

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: P310445

Luminaire Tested: **24FCZ2-75HE-UNV-L82765-RDP-CA08-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: P310445
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-2700K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.08" ACRYLIC 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: 4253.0 lumens
Efficiency: N/A
Efficacy: 67.7 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

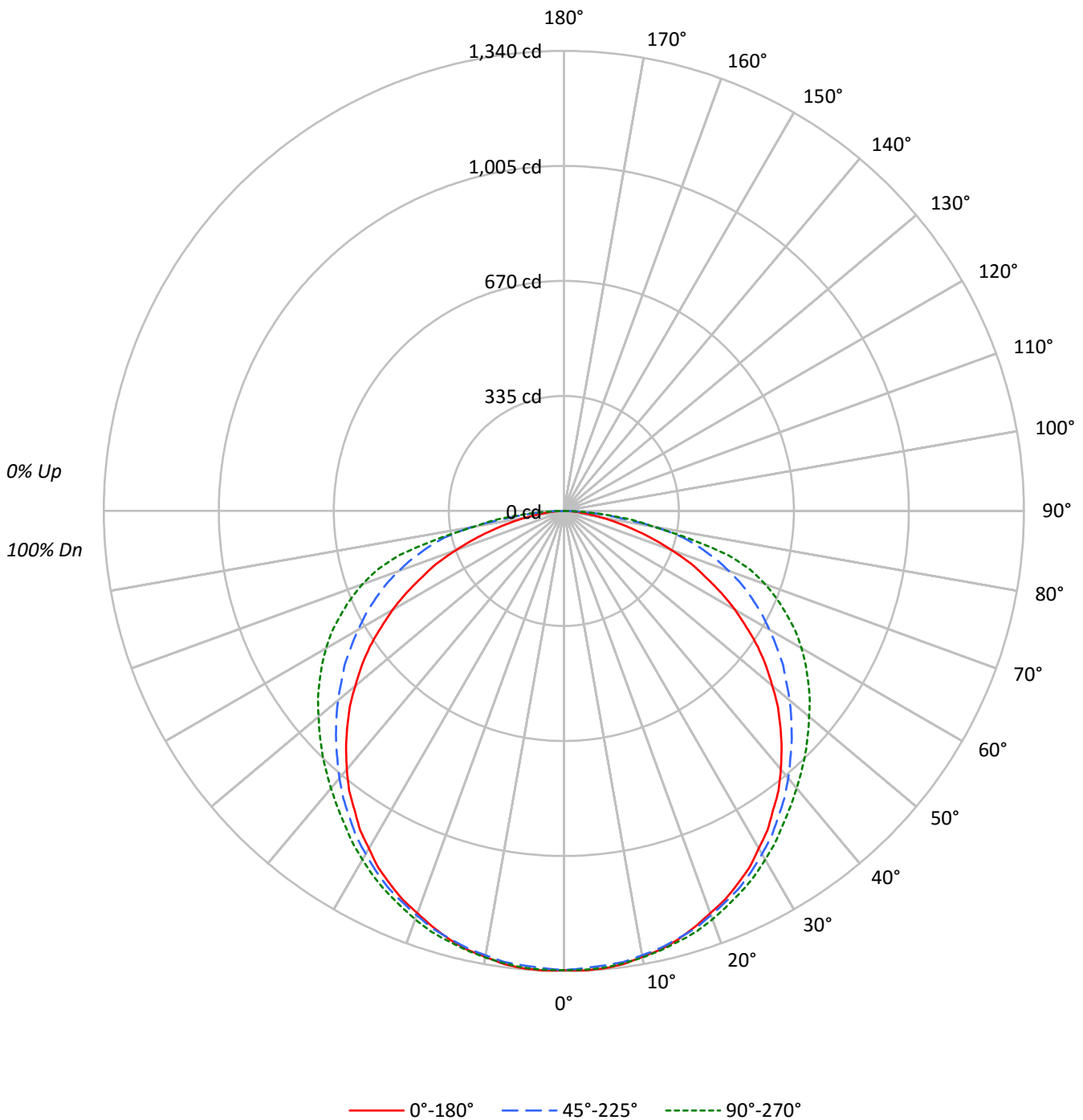
Input Watts (W): 62.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				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°	1799	1799	1799
5°	1806	1795	1803
10°	1801	1796	1804
15°	1798	1795	1807
20°	1785	1794	1812
25°	1779	1798	1816
30°	1763	1793	1822
35°	1746	1788	1829
40°	1727	1786	1853
45°	1698	1786	1895
50°	1660	1797	1952
55°	1618	1826	2039
60°	1550	1862	2151
65°	1451	1927	2283
70°	1319	2017	2456
75°	1119	2128	2566
80°	883	2141	2076
85°	651	1629	1823



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	126.9	3.0
10°-20°	365.1	8.6
20°-30°	558.4	13.1
30°-40°	682.6	16.0
40°-50°	727.5	17.1
50°-60°	695.6	16.4
60°-70°	589.2	13.9
70°-80°	396.0	9.3
80°-90°	111.7	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°	1050.4	24.7
0°-40°	1732.9	40.7
0°-60°	3156.0	74.2
0°-90°	4253.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4253.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1337	1337	1337	1337	1337	
5°	1337	1335	1329	1335	1335	127
15°	1291	1291	1289	1300	1297	364
25°	1198	1202	1211	1221	1224	552
35°	1063	1072	1088	1110	1114	666
45°	892	907	939	979	996	688
55°	690	715	778	840	869	614
65°	456	502	605	686	717	452
75°	215	293	409	479	494	230
85°	42	86	106	114	118	52
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1337.4	1337.4	1337.4	1337.4	1337.4
2.5°	1339.6	1339.6	1333.2	1337.4	1337.4
5°	1337.4	1335.3	1329.0	1335.3	1335.3
7.5°	1331.1	1329.0	1324.8	1331.1	1329.0
10°	1318.5	1318.5	1314.2	1320.6	1320.6
12.5°	1307.9	1305.8	1303.7	1312.1	1310.0
15°	1291.0	1291.0	1288.9	1299.5	1297.4
17.5°	1269.9	1272.1	1274.2	1282.6	1284.7
20°	1246.7	1251.0	1253.1	1265.7	1265.7
22.5°	1225.6	1227.8	1232.0	1244.6	1244.6
25°	1198.2	1202.4	1210.9	1221.4	1223.5
27.5°	1170.8	1172.9	1183.5	1198.2	1200.3
30°	1134.9	1141.3	1153.9	1170.8	1172.9
32.5°	1103.3	1109.6	1124.4	1141.3	1145.5
35°	1063.2	1071.6	1088.5	1109.6	1113.8
37.5°	1027.3	1033.7	1054.8	1078.0	1084.3
40°	983.0	995.7	1016.8	1044.2	1054.8
42.5°	938.7	951.4	976.7	1012.6	1025.2
45°	892.3	907.1	938.7	978.8	995.7
47.5°	845.9	862.8	898.7	945.1	964.1
50°	793.2	814.3	858.6	911.3	932.4
52.5°	742.6	767.9	816.4	875.5	902.9
55°	689.8	715.1	778.4	839.6	869.1
57.5°	630.8	664.5	734.1	803.7	835.4
60°	575.9	607.5	691.9	767.9	799.5
62.5°	516.8	559.0	649.7	729.9	761.5
65°	455.7	502.1	605.4	685.6	717.2
67.5°	400.8	451.4	561.1	641.3	672.9
70°	335.4	398.7	512.6	592.8	624.4
72.5°	274.2	343.9	462.0	540.0	569.6
75°	215.2	293.2	409.3	478.9	493.6
77.5°	160.3	242.6	354.4	383.9	373.4
80°	113.9	194.1	276.3	261.6	267.9
82.5°	73.8	147.7	170.9	194.1	200.4
85°	42.2	86.5	105.5	113.9	118.1
87.5°	19.0	31.6	42.2	42.2	40.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)