

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: P310481

Luminaire Tested: **24FCZ2-75HE-UNV-L82765-RDP-CP250-W2A-U-2700K**

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: P310481
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-CP250-W2A-U-2700K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.250" POLYCARB SHEET
Light Source: (336) 2700K 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: 3947.0 lumens
Efficiency: N/A
Efficacy: 62.9 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

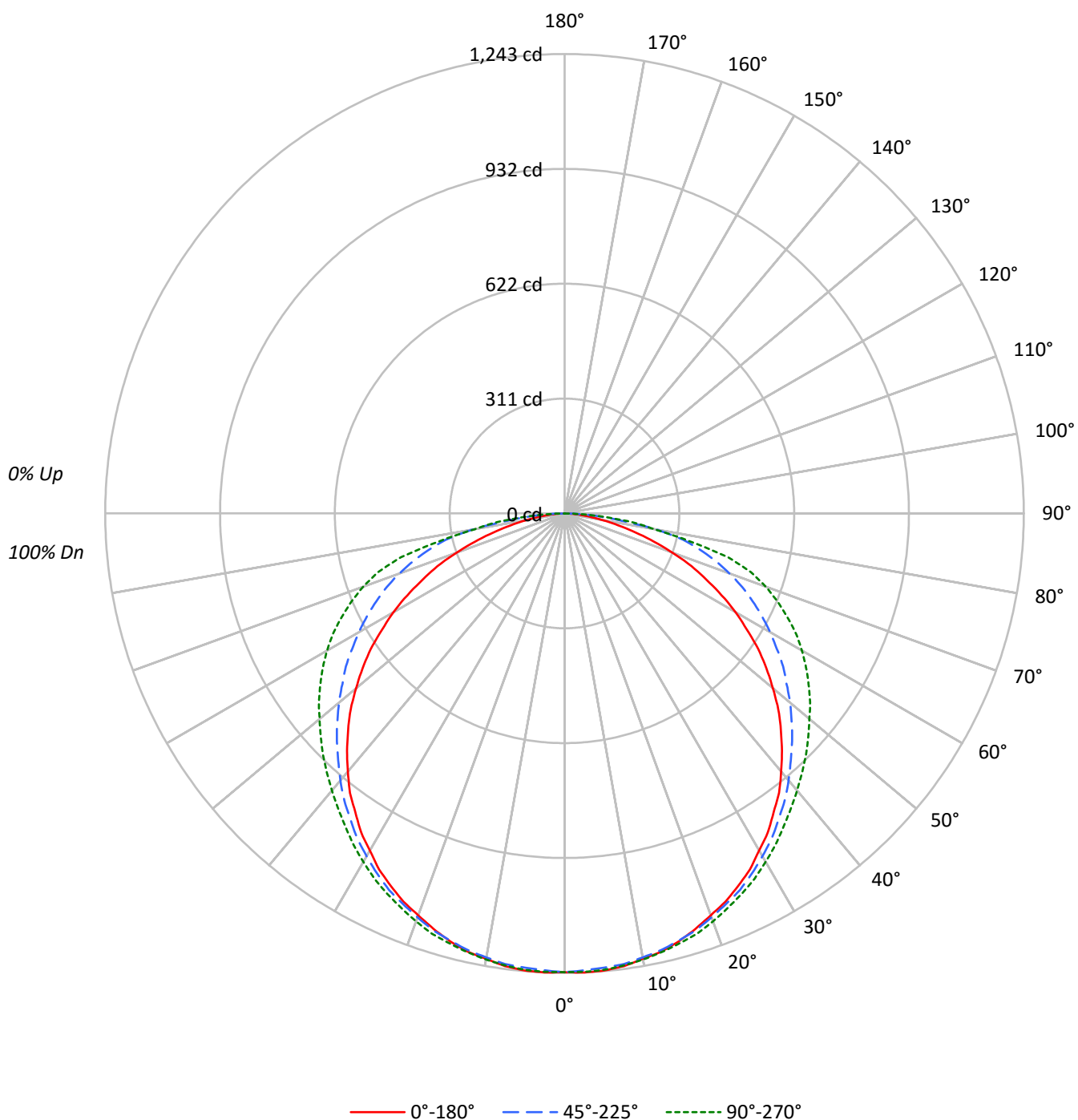
Input Watts (W): 62.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				0
RW	70	50	30	10	70	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		100
1	108	103	98	94	105	100	96	92	96	93	89		92	89	87		82
2	97	89	81	75	95	87	80	74	83	77	72		80	75	71		67
3	88	77	68	62	86	76	67	61	72	66	60		70	64	59		56
4	81	68	59	52	78	67	58	51	64	57	51		62	55	50		47
5	74	60	51	44	72	59	51	44	57	49	43		55	48	43		40
6	68	54	45	38	66	53	45	38	51	44	38		50	43	37		35
7	63	49	40	34	61	48	40	34	47	39	33		45	38	33		31
8	59	45	36	30	57	44	36	30	43	35	30		41	34	29		27
9	55	41	33	27	53	40	32	27	39	32	27		38	31	26		24
10	51	38	30	24	50	37	29	24	36	29	24		35	29	24		22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1670	1670	1670
5°	1676	1666	1674
10°	1672	1666	1674
15°	1669	1666	1677
20°	1657	1665	1682
25°	1651	1668	1686
30°	1636	1664	1691
35°	1621	1659	1698
40°	1602	1657	1719
45°	1576	1658	1758
50°	1541	1668	1811
55°	1502	1695	1892
60°	1438	1728	1997
65°	1346	1789	2119
70°	1225	1871	2280
75°	1038	1974	2381
80°	819	1987	1926
85°	605	1511	1692



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	117.7	3.0
10°-20°	338.9	8.6
20°-30°	518.2	13.1
30°-40°	633.5	16.0
40°-50°	675.1	17.1
50°-60°	645.5	16.4
60°-70°	546.9	13.9
70°-80°	367.5	9.3
80°-90°	103.7	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°	974.8	24.7
0°-40°	1608.3	40.7
0°-60°	2929.0	74.2
0°-90°	3947.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3947.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1241	1241	1241	1241	1241	
5°	1241	1239	1233	1239	1239	118
15°	1198	1198	1196	1206	1204	338
25°	1112	1116	1124	1134	1136	513
35°	987	994	1010	1030	1034	618
45°	828	842	871	908	924	639
55°	640	664	722	779	807	570
65°	423	466	562	636	666	420
75°	200	272	380	444	458	214
85°	39	80	98	106	110	48
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1241.2	1241.2	1241.2	1241.2	1241.2
2.5°	1243.2	1243.2	1237.3	1241.2	1241.2
5°	1241.2	1239.3	1233.4	1239.3	1239.3
7.5°	1235.3	1233.4	1229.5	1235.3	1233.4
10°	1223.6	1223.6	1219.7	1225.6	1225.6
12.5°	1213.8	1211.9	1209.9	1217.7	1215.8
15°	1198.1	1198.1	1196.2	1206.0	1204.0
17.5°	1178.6	1180.5	1182.5	1190.3	1192.3
20°	1157.0	1161.0	1162.9	1174.7	1174.7
22.5°	1137.5	1139.4	1143.3	1155.1	1155.1
25°	1112.0	1115.9	1123.8	1133.5	1135.5
27.5°	1086.6	1088.5	1098.3	1112.0	1114.0
30°	1053.3	1059.1	1070.9	1086.6	1088.5
32.5°	1023.9	1029.8	1043.5	1059.1	1063.1
35°	986.7	994.5	1010.2	1029.8	1033.7
37.5°	953.4	959.3	978.9	1000.4	1006.3
40°	912.3	924.1	943.6	969.1	978.9
42.5°	871.2	882.9	906.4	939.7	951.5
45°	828.1	841.8	871.2	908.4	924.1
47.5°	785.1	800.7	834.0	877.1	894.7
50°	736.1	755.7	796.8	845.8	865.3
52.5°	689.1	712.6	757.7	812.5	837.9
55°	640.2	663.7	722.4	779.2	806.6
57.5°	585.4	616.7	681.3	745.9	775.3
60°	534.5	563.8	642.1	712.6	742.0
62.5°	479.7	518.8	603.0	677.4	706.8
65°	422.9	465.9	561.9	636.3	665.6
67.5°	372.0	419.0	520.8	595.2	624.5
70°	311.3	370.0	475.7	550.1	579.5
72.5°	254.5	319.1	428.7	501.2	528.6
75°	199.7	272.1	379.8	444.4	458.1
77.5°	148.8	225.1	328.9	356.3	346.5
80°	105.7	180.1	256.5	242.8	248.6
82.5°	68.5	137.0	158.6	180.1	186.0
85°	39.2	80.3	97.9	105.7	109.6
87.5°	17.6	29.4	39.2	39.2	37.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)