

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: P310447

Luminaire Tested: **24FCZ2-75HE-UNV-L82765-RDP-CA08-W2A-U-3500K**

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: P310447  
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: 24FCZ2-75HE-UNV-L82765-RDP-CA08-W2A-U-3500K  
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.08" ACRYLIC SHEET  
Light Source: (336) 3500K 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**

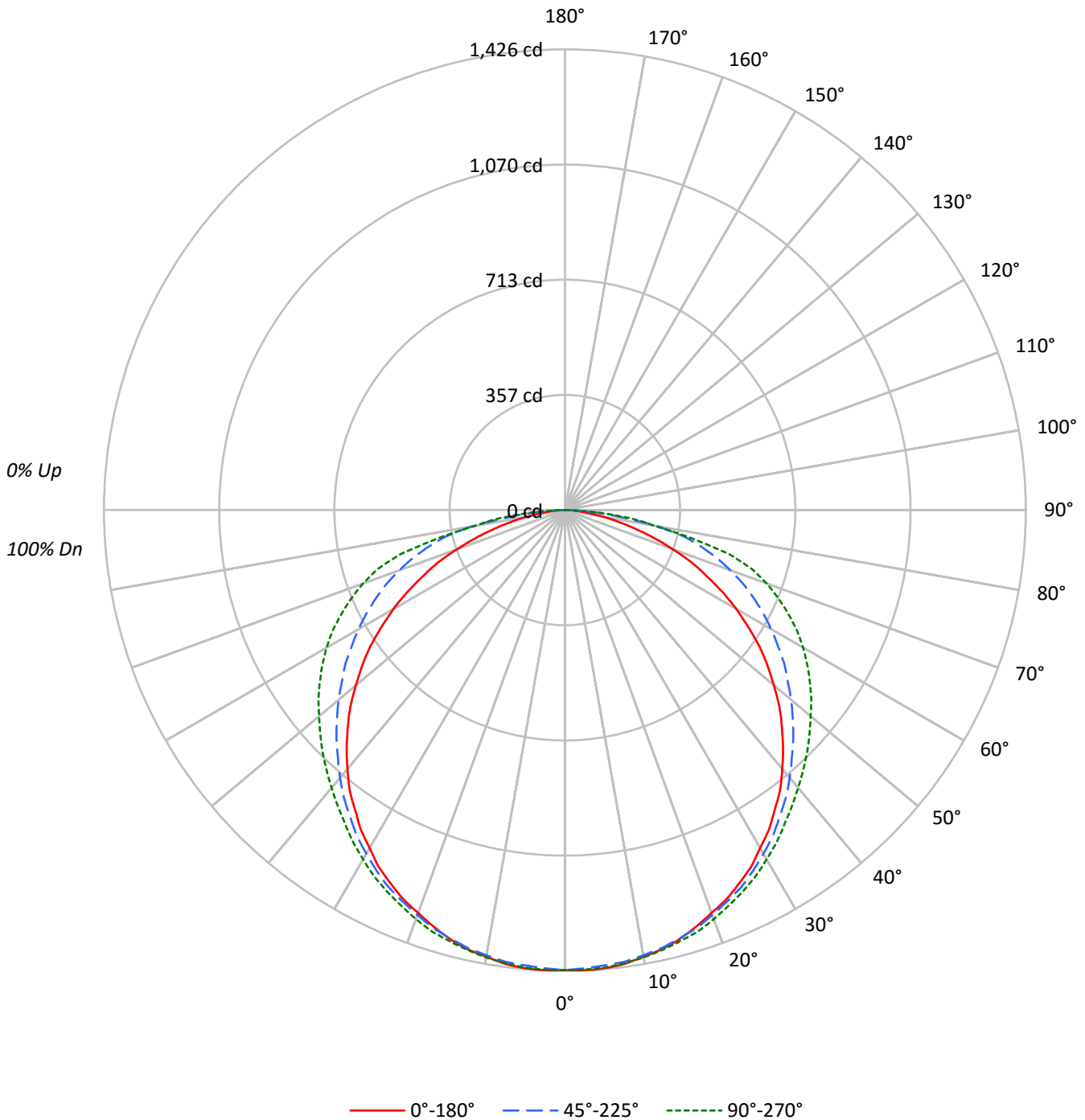
Lumens per Lamp: N/A  
Luminaire Lumens: 4527.0 lumens  
Efficiency: N/A  
Efficacy: 71.7 lumens/watt  
Spacing Criteria (0/90/45): 1.26 / 1.3 / 1.41  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 63.1  
Input Voltage (V): NR  
Input Current (A<sub>in</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	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°	1915	1915	1915
5°	1923	1911	1920
10°	1917	1911	1920
15°	1914	1911	1924
20°	1900	1910	1929
25°	1893	1913	1934
30°	1877	1908	1940
35°	1859	1903	1947
40°	1838	1901	1972
45°	1807	1901	2017
50°	1767	1913	2078
55°	1723	1944	2170
60°	1650	1982	2290
65°	1544	2052	2431
70°	1404	2146	2615
75°	1190	2264	2731
80°	940	2280	2210
85°	693	1734	1941



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	135.0	3.0
10°-20°	388.7	8.6
20°-30°	594.3	13.1
30°-40°	726.6	16.0
40°-50°	774.4	17.1
50°-60°	740.4	16.4
60°-70°	627.2	13.9
70°-80°	421.5	9.3
80°-90°	118.9	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°	1118.0	24.7
0°-40°	1844.6	40.7
0°-60°	3359.3	74.2
0°-90°	4527.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4527.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1424	1424	1424	1424	1424	
5°	1424	1421	1415	1421	1421	135
15°	1374	1374	1372	1383	1381	387
25°	1275	1280	1289	1300	1302	588
35°	1132	1141	1159	1181	1186	709
45°	950	966	999	1042	1060	733
55°	734	761	829	894	925	654
65°	485	534	644	730	764	481
75°	229	312	436	510	525	245
85°	45	92	112	121	126	56
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1423.6	1423.6	1423.6	1423.6	1423.6
2.5°	1425.9	1425.9	1419.1	1423.6	1423.6
5°	1423.6	1421.4	1414.6	1421.4	1421.4
7.5°	1416.9	1414.6	1410.1	1416.9	1414.6
10°	1403.4	1403.4	1398.9	1405.6	1405.6
12.5°	1392.2	1389.9	1387.7	1396.7	1394.4
15°	1374.2	1374.2	1372.0	1383.2	1380.9
17.5°	1351.8	1354.0	1356.2	1365.2	1367.5
20°	1327.1	1331.5	1333.8	1347.3	1347.3
22.5°	1304.6	1306.8	1311.3	1324.8	1324.8
25°	1275.4	1279.9	1288.9	1300.1	1302.4
27.5°	1246.2	1248.5	1259.7	1275.4	1277.7
30°	1208.0	1214.8	1228.3	1246.2	1248.5
32.5°	1174.4	1181.1	1196.8	1214.8	1219.3
35°	1131.7	1140.7	1158.6	1181.1	1185.6
37.5°	1093.5	1100.3	1122.7	1147.4	1154.2
40°	1046.4	1059.9	1082.3	1111.5	1122.7
42.5°	999.2	1012.7	1039.6	1077.8	1091.3
45°	949.8	965.5	999.2	1041.9	1059.9
47.5°	900.4	918.4	956.6	1006.0	1026.2
50°	844.3	866.7	913.9	970.0	992.5
52.5°	790.4	817.3	869.0	931.9	961.1
55°	734.3	761.2	828.6	893.7	925.1
57.5°	671.4	707.3	781.4	855.5	889.2
60°	613.0	646.7	736.5	817.3	851.0
62.5°	550.1	595.0	691.6	776.9	810.6
65°	485.0	534.4	644.4	729.8	763.5
67.5°	426.6	480.5	597.3	682.6	716.3
70°	357.0	424.4	545.6	631.0	664.7
72.5°	291.9	366.0	491.8	574.8	606.3
75°	229.0	312.1	435.6	509.7	525.4
77.5°	170.7	258.2	377.2	408.7	397.4
80°	121.3	206.6	294.2	278.4	285.2
82.5°	78.6	157.2	181.9	206.6	213.3
85°	44.9	92.1	112.3	121.3	125.7
87.5°	20.2	33.7	44.9	44.9	42.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)