

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: P311096

Luminaire Tested: **24FCZ2-70HE-UNV-L82765-CP125-W2A-U-4000K**

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: P311096
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-CP125-W2A-U-4000K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.125" POLYCARB SHEET
Light Source: (336) 4000K 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: 6287.0 lumens
Efficiency: N/A
Efficacy: 107.7 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

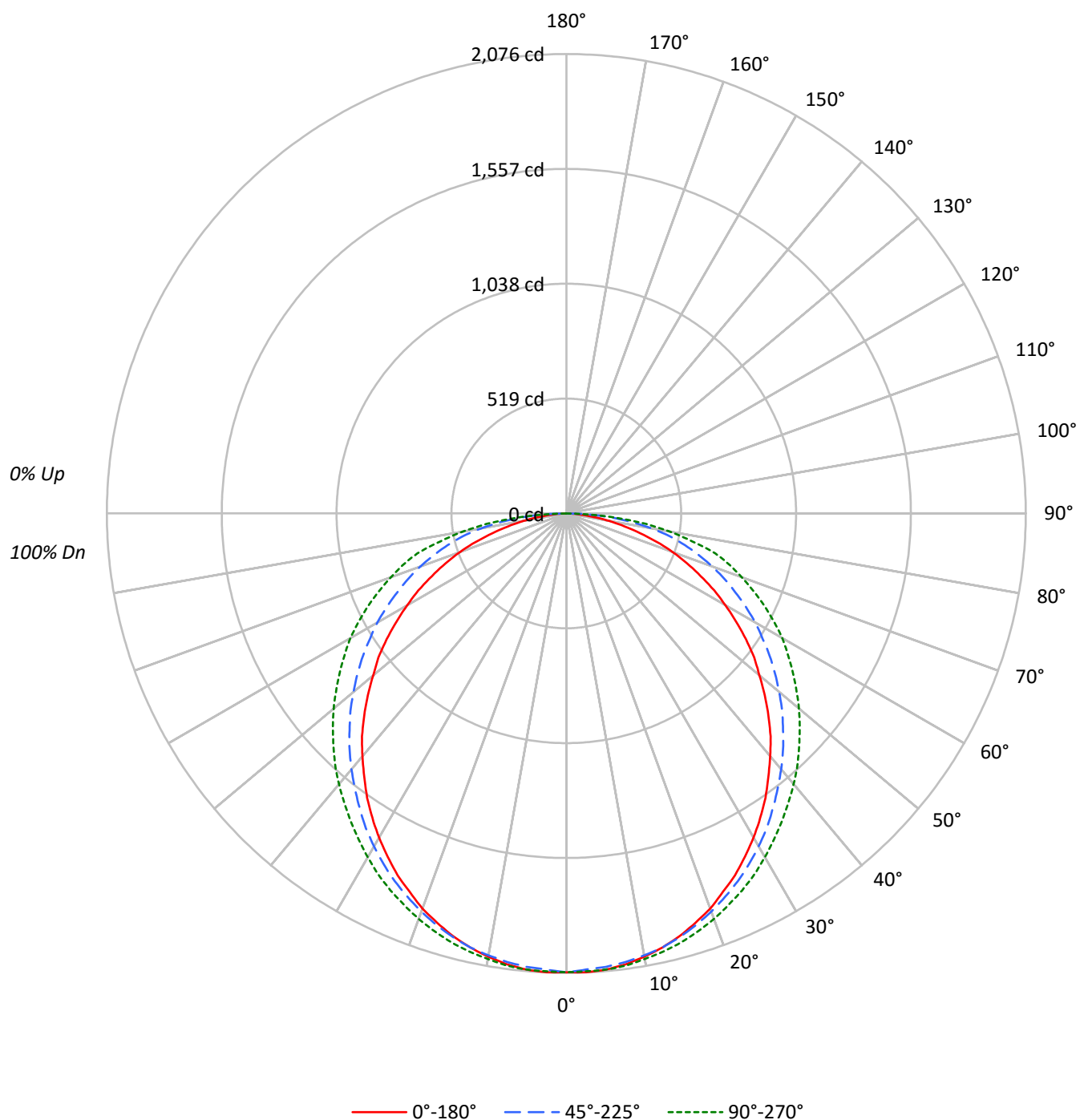
Input Watts (W): 58.4
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	2790	2790	2790
5°	2795	2778	2795
10°	2779	2770	2793
15°	2754	2760	2795
20°	2721	2742	2793
25°	2679	2722	2790
30°	2628	2700	2787
35°	2576	2672	2789
40°	2517	2653	2806
45°	2457	2635	2830
50°	2384	2628	2873
55°	2324	2632	2931
60°	2234	2655	3031
65°	2132	2683	3141
70°	2019	2766	3315
75°	1800	2885	3622
80°	1536	3054	3701
85°	1095	3027	3543



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	196.2	3.1
10°-20°	561.1	8.9
20°-30°	847.5	13.5
30°-40°	1021.4	16.2
40°-50°	1072.3	17.1
50°-60°	1003.2	16.0
60°-70°	828.4	13.2
70°-80°	564.5	9.0
80°-90°	192.5	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°	1604.7	25.5
0°-40°	2626.1	41.8
0°-60°	4701.5	74.8
0°-90°	6287.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6287.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2073	2073	2073	2073	2073	
5°	2069	2067	2057	2069	2069	196
15°	1977	1980	1982	2002	2007	557
25°	1804	1813	1834	1869	1879	830
35°	1569	1585	1627	1681	1698	980
45°	1291	1318	1385	1460	1487	996
55°	991	1030	1122	1214	1250	884
65°	670	726	843	949	987	664
75°	346	426	555	659	697	369
85°	71	140	196	221	230	89
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2073.4	2073.4	2073.4	2073.4	2073.4
2.5°	2075.5	2073.4	2063.0	2073.4	2071.3
5°	2069.2	2067.1	2056.7	2069.2	2069.2
7.5°	2054.6	2054.6	2044.2	2058.8	2060.9
10°	2033.8	2033.8	2027.5	2044.2	2044.2
12.5°	2008.7	2008.7	2008.7	2025.4	2027.5
15°	1977.4	1979.5	1981.6	2002.5	2006.6
17.5°	1939.9	1944.1	1950.3	1975.4	1979.5
20°	1900.3	1904.4	1914.9	1944.1	1950.3
22.5°	1850.2	1860.6	1875.2	1908.6	1914.9
25°	1804.3	1812.7	1833.5	1869.0	1879.4
27.5°	1748.0	1760.5	1787.6	1825.2	1839.8
30°	1691.7	1704.2	1737.6	1781.4	1793.9
32.5°	1631.2	1650.0	1685.4	1731.3	1745.9
35°	1568.6	1585.3	1627.0	1681.2	1697.9
37.5°	1499.8	1522.7	1568.6	1627.0	1647.9
40°	1433.0	1458.1	1510.2	1572.8	1597.8
42.5°	1366.3	1391.3	1449.7	1520.6	1545.7
45°	1291.2	1318.3	1385.0	1460.1	1487.3
47.5°	1216.1	1249.5	1322.5	1401.7	1430.9
50°	1138.9	1176.5	1255.7	1339.2	1372.5
52.5°	1070.1	1105.5	1189.0	1278.7	1310.0
55°	990.8	1030.4	1122.2	1214.0	1249.5
57.5°	909.5	953.3	1051.3	1151.4	1186.9
60°	830.2	878.2	986.6	1086.8	1126.4
62.5°	753.0	801.0	913.6	1017.9	1057.6
65°	669.6	725.9	842.7	949.1	986.6
67.5°	590.3	650.8	773.9	878.2	915.7
70°	513.1	571.5	703.0	805.2	842.7
72.5°	429.7	496.4	627.9	734.2	773.9
75°	346.3	425.5	554.9	659.1	696.7
77.5°	269.1	350.4	479.8	565.3	584.1
80°	198.2	281.6	394.2	454.7	477.7
82.5°	127.2	210.7	300.4	344.2	362.9
85°	70.9	139.8	196.1	221.1	229.5
87.5°	29.2	60.5	79.3	89.7	89.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)