

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: P313410

Luminaire Tested: **24FCZ2-75HE-UNV-L83050-HRP-CP250-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: P313410  
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: 24FCZ2-75HE-UNV-L83050-HRP-CP250-W2A-U-3000K  
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.250"  
POLYCARB 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**

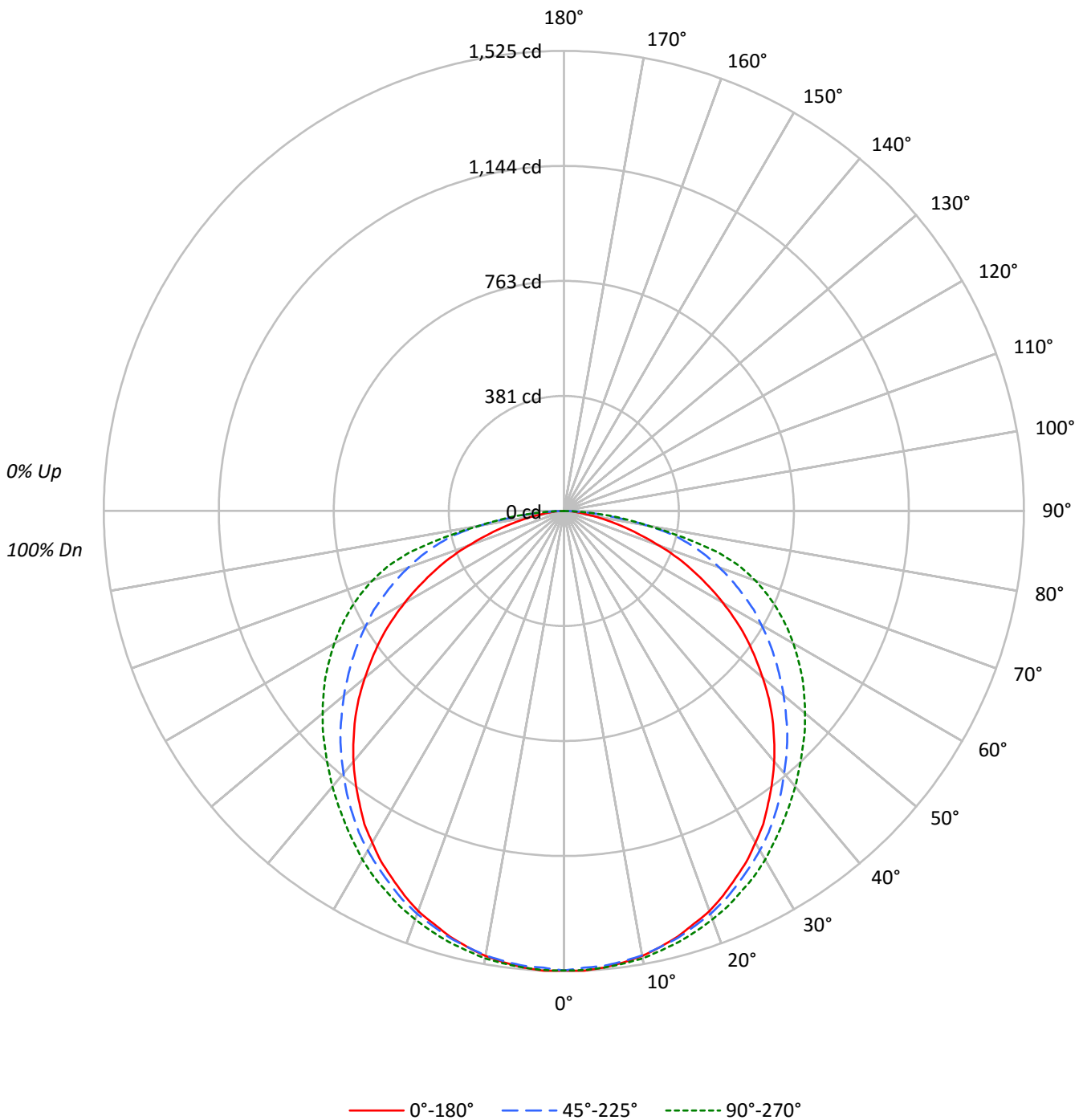
Lumens per Lamp: N/A  
Luminaire Lumens: 4695.0 lumens  
Efficiency: N/A  
Efficacy: 74.9 lumens/watt  
Spacing Criteria (0/90/45): 1.24 / 1.3 / 1.4  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 62.7  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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°	2050	2050	2050
5°	2052	2044	2052
10°	2046	2044	2057
15°	2034	2040	2059
20°	2021	2035	2063
25°	1996	2025	2066
30°	1973	2018	2073
35°	1940	2008	2076
40°	1906	1995	2096
45°	1862	1993	2128
50°	1802	1991	2185
55°	1738	2006	2264
60°	1640	2036	2364
65°	1514	2084	2497
70°	1322	2157	2660
75°	1073	2269	2748
80°	792	2224	2224
85°	607	1638	1851



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	144.3	3.1
10°-20°	414.4	8.8
20°-30°	630.9	13.4
30°-40°	766.0	16.3
40°-50°	809.3	17.2
50°-60°	763.7	16.3
60°-70°	634.9	13.5
70°-80°	417.7	8.9
80°-90°	113.9	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°	1189.5	25.3
0°-40°	1955.5	41.7
0°-60°	3528.5	75.2
0°-90°	4695.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4695.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1523	1523	1523	1523	1523	
5°	1519	1519	1514	1519	1519	144
15°	1460	1462	1464	1478	1478	412
25°	1344	1352	1364	1388	1392	620
35°	1181	1195	1223	1254	1264	739
45°	979	998	1048	1099	1118	754
55°	741	772	855	936	965	660
65°	476	531	654	751	784	470
75°	206	301	436	517	529	222
85°	39	86	106	118	120	48
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1523.3	1523.3	1523.3	1523.3	1523.3
2.5°	1525.3	1523.3	1515.4	1523.3	1523.3
5°	1519.4	1519.4	1513.5	1519.4	1519.4
7.5°	1509.5	1509.5	1505.6	1513.5	1513.5
10°	1497.7	1497.7	1495.8	1505.6	1505.6
12.5°	1480.1	1482.0	1480.1	1491.8	1491.8
15°	1460.4	1462.4	1464.3	1478.1	1478.1
17.5°	1434.8	1438.8	1442.7	1458.4	1460.4
20°	1411.3	1413.2	1421.1	1438.8	1440.7
22.5°	1379.8	1385.7	1395.5	1413.2	1419.1
25°	1344.4	1352.3	1364.1	1387.7	1391.6
27.5°	1311.0	1316.9	1332.6	1358.2	1366.1
30°	1269.7	1279.6	1299.2	1324.8	1334.6
32.5°	1230.4	1240.3	1263.8	1291.4	1299.2
35°	1181.3	1195.1	1222.6	1254.0	1263.8
37.5°	1134.1	1147.9	1181.3	1216.7	1228.5
40°	1085.0	1100.7	1136.1	1177.4	1193.1
42.5°	1031.9	1053.5	1092.8	1138.0	1155.7
45°	978.8	998.5	1047.6	1098.7	1118.4
47.5°	921.8	945.4	998.5	1059.4	1083.0
50°	860.9	890.4	951.3	1018.2	1043.7
52.5°	800.0	833.4	902.2	976.9	1004.4
55°	741.0	772.5	855.0	935.6	965.1
57.5°	676.1	715.5	805.9	892.4	921.8
60°	609.3	652.6	756.7	847.1	878.6
62.5°	542.5	591.6	709.6	800.0	833.4
65°	475.7	530.7	654.5	750.8	784.3
67.5°	410.8	471.7	603.4	699.7	733.1
70°	336.1	412.8	548.4	642.7	676.1
72.5°	267.3	355.8	495.3	583.8	613.2
75°	206.4	300.7	436.4	516.9	528.7
77.5°	151.3	245.7	375.4	402.9	404.9
80°	102.2	196.6	287.0	283.0	287.0
82.5°	66.8	147.4	180.8	202.5	204.4
85°	39.3	86.5	106.1	117.9	119.9
87.5°	19.7	29.5	37.3	39.3	43.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)