

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: P311157

Luminaire Tested: **24FCZ2-75HE-UNV-L82765-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: P311157
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-15)
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-CP250-W2A-U-3000K
Description: 2'X4' TROFFER LED MODULE, RIBBED 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: 6039.0 lumens
Efficiency: N/A
Efficacy: 96.8 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.29 / 1.38
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

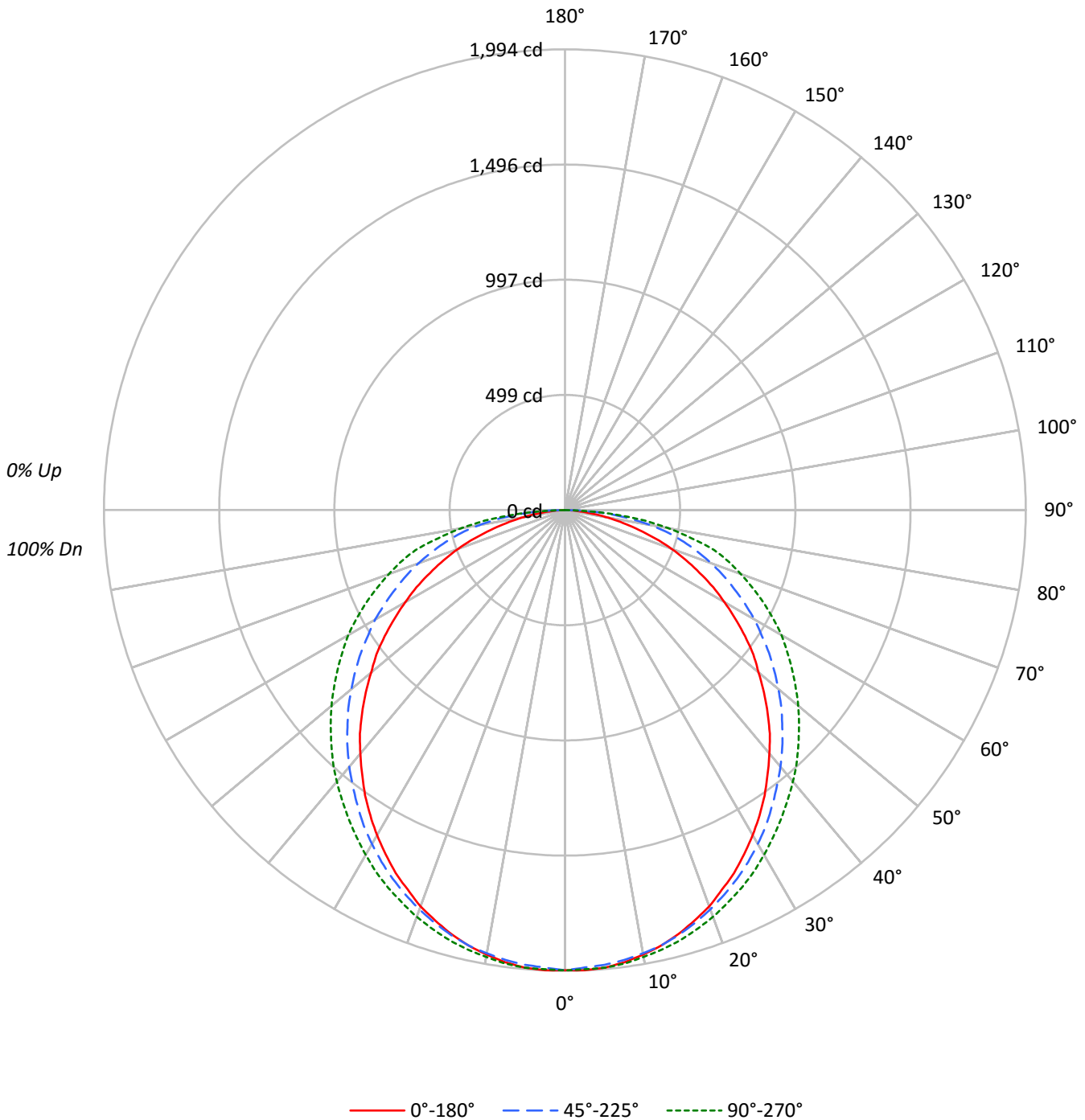
Input Watts (W): 62.4
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	92	89	92	89	87	88	86	84	82
2	98	89	81	75	95	87	80	74	83	78	73	80	75	71	77	73	69	67
3	89	77	69	62	86	76	68	61	73	66	60	70	64	59	67	62	58	56
4	81	68	59	52	79	67	58	52	64	57	51	62	56	50	60	54	50	47
5	74	61	52	45	72	60	51	44	58	50	44	56	49	43	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36
7	64	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31
8	59	45	37	31	57	45	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	25	35	29	24	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2680	2680	2680
5°	2685	2668	2685
10°	2669	2661	2683
15°	2646	2651	2685
20°	2614	2634	2682
25°	2573	2615	2680
30°	2525	2593	2677
35°	2475	2567	2679
40°	2418	2548	2696
45°	2360	2531	2718
50°	2290	2525	2760
55°	2232	2529	2815
60°	2146	2550	2912
65°	2048	2577	3017
70°	1939	2656	3185
75°	1729	2771	3479
80°	1475	2934	3555
85°	1051	2907	3402



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	188.5	3.1
10°-20°	538.9	8.9
20°-30°	814.0	13.5
30°-40°	981.1	16.2
40°-50°	1030.0	17.1
50°-60°	963.6	16.0
60°-70°	795.8	13.2
70°-80°	542.2	9.0
80°-90°	184.9	3.1
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°	1541.4	25.5
0°-40°	2522.5	41.8
0°-60°	4516.1	74.8
0°-90°	6039.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6039.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1992	1992	1992	1992	1992	
5°	1988	1986	1976	1988	1988	189
15°	1899	1901	1903	1924	1928	535
25°	1733	1741	1761	1795	1805	797
35°	1507	1523	1563	1615	1631	942
45°	1240	1266	1330	1402	1429	957
55°	952	990	1078	1166	1200	849
65°	643	697	810	912	948	638
75°	333	409	533	633	669	355
85°	68	134	188	212	220	85
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1991.6	1991.6	1991.6	1991.6	1991.6
2.5°	1993.6	1991.6	1981.6	1991.6	1989.6
5°	1987.6	1985.6	1975.6	1987.6	1987.6
7.5°	1973.6	1973.6	1963.6	1977.6	1979.6
10°	1953.5	1953.5	1947.5	1963.6	1963.6
12.5°	1929.5	1929.5	1929.5	1945.5	1947.5
15°	1899.4	1901.4	1903.4	1923.5	1927.5
17.5°	1863.4	1867.4	1873.4	1897.4	1901.4
20°	1825.3	1829.3	1839.3	1867.4	1873.4
22.5°	1777.2	1787.2	1801.3	1833.3	1839.3
25°	1733.1	1741.2	1761.2	1795.3	1805.3
27.5°	1679.0	1691.1	1717.1	1753.2	1767.2
30°	1624.9	1637.0	1669.0	1711.1	1723.1
32.5°	1566.8	1584.9	1618.9	1663.0	1677.0
35°	1506.7	1522.8	1562.8	1614.9	1631.0
37.5°	1440.6	1462.7	1506.7	1562.8	1582.9
40°	1376.5	1400.5	1450.6	1510.7	1534.8
42.5°	1312.4	1336.4	1392.5	1460.6	1484.7
45°	1240.2	1266.3	1330.4	1402.5	1428.6
47.5°	1168.1	1200.2	1270.3	1346.4	1374.5
50°	1094.0	1130.0	1206.2	1286.3	1318.4
52.5°	1027.9	1061.9	1142.1	1228.2	1258.3
55°	951.7	989.8	1078.0	1166.1	1200.2
57.5°	873.6	915.7	1009.8	1106.0	1140.1
60°	797.4	843.5	947.7	1043.9	1082.0
62.5°	723.3	769.4	877.6	977.8	1015.8
65°	643.2	697.3	809.5	911.7	947.7
67.5°	567.0	625.1	743.3	843.5	879.6
70°	492.9	549.0	675.2	773.4	809.5
72.5°	412.7	476.9	603.1	705.3	743.3
75°	332.6	408.7	533.0	633.1	669.2
77.5°	258.5	336.6	460.8	543.0	561.0
80°	190.3	270.5	378.7	436.8	458.8
82.5°	122.2	202.4	288.5	330.6	348.6
85°	68.1	134.2	188.3	212.4	220.4
87.5°	28.1	58.1	76.1	86.2	86.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)