

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: P310446

Luminaire Tested: **24FCZ2-75HE-UNV-L82765-RDP-CA08-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: P310446  
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-3000K  
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.08" 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**

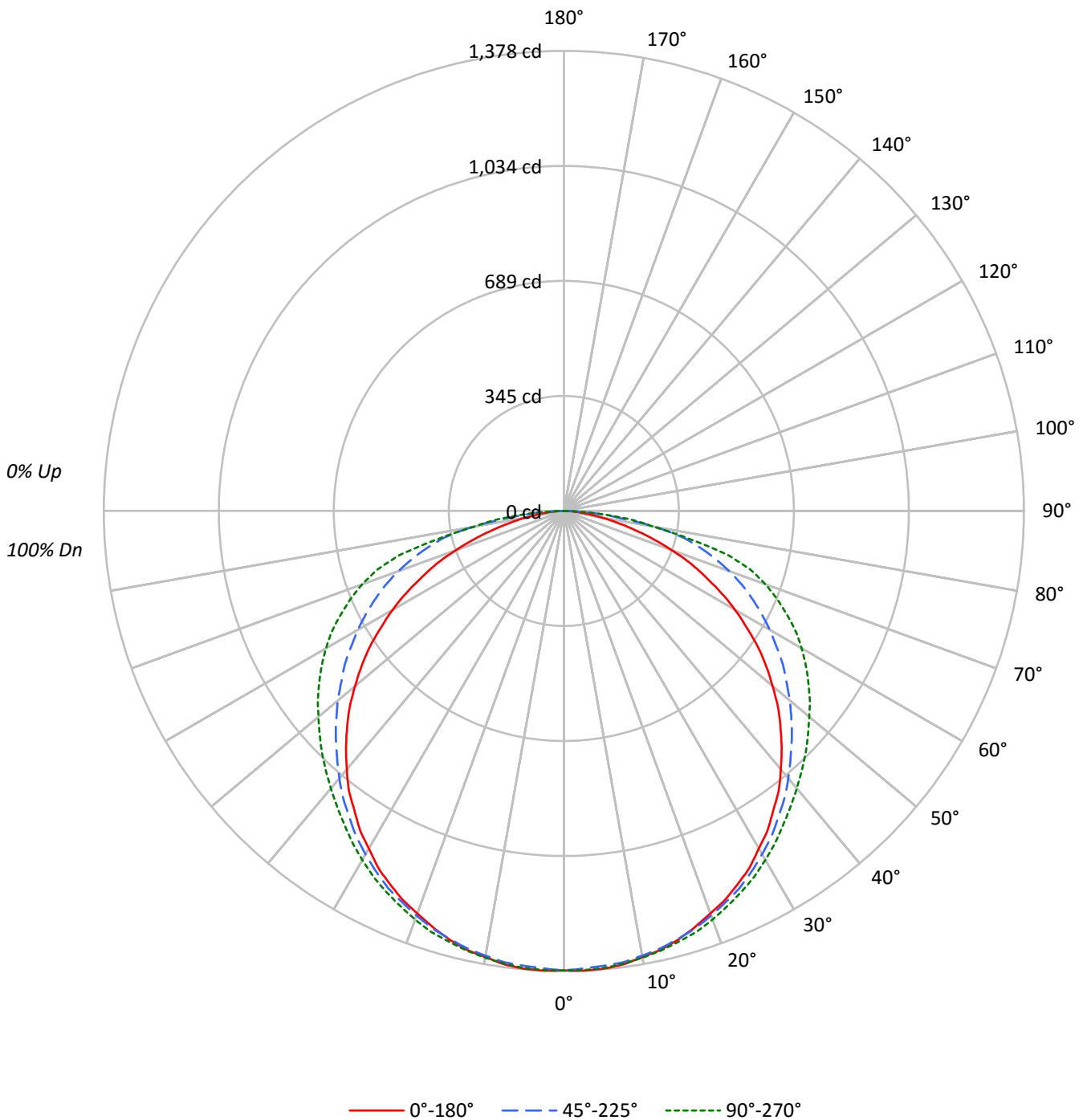
Lumens per Lamp: N/A  
Luminaire Lumens: 4376.0 lumens  
Efficiency: N/A  
Efficacy: 70.1 lumens/watt  
Spacing Criteria (0/90/45): 1.26 / 1.3 / 1.41  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 62.4  
Input Voltage (V): NR  
Input Current (Ain): NR  
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	68	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°	1852	1852	1852
5°	1859	1847	1856
10°	1853	1848	1856
15°	1850	1847	1859
20°	1837	1846	1865
25°	1830	1850	1869
30°	1814	1845	1875
35°	1797	1840	1882
40°	1777	1838	1906
45°	1747	1838	1949
50°	1708	1849	2008
55°	1665	1879	2098
60°	1595	1916	2214
65°	1493	1983	2350
70°	1358	2075	2528
75°	1151	2189	2640
80°	908	2203	2136
85°	670	1675	1877



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	130.5	3.0
10°-20°	375.7	8.6
20°-30°	574.5	13.1
30°-40°	702.3	16.0
40°-50°	748.5	17.1
50°-60°	715.7	16.4
60°-70°	606.3	13.9
70°-80°	407.5	9.3
80°-90°	114.9	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°	1080.7	24.7
0°-40°	1783.1	40.7
0°-60°	3247.3	74.2
0°-90°	4376.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4376.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1376	1376	1376	1376	1376	
5°	1376	1374	1367	1374	1374	131
15°	1328	1328	1326	1337	1335	375
25°	1233	1237	1246	1257	1259	568
35°	1094	1103	1120	1142	1146	685
45°	918	933	966	1007	1024	708
55°	710	736	801	864	894	632
65°	469	517	623	705	738	465
75°	221	302	421	493	508	237
85°	43	89	108	117	122	54
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1376.1	1376.1	1376.1	1376.1	1376.1
2.5°	1378.3	1378.3	1371.8	1376.1	1376.1
5°	1376.1	1374.0	1367.4	1374.0	1374.0
7.5°	1369.6	1367.4	1363.1	1369.6	1367.4
10°	1356.6	1356.6	1352.3	1358.8	1358.8
12.5°	1345.7	1343.6	1341.4	1350.1	1347.9
15°	1328.4	1328.4	1326.2	1337.1	1334.9
17.5°	1306.7	1308.8	1311.0	1319.7	1321.9
20°	1282.8	1287.1	1289.3	1302.3	1302.3
22.5°	1261.1	1263.3	1267.6	1280.6	1280.6
25°	1232.9	1237.2	1245.9	1256.7	1258.9
27.5°	1204.7	1206.8	1217.7	1232.9	1235.0
30°	1167.8	1174.3	1187.3	1204.7	1206.8
32.5°	1135.2	1141.7	1156.9	1174.3	1178.6
35°	1094.0	1102.6	1120.0	1141.7	1146.0
37.5°	1057.1	1063.6	1085.3	1109.1	1115.7
40°	1011.5	1024.5	1046.2	1074.4	1085.3
42.5°	965.9	978.9	1005.0	1041.9	1054.9
45°	918.1	933.3	965.9	1007.1	1024.5
47.5°	870.4	887.8	924.7	972.4	991.9
50°	816.1	837.8	883.4	937.7	959.4
52.5°	764.0	790.1	840.0	900.8	929.0
55°	709.8	735.8	800.9	863.9	894.3
57.5°	649.0	683.7	755.4	827.0	859.5
60°	592.6	625.1	711.9	790.1	822.6
62.5°	531.8	575.2	668.5	751.0	783.6
65°	468.8	516.6	622.9	705.4	738.0
67.5°	412.4	464.5	577.4	659.8	692.4
70°	345.1	410.2	527.4	609.9	642.5
72.5°	282.2	353.8	475.3	555.7	586.0
75°	221.4	301.7	421.1	492.7	507.9
77.5°	165.0	249.6	364.7	395.0	384.2
80°	117.2	199.7	284.3	269.1	275.7
82.5°	76.0	151.9	175.8	199.7	206.2
85°	43.4	89.0	108.5	117.2	121.6
87.5°	19.5	32.6	43.4	43.4	41.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)