

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: P309731

Luminaire Tested: **24FCZ2-70HE-UNV-L82765-HRP-CA08-W2A-U-5500K**

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: P309731  
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-L82765-HRP-CA08-W2A-U-5500K  
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.08" ACRYLIC SHEET  
Light Source: (336) 5500K 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**

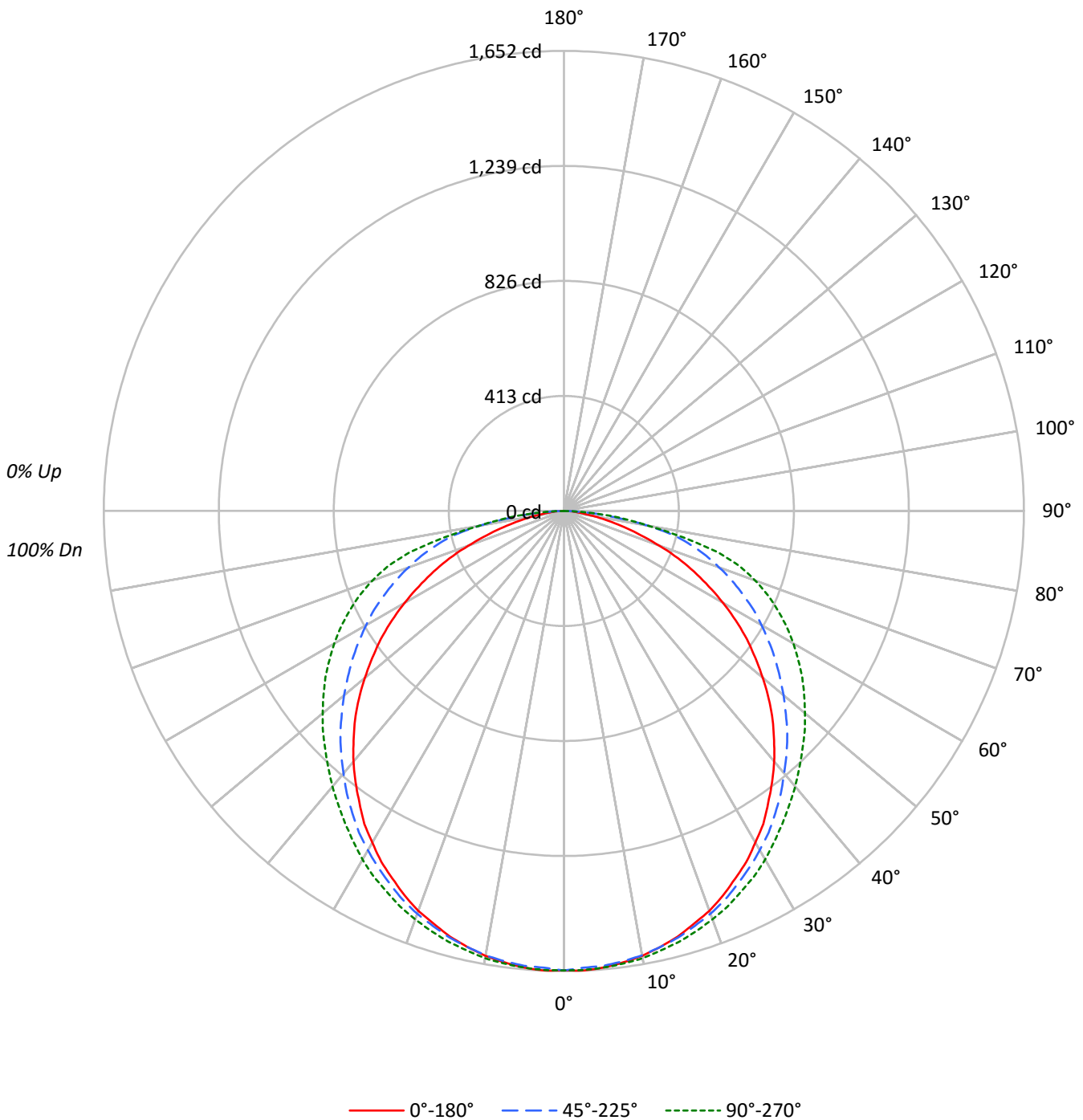
Lumens per Lamp: N/A  
Luminaire Lumens: 5085.0 lumens  
Efficiency: N/A  
Efficacy: 85.8 lumens/watt  
Spacing Criteria (0/90/45): 1.24 / 1.3 / 1.4  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 59.3  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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°	2220	2220	2220
5°	2223	2214	2223
10°	2216	2213	2228
15°	2203	2209	2230
20°	2189	2204	2234
25°	2162	2193	2238
30°	2137	2186	2246
35°	2101	2175	2248
40°	2064	2161	2270
45°	2017	2159	2305
50°	1952	2157	2366
55°	1883	2172	2452
60°	1776	2206	2561
65°	1640	2257	2704
70°	1432	2336	2881
75°	1162	2457	2977
80°	858	2408	2408
85°	658	1775	2005



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	156.3	3.1
10°-20°	448.8	8.8
20°-30°	683.3	13.4
30°-40°	829.6	16.3
40°-50°	876.5	17.2
50°-60°	827.1	16.3
60°-70°	687.7	13.5
70°-80°	452.4	8.9
80°-90°	123.3	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°	1288.4	25.3
0°-40°	2118.0	41.7
0°-60°	3821.5	75.2
0°-90°	5085.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5085.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1650	1650	1650	1650	1650	
5°	1646	1646	1639	1646	1646	156
15°	1582	1584	1586	1601	1601	446
25°	1456	1465	1477	1503	1507	672
35°	1279	1294	1324	1358	1369	801
45°	1060	1081	1135	1190	1211	816
55°	803	837	926	1013	1045	715
65°	515	575	709	813	849	509
75°	224	326	473	560	573	241
85°	43	94	115	128	130	52
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1649.8	1649.8	1649.8	1649.8	1649.8
2.5°	1652.0	1649.8	1641.3	1649.8	1649.8
5°	1645.6	1645.6	1639.2	1645.6	1645.6
7.5°	1634.9	1634.9	1630.7	1639.2	1639.2
10°	1622.2	1622.2	1620.0	1630.7	1630.7
12.5°	1603.0	1605.1	1603.0	1615.8	1615.8
15°	1581.7	1583.8	1586.0	1600.9	1600.9
17.5°	1554.0	1558.3	1562.6	1579.6	1581.7
20°	1528.5	1530.6	1539.1	1558.3	1560.4
22.5°	1494.4	1500.8	1511.5	1530.6	1537.0
25°	1456.1	1464.6	1477.4	1502.9	1507.2
27.5°	1419.9	1426.3	1443.3	1471.0	1479.5
30°	1375.2	1385.9	1407.1	1434.8	1445.5
32.5°	1332.6	1343.3	1368.8	1398.6	1407.1
35°	1279.4	1294.3	1324.1	1358.2	1368.8
37.5°	1228.3	1243.2	1279.4	1317.7	1330.5
40°	1175.1	1192.1	1230.5	1275.2	1292.2
42.5°	1117.6	1141.0	1183.6	1232.6	1251.7
45°	1060.2	1081.4	1134.7	1190.0	1211.3
47.5°	998.4	1024.0	1081.4	1147.4	1173.0
50°	932.4	964.4	1030.3	1102.7	1130.4
52.5°	866.4	902.6	977.1	1058.0	1087.8
55°	802.6	836.6	926.0	1013.3	1045.2
57.5°	732.3	774.9	872.8	966.5	998.4
60°	659.9	706.8	819.6	917.5	951.6
62.5°	587.6	640.8	768.5	866.4	902.6
65°	515.2	574.8	708.9	813.2	849.4
67.5°	444.9	510.9	653.5	757.9	794.0
70°	364.0	447.1	593.9	696.1	732.3
72.5°	289.5	385.3	536.5	632.3	664.2
75°	223.5	325.7	472.6	559.9	572.7
77.5°	163.9	266.1	406.6	436.4	438.5
80°	110.7	212.9	310.8	306.5	310.8
82.5°	72.4	159.7	195.9	219.3	221.4
85°	42.6	93.7	115.0	127.7	129.9
87.5°	21.3	31.9	40.4	42.6	46.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)