

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: P311091

Luminaire Tested: **24FCZ2-70HE-UNV-L82765-CA125-W2A-U-5700K**

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: P311091
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: 24FCZ2-70HE-UNV-L82765-CA125-W2A-U-5700K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.125" ACRYLIC SHEET
Light Source: (336) 5700K 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: 6697.0 lumens
Efficiency: N/A
Efficacy: 112.9 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

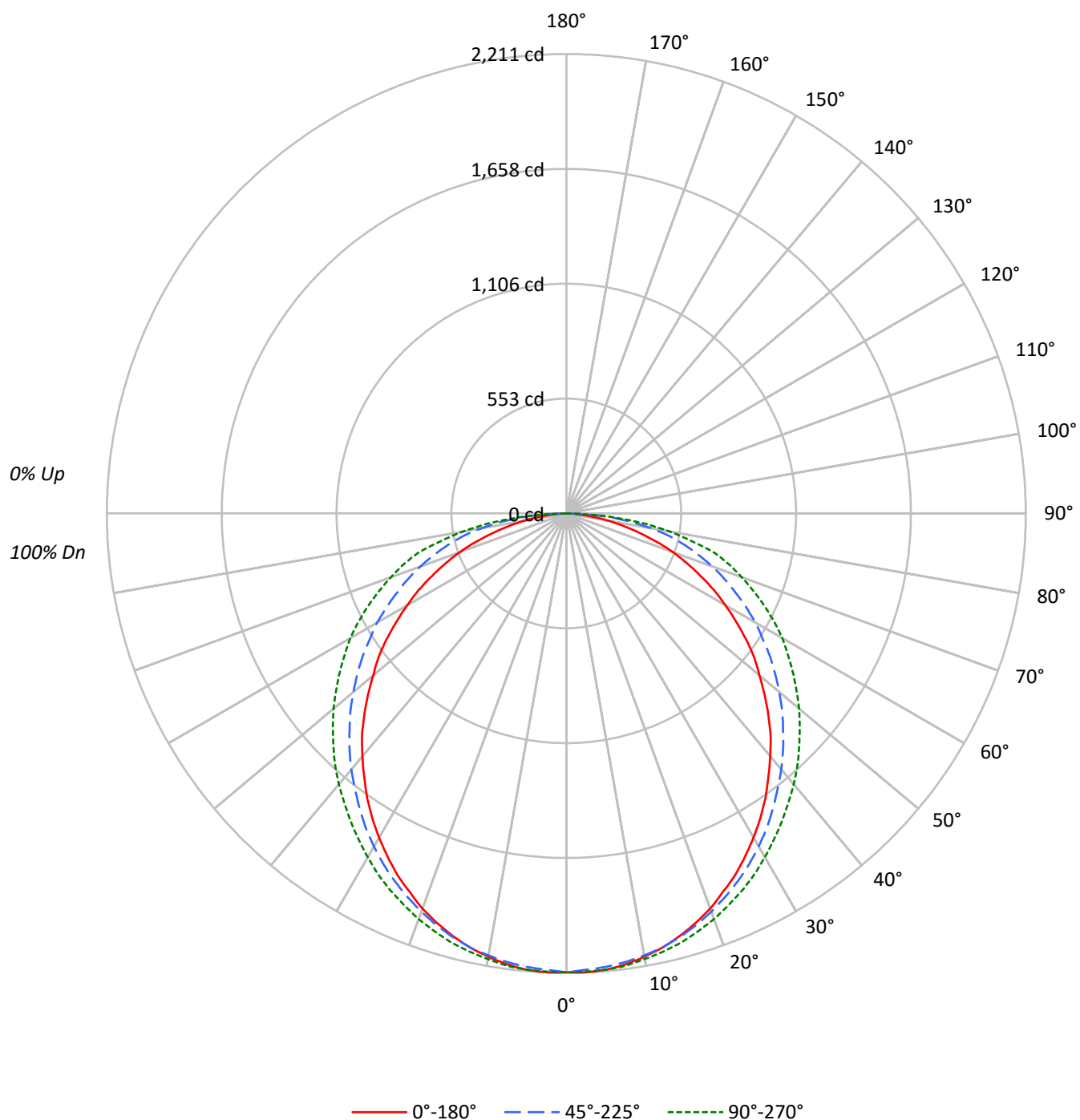
Input Watts (W): 59.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2972	2972	2972
5°	2977	2959	2977
10°	2960	2951	2975
15°	2934	2940	2977
20°	2898	2921	2975
25°	2853	2900	2972
30°	2800	2876	2969
35°	2745	2847	2971
40°	2681	2826	2989
45°	2617	2807	3014
50°	2539	2800	3060
55°	2476	2804	3122
60°	2380	2828	3229
65°	2271	2858	3346
70°	2150	2946	3532
75°	1917	3072	3858
80°	1636	3254	3942
85°	1166	3225	3773



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	209.0	3.1
10°-20°	597.7	8.9
20°-30°	902.7	13.5
30°-40°	1088.0	16.2
40°-50°	1142.2	17.1
50°-60°	1068.6	16.0
60°-70°	882.4	13.2
70°-80°	601.3	9.0
80°-90°	205.1	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°	1709.4	25.5
0°-40°	2797.4	41.8
0°-60°	5008.1	74.8
0°-90°	6697.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6697.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2209	2209	2209	2209	2209	
5°	2204	2202	2191	2204	2204	209
15°	2106	2109	2111	2133	2138	594
25°	1922	1931	1953	1991	2002	884
35°	1671	1689	1733	1791	1809	1044
45°	1375	1404	1475	1555	1584	1061
55°	1055	1098	1195	1293	1331	942
65°	713	773	898	1011	1051	707
75°	369	453	591	702	742	393
85°	76	149	209	236	244	95
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2208.6	2208.6	2208.6	2208.6	2208.6
2.5°	2210.8	2208.6	2197.5	2208.6	2206.4
5°	2204.2	2201.9	2190.8	2204.2	2204.2
7.5°	2188.6	2188.6	2177.5	2193.1	2195.3
10°	2166.4	2166.4	2159.7	2177.5	2177.5
12.5°	2139.7	2139.7	2139.7	2157.5	2159.7
15°	2106.4	2108.6	2110.8	2133.1	2137.5
17.5°	2066.4	2070.9	2077.5	2104.2	2108.6
20°	2024.2	2028.6	2039.7	2070.9	2077.5
22.5°	1970.9	1982.0	1997.5	2033.1	2039.7
25°	1922.0	1930.9	1953.1	1990.9	2002.0
27.5°	1862.0	1875.3	1904.2	1944.2	1959.8
30°	1802.0	1815.3	1850.9	1897.5	1910.9
32.5°	1737.6	1757.6	1795.3	1844.2	1859.8
35°	1670.9	1688.7	1733.1	1790.9	1808.7
37.5°	1597.6	1622.0	1670.9	1733.1	1755.3
40°	1526.5	1553.1	1608.7	1675.3	1702.0
42.5°	1455.4	1482.0	1544.3	1619.8	1646.5
45°	1375.4	1404.3	1475.4	1555.4	1584.2
47.5°	1295.4	1330.9	1408.7	1493.1	1524.3
50°	1213.2	1253.2	1337.6	1426.5	1462.0
52.5°	1139.9	1177.6	1266.5	1362.1	1395.4
55°	1055.4	1097.6	1195.4	1293.2	1330.9
57.5°	968.8	1015.4	1119.9	1226.5	1264.3
60°	884.3	935.4	1051.0	1157.6	1199.8
62.5°	802.1	853.2	973.2	1084.3	1126.5
65°	713.2	773.2	897.7	1011.0	1051.0
67.5°	628.8	693.2	824.3	935.4	975.4
70°	546.6	608.8	748.8	857.7	897.7
72.5°	457.7	528.8	668.8	782.1	824.3
75°	368.8	453.3	591.0	702.1	742.1
77.5°	286.6	373.3	511.0	602.1	622.1
80°	211.1	300.0	419.9	484.4	508.8
82.5°	135.5	224.4	320.0	366.6	386.6
85°	75.5	148.9	208.9	235.5	244.4
87.5°	31.1	64.4	84.4	95.5	95.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)