	1943
50°	1703	1843	2002
55°	1660	1873	2091
60°	1590	1910	2207
65°	1488	1977	2342
70°	1353	2068	2519
75°	1147	2182	2632
80°	905	2196	2129
85°	668	1670	1871



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	130.1	3.0
10°-20°	374.5	8.6
20°-30°	572.7	13.1
30°-40°	700.1	16.0
40°-50°	746.1	17.1
50°-60°	713.4	16.4
60°-70°	604.4	13.9
70°-80°	406.2	9.3
80°-90°	114.6	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°	1077.3	24.7
0°-40°	1777.4	40.7
0°-60°	3236.9	74.2
0°-90°	4362.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4362.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1372	1372	1372	1372	1372	
5°	1372	1370	1363	1370	1370	130
15°	1324	1324	1322	1333	1331	373
25°	1229	1233	1242	1253	1255	566
35°	1090	1099	1116	1138	1142	683
45°	915	930	963	1004	1021	706
55°	708	734	798	861	891	630
65°	467	515	621	703	736	464
75°	221	301	420	491	506	236
85°	43	89	108	117	121	54
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1371.7	1371.7	1371.7	1371.7	1371.7
2.5°	1373.9	1373.9	1367.4	1371.7	1371.7
5°	1371.7	1369.6	1363.1	1369.6	1369.6
7.5°	1365.2	1363.1	1358.7	1365.2	1363.1
10°	1352.3	1352.3	1347.9	1354.4	1354.4
12.5°	1341.4	1339.3	1337.1	1345.8	1343.6
15°	1324.1	1324.1	1322.0	1332.8	1330.6
17.5°	1302.5	1304.7	1306.8	1315.5	1317.6
20°	1278.7	1283.0	1285.2	1298.2	1298.2
22.5°	1257.1	1259.2	1263.5	1276.5	1276.5
25°	1228.9	1233.3	1241.9	1252.7	1254.9
27.5°	1200.8	1203.0	1213.8	1228.9	1231.1
30°	1164.0	1170.5	1183.5	1200.8	1203.0
32.5°	1131.6	1138.1	1153.2	1170.5	1174.8
35°	1090.5	1099.1	1116.4	1138.1	1142.4
37.5°	1053.7	1060.2	1081.8	1105.6	1112.1
40°	1008.2	1021.2	1042.9	1071.0	1081.8
42.5°	962.8	975.8	1001.7	1038.5	1051.5
45°	915.2	930.3	962.8	1003.9	1021.2
47.5°	867.6	884.9	921.7	969.3	988.8
50°	813.5	835.2	880.6	934.7	956.3
52.5°	761.6	787.6	837.3	897.9	926.0
55°	707.5	733.5	798.4	861.1	891.4
57.5°	646.9	681.5	752.9	824.3	856.8
60°	590.7	623.1	709.7	787.6	820.0
62.5°	530.1	573.4	666.4	748.6	781.1
65°	467.3	514.9	621.0	703.2	735.6
67.5°	411.1	463.0	575.5	657.7	690.2
70°	344.0	408.9	525.8	608.0	640.4
72.5°	281.3	352.7	473.8	553.9	584.2
75°	220.7	300.7	419.7	491.1	506.3
77.5°	164.4	248.8	363.5	393.8	383.0
80°	116.8	199.1	283.4	268.3	274.8
82.5°	75.7	151.5	175.3	199.1	205.5
85°	43.3	88.7	108.2	116.8	121.2
87.5°	19.5	32.5	43.3	43.3	41.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)