

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: P313370

Luminaire Tested: **24FCZ2-70HE-UNV-L83050-HRP-CA125-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: P313370  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-20)  
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-HRP-CA125-W2A-U-3000K  
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.125" ACRYLIC 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: 4715.0 lumens  
Efficiency: N/A  
Efficacy: 81.9 lumens/watt  
Spacing Criteria (0/90/45): 1.24 / 1.3 / 1.4  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

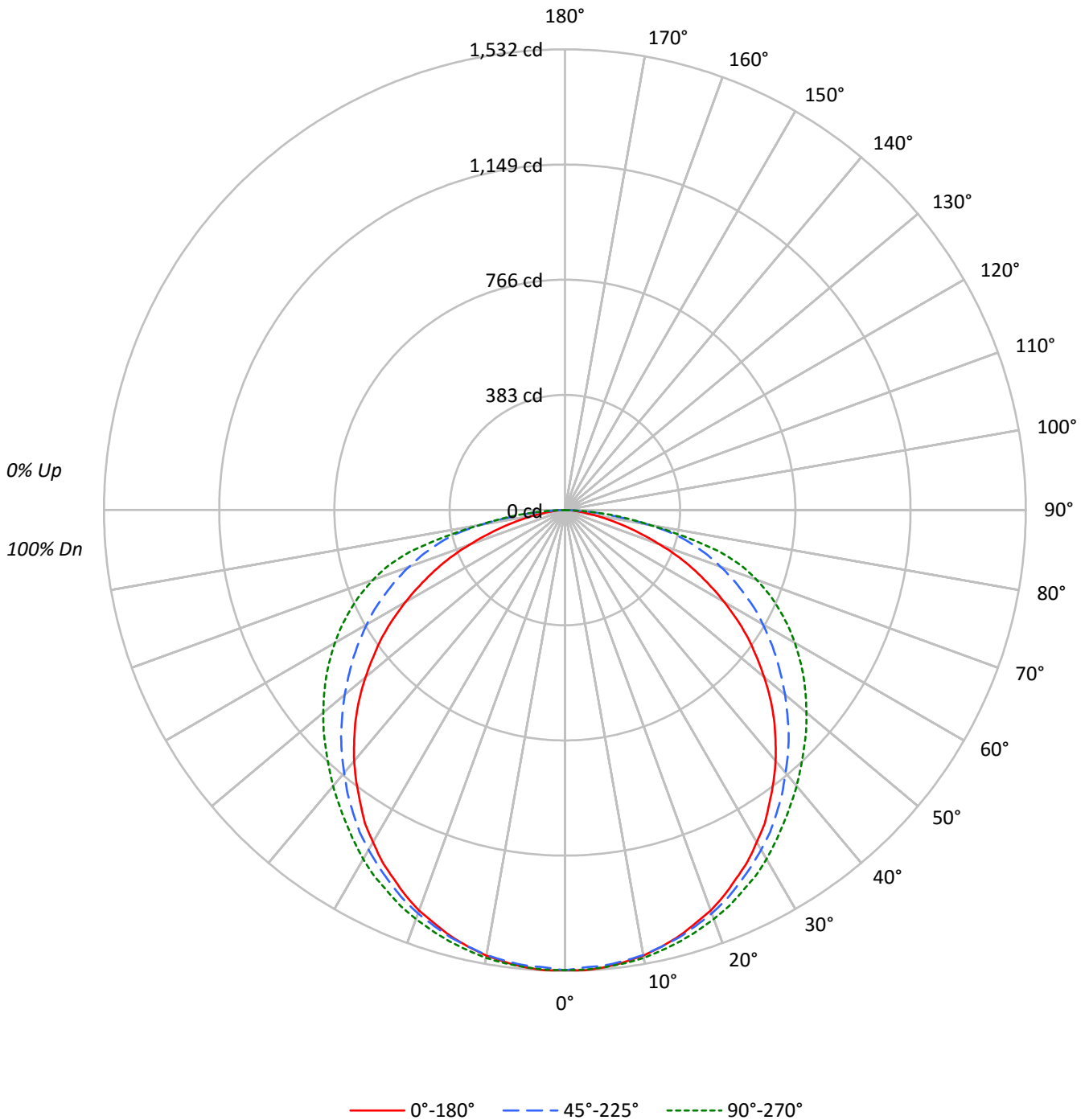
Input Watts (W): 57.6  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	98	94	105	101	96	93	96	93	90	92	90	87	89	86	84	82
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67
3	89	78	69	62	86	76	68	62	73	66	61	70	64	59	68	63	58	56
4	81	68	59	52	79	67	59	52	65	57	51	62	56	50	60	54	50	48
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36
7	63	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31
8	59	45	36	30	57	44	36	30	43	36	30	42	35	30	41	34	30	28
9	55	41	33	27	54	41	33	27	40	32	27	39	32	27	38	31	27	25
10	52	38	30	25	50	38	30	25	37	30	25	36	29	24	35	29	24	23

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

	0°	45°	90°
0°	2058	2058	2058
5°	2061	2053	2061
10°	2055	2052	2066
15°	2043	2048	2068
20°	2029	2043	2072
25°	2004	2034	2075
30°	1981	2027	2082
35°	1949	2017	2085
40°	1914	2004	2105
45°	1870	2002	2137
50°	1810	2000	2194
55°	1746	2014	2274
60°	1647	2045	2374
65°	1521	2093	2507
70°	1328	2166	2671
75°	1078	2278	2760
80°	795	2233	2233
85°	610	1646	1859



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	144.9	3.1
10°-20°	416.2	8.8
20°-30°	633.5	13.4
30°-40°	769.3	16.3
40°-50°	812.7	17.2
50°-60°	766.9	16.3
60°-70°	637.6	13.5
70°-80°	419.5	8.9
80°-90°	114.3	2.4
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°	1194.6	25.3
0°-40°	1963.9	41.7
0°-60°	3543.5	75.2
0°-90°	4715.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4715.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1530	1530	1530	1530	1530	
5°	1526	1526	1520	1526	1526	145
15°	1467	1469	1471	1484	1484	414
25°	1350	1358	1370	1394	1398	623
35°	1186	1200	1228	1259	1269	743
45°	983	1003	1052	1103	1123	757
55°	744	776	859	940	969	663
65°	478	533	657	754	788	472
75°	207	302	438	519	531	223
85°	40	87	107	118	120	48
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1529.8	1529.8	1529.8	1529.8	1529.8
2.5°	1531.8	1529.8	1521.9	1529.8	1529.8
5°	1525.8	1525.8	1519.9	1525.8	1525.8
7.5°	1516.0	1516.0	1512.0	1519.9	1519.9
10°	1504.1	1504.1	1502.2	1512.0	1512.0
12.5°	1486.4	1488.3	1486.4	1498.2	1498.2
15°	1466.6	1468.6	1470.6	1484.4	1484.4
17.5°	1441.0	1444.9	1448.9	1464.6	1466.6
20°	1417.3	1419.2	1427.1	1444.9	1446.9
22.5°	1385.7	1391.6	1401.5	1419.2	1425.2
25°	1350.2	1358.1	1369.9	1393.6	1397.5
27.5°	1316.6	1322.5	1338.3	1364.0	1371.9
30°	1275.2	1285.0	1304.8	1330.4	1340.3
32.5°	1235.7	1245.5	1269.2	1296.9	1304.8
35°	1186.3	1200.1	1227.8	1259.4	1269.2
37.5°	1138.9	1152.8	1186.3	1221.9	1233.7
40°	1089.6	1105.4	1140.9	1182.4	1198.2
42.5°	1036.3	1058.0	1097.5	1142.9	1160.7
45°	983.0	1002.7	1052.1	1103.4	1123.2
47.5°	925.8	949.5	1002.7	1063.9	1087.6
50°	864.6	894.2	955.4	1022.5	1048.1
52.5°	803.4	836.9	906.0	981.0	1008.7
55°	744.2	775.7	858.7	939.6	969.2
57.5°	679.0	718.5	809.3	896.2	925.8
60°	611.9	655.3	760.0	850.8	882.3
62.5°	544.8	594.1	712.6	803.4	836.9
65°	477.7	533.0	657.3	754.0	787.6
67.5°	412.5	473.7	606.0	702.7	736.3
70°	337.5	414.5	550.7	645.5	679.0
72.5°	268.5	357.3	497.4	586.3	615.9
75°	207.3	302.0	438.2	519.1	531.0
77.5°	152.0	246.7	377.0	404.7	406.6
80°	102.6	197.4	288.2	284.2	288.2
82.5°	67.1	148.0	181.6	203.3	205.3
85°	39.5	86.9	106.6	118.4	120.4
87.5°	19.7	29.6	37.5	39.5	43.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)