

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: P311147

Luminaire Tested: **24FCZ2-75HE-UNV-L82765-CP187-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: P311147
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-CP187-W2A-U-2700K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.187" 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: 5918.0 lumens
Efficiency: N/A
Efficacy: 94.2 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

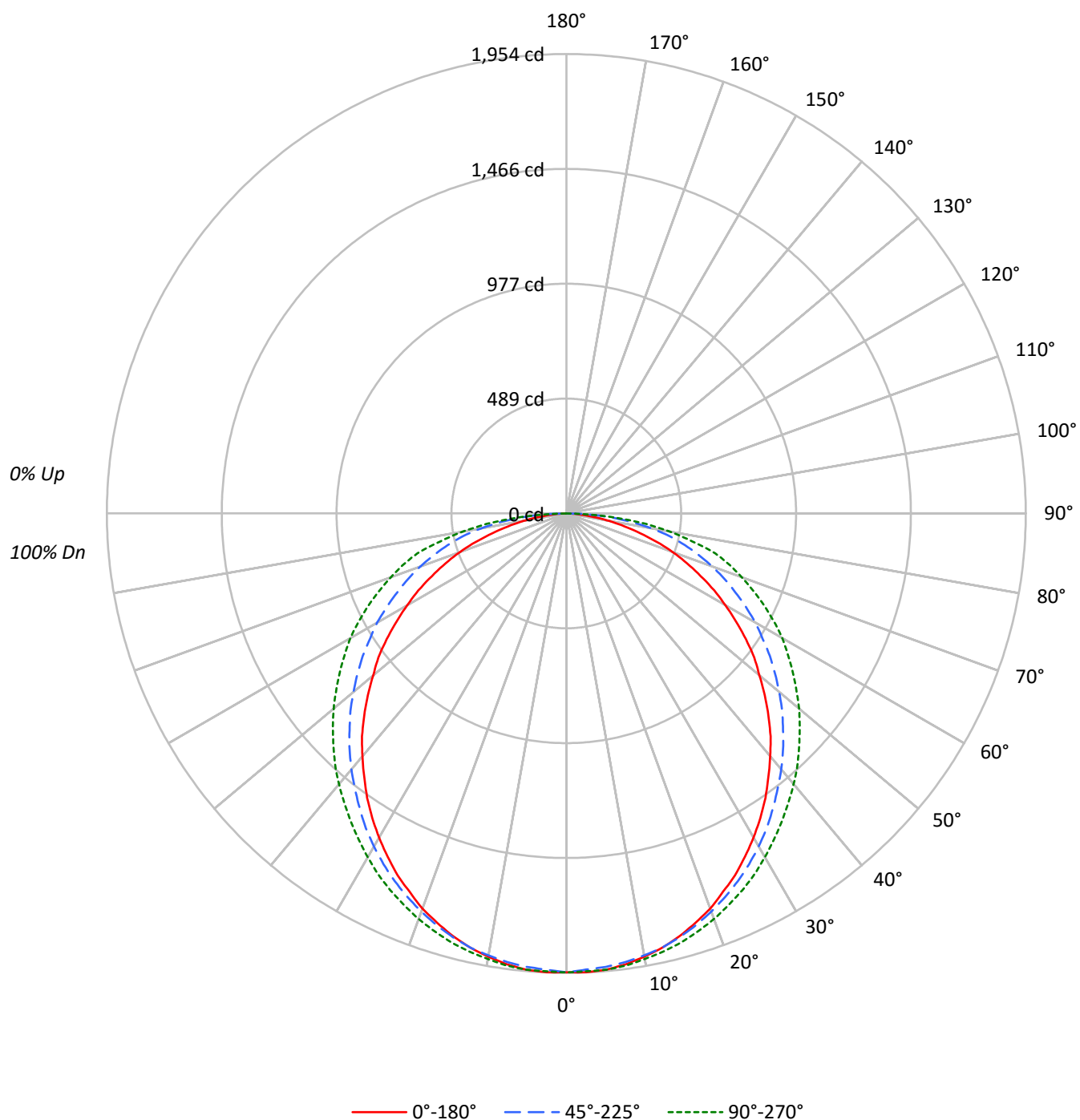
Input Watts (W): 62.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	92	89		92	89	87		82
2	98	89	81	75	95	87	80	74	83	78	73		80	75	71		67
3	89	77	69	62	86	76	68	61	73	66	60		70	64	59		56
4	81	68	59	52	79	67	58	52	64	57	51		62	56	50		47
5	74	61	52	45	72	60	51	44	58	50	44		56	49	43		41
6	69	55	46	39	67	54	45	39	52	44	38		50	43	38		36
7	64	50	41	34	62	49	40	34	47	39	34		46	39	34		31
8	59	45	37	31	57	45	36	30	43	36	30		42	35	30		28
9	55	41	33	27	54	41	33	27	40	32	27		39	32	27		25
10	52	38	30	25	50	38	30	25	37	30	25		36	29	25		23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2626	2626	2626
5°	2631	2615	2631
10°	2616	2607	2629
15°	2593	2598	2631
20°	2561	2581	2629
25°	2521	2562	2626
30°	2474	2541	2623
35°	2425	2516	2625
40°	2369	2497	2642
45°	2313	2481	2664
50°	2244	2474	2704
55°	2188	2478	2759
60°	2103	2499	2853
65°	2007	2525	2957
70°	1900	2603	3120
75°	1694	2715	3409
80°	1445	2875	3484
85°	1031	2850	3335



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	184.7	3.1
10°-20°	528.1	8.9
20°-30°	797.7	13.5
30°-40°	961.4	16.2
40°-50°	1009.3	17.1
50°-60°	944.3	16.0
60°-70°	779.8	13.2
70°-80°	531.4	9.0
80°-90°	181.2	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°	1510.6	25.5
0°-40°	2472.0	41.8
0°-60°	4425.6	74.8
0°-90°	5918.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5918.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1952	1952	1952	1952	1952	
5°	1948	1946	1936	1948	1948	185
15°	1861	1863	1865	1885	1889	525
25°	1698	1706	1726	1759	1769	781
35°	1476	1492	1532	1583	1598	923
45°	1215	1241	1304	1374	1400	937
55°	933	970	1056	1143	1176	832
65°	630	683	793	893	929	625
75°	326	401	522	620	656	348
85°	67	132	185	208	216	84
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1951.7	1951.7	1951.7	1951.7	1951.7
2.5°	1953.7	1951.7	1941.9	1951.7	1949.7
5°	1947.8	1945.8	1936.0	1947.8	1947.8
7.5°	1934.0	1934.0	1924.2	1938.0	1939.9
10°	1914.4	1914.4	1908.5	1924.2	1924.2
12.5°	1890.8	1890.8	1890.8	1906.5	1908.5
15°	1861.4	1863.3	1865.3	1884.9	1888.9
17.5°	1826.0	1830.0	1835.9	1859.4	1863.3
20°	1788.7	1792.7	1802.5	1830.0	1835.9
22.5°	1741.6	1751.4	1765.2	1796.6	1802.5
25°	1698.4	1706.3	1725.9	1759.3	1769.1
27.5°	1645.4	1657.2	1682.7	1718.1	1731.8
30°	1592.4	1604.2	1635.6	1676.8	1688.6
32.5°	1535.4	1553.1	1586.5	1629.7	1643.4
35°	1476.5	1492.2	1531.5	1582.6	1598.3
37.5°	1411.7	1433.3	1476.5	1531.5	1551.2
40°	1348.9	1372.5	1421.6	1480.5	1504.0
42.5°	1286.1	1309.6	1364.6	1431.4	1454.9
45°	1215.4	1240.9	1303.8	1374.4	1400.0
47.5°	1144.7	1176.1	1244.9	1319.5	1347.0
50°	1072.1	1107.4	1182.0	1260.6	1292.0
52.5°	1007.3	1040.6	1119.2	1203.6	1233.1
55°	932.7	970.0	1056.4	1142.7	1176.1
57.5°	856.1	897.3	989.6	1083.8	1117.2
60°	781.5	826.6	928.7	1023.0	1060.3
62.5°	708.8	754.0	860.0	958.2	995.5
65°	630.3	683.3	793.2	893.4	928.7
67.5°	555.7	612.6	728.5	826.6	862.0
70°	483.0	538.0	661.7	757.9	793.2
72.5°	404.5	467.3	591.0	691.1	728.5
75°	325.9	400.6	522.3	620.5	655.8
77.5°	253.3	329.9	451.6	532.1	549.8
80°	186.5	265.1	371.1	428.0	449.6
82.5°	119.8	198.3	282.7	324.0	341.6
85°	66.8	131.6	184.6	208.1	216.0
87.5°	27.5	56.9	74.6	84.4	84.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)