

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: P311822

Luminaire Tested: **24FCZ2-75HE-UNV-L82765-S-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: P311822
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-2700K
Description: 2'X4' TROFFER LED MODULE, SMOOTH 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: 6218.0 lumens
Efficiency: N/A
Efficacy: 99.0 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

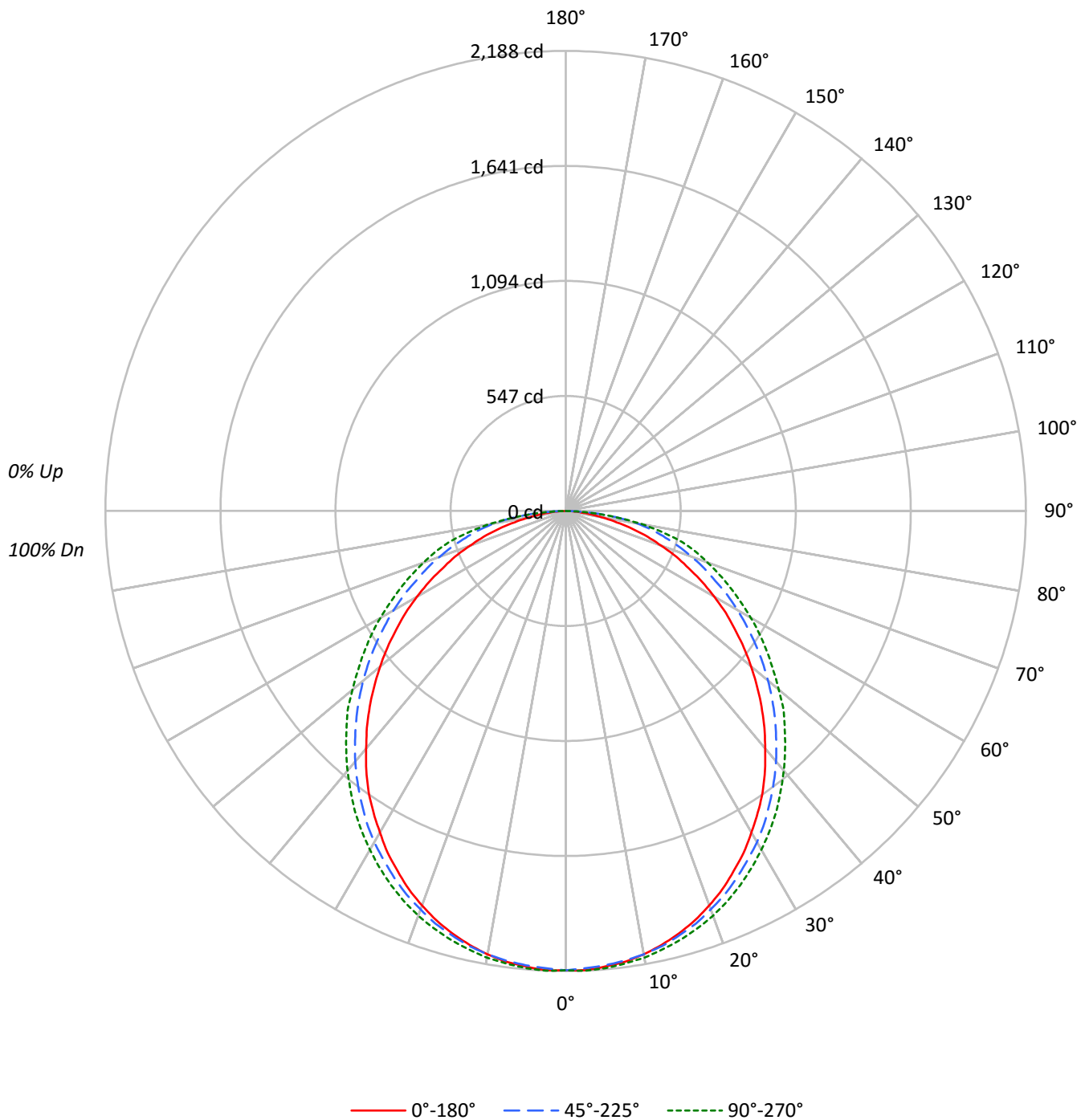
Input Watts (W): 62.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	2939	2939	2939
5°	2937	2929	2948
10°	2925	2925	2947
15°	2897	2911	2941
20°	2859	2887	2933
25°	2806	2859	2915
30°	2743	2826	2891
35°	2683	2780	2868
40°	2591	2734	2834
45°	2507	2680	2804
50°	2410	2629	2770
55°	2303	2581	2743
60°	2195	2541	2737
65°	2056	2496	2754
70°	1904	2509	2828
75°	1705	2557	2988
80°	1378	2709	2923
85°	1037	2379	2317



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	206.8	3.3
10°-20°	590.9	9.5
20°-30°	888.3	14.3
30°-40°	1058.1	17.0
40°-50°	1082.9	17.4
50°-60°	974.9	15.7
60°-70°	765.6	12.3
70°-80°	496.9	8.0
80°-90°	153.7	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°	1686.0	27.1
0°-40°	2744.0	44.1
0°-60°	4801.8	77.2
0°-90°	6218.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6218.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2184	2184	2184	2184	2184	
5°	2174	2178	2169	2180	2182	207
15°	2080	2086	2090	2107	2111	586
25°	1890	1906	1926	1957	1963	871
35°	1633	1653	1693	1734	1746	1019
45°	1317	1349	1408	1462	1473	1016
55°	982	1025	1100	1157	1169	880
65°	646	695	784	849	865	643
75°	328	391	492	559	575	347
85°	67	124	154	150	150	81
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2184.4	2184.4	2184.4	2184.4	2184.4
2.5°	2186.4	2186.4	2176.5	2186.4	2188.4
5°	2174.5	2178.5	2168.6	2180.5	2182.4
7.5°	2162.7	2162.7	2156.8	2168.6	2170.6
10°	2141.0	2142.9	2141.0	2154.8	2156.8
12.5°	2113.3	2117.3	2119.2	2133.1	2135.0
15°	2079.7	2085.7	2089.6	2107.4	2111.3
17.5°	2042.2	2048.1	2058.0	2077.8	2081.7
20°	1996.8	2004.7	2016.5	2042.2	2048.1
22.5°	1947.4	1955.3	1975.1	1998.8	2008.6
25°	1890.1	1905.9	1925.7	1957.3	1963.2
27.5°	1832.9	1846.7	1872.4	1905.9	1913.8
30°	1765.7	1787.4	1819.0	1852.6	1860.5
32.5°	1700.5	1722.3	1759.8	1795.3	1805.2
35°	1633.4	1653.1	1692.6	1734.1	1746.0
37.5°	1556.4	1582.0	1625.5	1667.0	1678.8
40°	1475.4	1507.0	1556.4	1599.8	1613.6
42.5°	1398.3	1431.9	1481.3	1528.7	1544.5
45°	1317.4	1349.0	1408.2	1461.5	1473.4
47.5°	1234.4	1270.0	1333.2	1386.5	1406.2
50°	1151.5	1189.0	1256.1	1311.4	1323.3
52.5°	1068.5	1108.0	1179.1	1238.4	1244.3
55°	981.6	1025.1	1100.1	1157.4	1169.2
57.5°	902.6	940.1	1021.1	1080.4	1094.2
60°	815.7	857.2	944.1	999.4	1017.2
62.5°	732.7	776.2	867.1	922.4	938.2
65°	645.8	695.2	784.1	849.3	865.1
67.5°	570.8	618.2	713.0	776.2	792.0
70°	483.9	537.2	637.9	703.1	718.9
72.5°	408.8	464.1	564.9	628.1	651.8
75°	327.9	391.1	491.8	558.9	574.7
77.5°	248.9	321.9	424.6	476.0	476.0
80°	177.8	254.8	349.6	373.3	377.2
82.5°	116.5	191.6	258.7	256.8	256.8
85°	67.2	124.4	154.1	150.1	150.1
87.5°	25.7	51.4	55.3	55.3	53.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)