

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: P311823

Luminaire Tested: **24FCZ2-75HE-UNV-L82765-S-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: P311823
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-1)
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-S-CP187-W2A-U-3000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH 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: 6398.0 lumens
Efficiency: N/A
Efficacy: 102.5 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

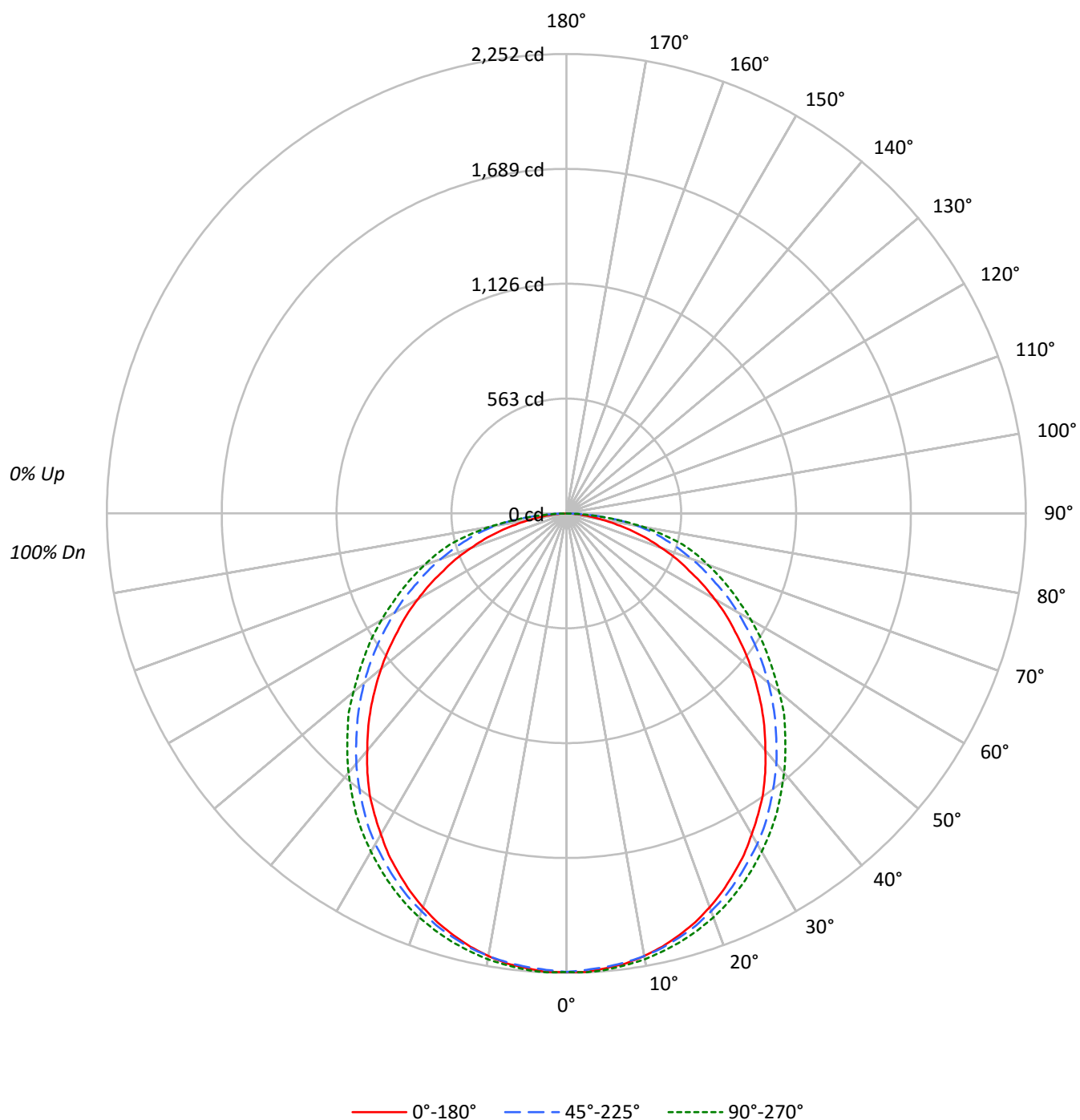
Input Watts (W): 62.4
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	99	95	106	101	97	93	97	93	90		93	90	88		83
2	98	90	83	77	96	88	81	76	84	79	74		81	76	72		69
3	89	79	70	64	87	77	69	63	74	67	62		71	66	61		58
4	82	70	61	54	80	68	60	54	66	59	53		63	57	52		49
5	75	62	53	46	73	61	53	46	59	51	46		57	50	45		42
6	70	56	47	40	68	55	47	40	53	46	40		52	45	40		37
7	64	51	42	36	63	50	42	36	48	41	35		47	40	35		33
8	60	46	38	32	58	46	37	32	44	37	32		43	36	31		29
9	56	43	34	29	55	42	34	29	41	34	28		40	33	28		26
10	53	39	31	26	51	39	31	26	38	31	26		37	30	26		24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3024	3024	3024
5°	3022	3014	3033
10°	3010	3010	3032
15°	2981	2995	3026
20°	2942	2971	3017
25°	2887	2942	2999
30°	2823	2908	2974
35°	2761	2861	2951
40°	2666	2813	2916
45°	2579	2757	2885
50°	2480	2705	2850
55°	2369	2655	2822
60°	2259	2614	2816
65°	2116	2569	2834
70°	1959	2582	2910
75°	1754	2630	3074
80°	1417	2787	3008
85°	1067	2447	2385



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	212.8	3.3
10°-20°	608.0	9.5
20°-30°	914.0	14.3
30°-40°	1088.7	17.0
40°-50°	1114.2	17.4
50°-60°	1003.1	15.7
60°-70°	787.8	12.3
70°-80°	511.3	8.0
80°-90°	158.1	2.5
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°	1734.8	27.1
0°-40°	2823.4	44.1
0°-60°	4940.8	77.2
0°-90°	6398.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6398.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2248	2248	2248	2248	2248	
5°	2238	2242	2231	2244	2246	213
15°	2140	2146	2150	2168	2172	603
25°	1945	1961	1981	2014	2020	896
35°	1681	1701	1742	1784	1796	1048
45°	1356	1388	1449	1504	1516	1045
55°	1010	1055	1132	1191	1203	905
65°	664	715	807	874	890	662
75°	337	402	506	575	591	357
85°	69	128	158	154	154	83
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2247.7	2247.7	2247.7	2247.7	2247.7
2.5°	2249.7	2249.7	2239.5	2249.7	2251.7
5°	2237.5	2241.6	2231.4	2243.6	2245.6
7.5°	2225.3	2225.3	2219.2	2231.4	2233.4
10°	2202.9	2205.0	2202.9	2217.2	2219.2
12.5°	2174.5	2178.6	2180.6	2194.8	2196.9
15°	2140.0	2146.0	2150.1	2168.4	2172.5
17.5°	2101.3	2107.4	2117.6	2137.9	2142.0
20°	2054.6	2062.7	2074.9	2101.3	2107.4
22.5°	2003.8	2011.9	2032.2	2056.6	2066.8
25°	1944.9	1961.1	1981.4	2014.0	2020.0
27.5°	1885.9	1900.1	1926.6	1961.1	1969.2
30°	1816.8	1839.2	1871.7	1906.2	1914.4
32.5°	1749.8	1772.1	1810.7	1847.3	1857.5
35°	1680.7	1701.0	1741.6	1784.3	1796.5
37.5°	1601.4	1627.8	1672.5	1715.2	1727.4
40°	1518.1	1550.6	1601.4	1646.1	1660.3
42.5°	1438.8	1473.4	1524.2	1573.0	1589.2
45°	1355.5	1388.0	1449.0	1503.9	1516.1
47.5°	1270.2	1306.7	1371.8	1426.6	1447.0
50°	1184.8	1223.4	1292.5	1349.4	1361.6
52.5°	1099.4	1140.1	1213.2	1274.2	1280.3
55°	1010.0	1054.7	1132.0	1190.9	1203.1
57.5°	928.7	967.3	1050.7	1111.6	1125.9
60°	839.3	882.0	971.4	1028.3	1046.6
62.5°	754.0	798.7	892.2	949.1	965.3
65°	664.5	715.3	806.8	873.9	890.1
67.5°	587.3	636.1	733.6	798.7	814.9
70°	497.9	552.8	656.4	723.5	739.7
72.5°	420.7	477.6	581.2	646.3	670.6
75°	337.4	402.4	506.0	575.1	591.4
77.5°	256.1	331.3	436.9	489.8	489.8
80°	182.9	262.2	359.7	384.1	388.2
82.5°	119.9	197.1	266.2	264.2	264.2
85°	69.1	128.0	158.5	154.5	154.5
87.5°	26.4	52.8	56.9	56.9	54.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)