

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: P313405

Luminaire Tested: **24FCZ2-75HE-UNV-L83050-HRP-CP187-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: P313405  
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-CP187-W2A-U-3000K  
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.187" 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: 4734.0 lumens  
Efficiency: N/A  
Efficacy: 75.5 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

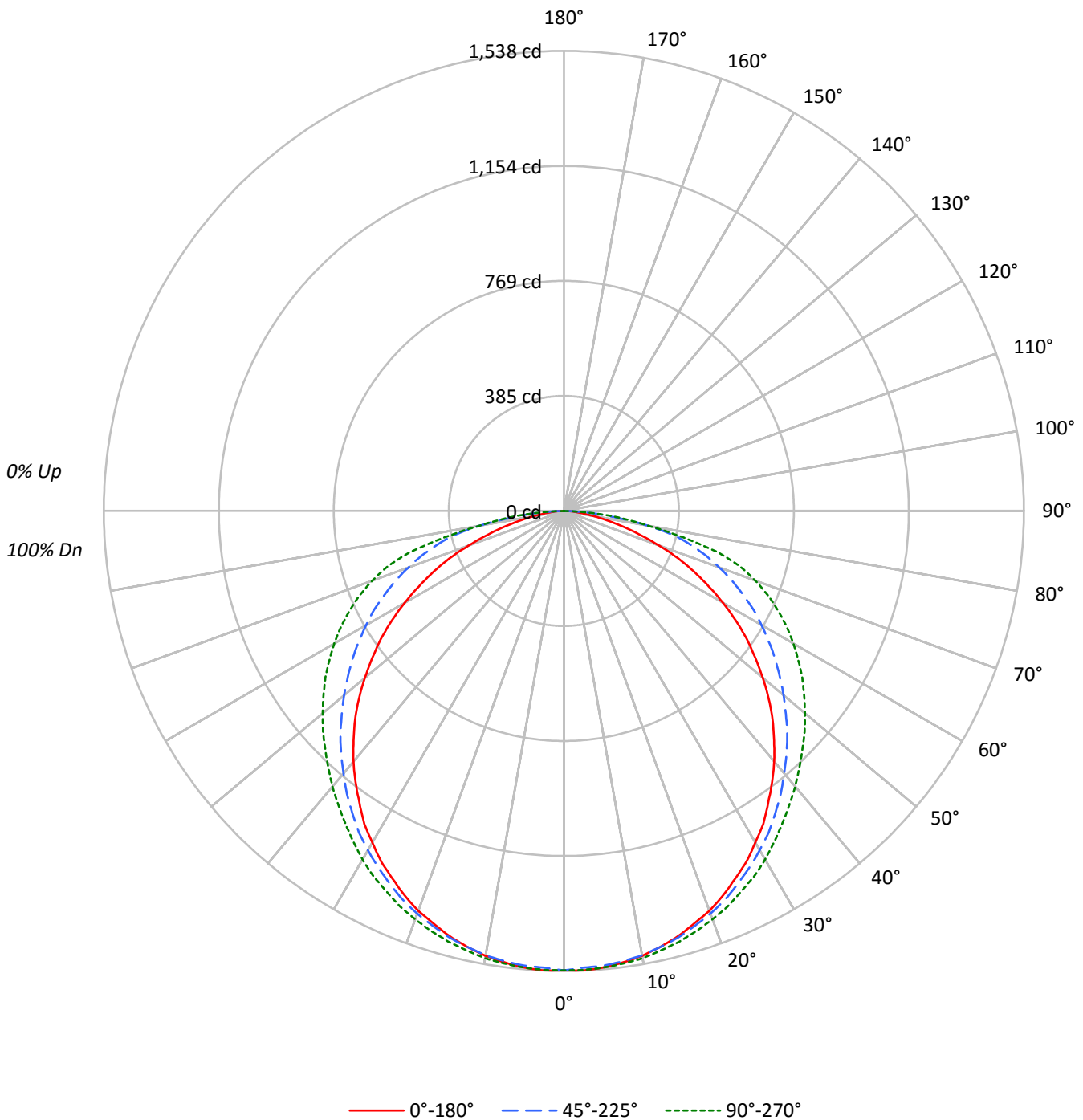
Input Watts (W): 62.7  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	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°	2067	2067	2067
5°	2069	2061	2069
10°	2063	2061	2074
15°	2051	2057	2076
20°	2038	2052	2080
25°	2013	2042	2083
30°	1989	2035	2091
35°	1956	2025	2093
40°	1922	2012	2113
45°	1878	2010	2146
50°	1817	2008	2203
55°	1753	2022	2283
60°	1653	2053	2384
65°	1527	2101	2518
70°	1333	2175	2682
75°	1082	2287	2771
80°	799	2242	2242
85°	611	1652	1866



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	145.5	3.1
10°-20°	417.8	8.8
20°-30°	636.1	13.4
30°-40°	772.4	16.3
40°-50°	816.0	17.2
50°-60°	770.0	16.3
60°-70°	640.2	13.5
70°-80°	421.2	8.9
80°-90°	114.8	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°	1199.4	25.3
0°-40°	1971.8	41.7
0°-60°	3557.8	75.2
0°-90°	4734.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4734.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1536	1536	1536	1536	1536	
5°	1532	1532	1526	1532	1532	146
15°	1472	1474	1476	1490	1490	415
25°	1356	1364	1375	1399	1403	625
35°	1191	1205	1233	1264	1274	746
45°	987	1007	1056	1108	1128	760
55°	747	779	862	943	973	666
65°	480	535	660	757	791	474
75°	208	303	440	521	533	224
85°	40	87	107	119	121	49
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1535.9	1535.9	1535.9	1535.9	1535.9
2.5°	1537.9	1535.9	1528.0	1535.9	1535.9
5°	1532.0	1532.0	1526.0	1532.0	1532.0
7.5°	1522.1	1522.1	1518.1	1526.0	1526.0
10°	1510.2	1510.2	1508.2	1518.1	1518.1
12.5°	1492.3	1494.3	1492.3	1504.2	1504.2
15°	1472.5	1474.5	1476.5	1490.4	1490.4
17.5°	1446.8	1450.7	1454.7	1470.5	1472.5
20°	1423.0	1425.0	1432.9	1450.7	1452.7
22.5°	1391.3	1397.2	1407.1	1425.0	1430.9
25°	1355.6	1363.5	1375.4	1399.2	1403.2
27.5°	1321.9	1327.9	1343.7	1369.5	1377.4
30°	1280.3	1290.2	1310.0	1335.8	1345.7
32.5°	1240.7	1250.6	1274.3	1302.1	1310.0
35°	1191.1	1205.0	1232.7	1264.4	1274.3
37.5°	1143.5	1157.4	1191.1	1226.8	1238.7
40°	1094.0	1109.8	1145.5	1187.1	1203.0
42.5°	1040.5	1062.3	1101.9	1147.5	1165.3
45°	987.0	1006.8	1056.3	1107.9	1127.7
47.5°	929.5	953.3	1006.8	1068.2	1092.0
50°	868.1	897.8	959.2	1026.6	1052.4
52.5°	806.6	840.3	909.7	985.0	1012.7
55°	747.2	778.9	862.1	943.4	973.1
57.5°	681.8	721.4	812.6	899.8	929.5
60°	614.4	658.0	763.0	854.2	885.9
62.5°	547.0	596.5	715.5	806.6	840.3
65°	479.6	535.1	660.0	757.1	790.8
67.5°	414.2	475.6	608.4	705.5	739.2
70°	338.9	416.2	552.9	648.1	681.8
72.5°	269.5	358.7	499.4	588.6	618.3
75°	208.1	303.2	440.0	521.2	533.1
77.5°	152.6	247.7	378.5	406.3	408.3
80°	103.1	198.2	289.4	285.4	289.4
82.5°	67.4	148.6	182.3	204.1	206.1
85°	39.6	87.2	107.0	118.9	120.9
87.5°	19.8	29.7	37.7	39.6	43.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)