

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: P314126

Luminaire Tested: **24FCZ2-70HE-UNV-L83050-CP125-W2A-U-3500K**

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: P314126
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-L83050-CP125-W2A-U-3500K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.125" POLYCARB SHEET
Light Source: (336) 3500K 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: 6299.0 lumens
Efficiency: N/A
Efficacy: 109.2 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

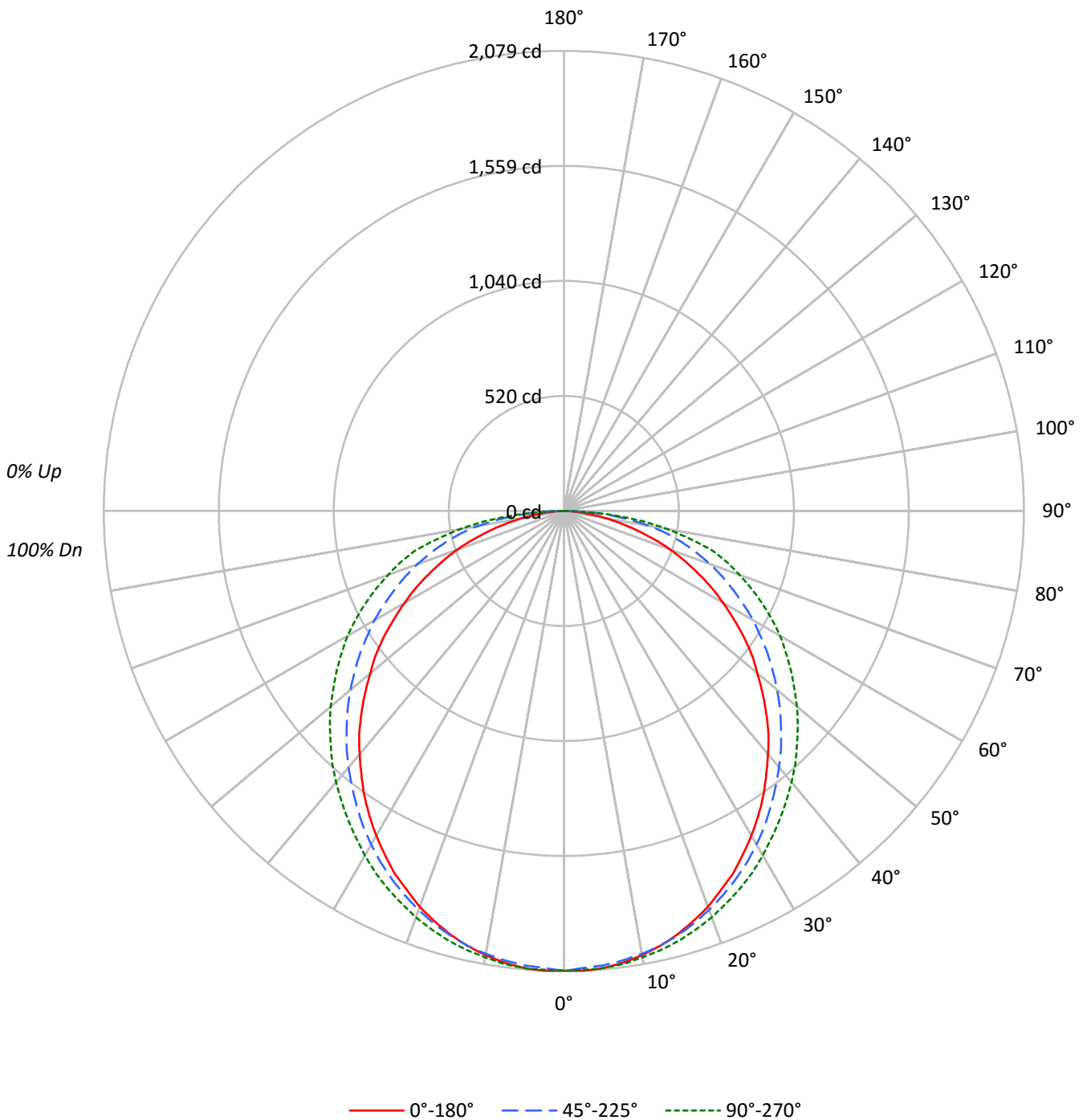
Input Watts (W): 57.7
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				10	0
RW	70	50	30	10	70	50	30	10	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	102	102	102	100
1	108	103	98	94	105	100	96	92	96	92	89	92	89	87	88	86	84	82
2	98	89	81	75	95	87	80	74	83	78	73	80	75	71	77	73	69	67
3	89	77	69	62	86	76	68	61	73	66	60	70	64	59	67	62	58	56
4	81	68	59	52	79	67	58	52	64	57	51	62	56	50	60	54	50	47
5	74	61	52	45	72	60	51	44	58	50	44	56	49	43	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36
7	64	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31
8	59	45	37	31	57	45	36	30	43	36	30	42	35	30	41	34	30	28
9	55	41	33	27	54	41	33	27	40	32	27	39	32	27	38	31	27	25
10	52	38	30	25	50	38	30	25	37	30	25	36	29	25	35	29	24	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2795	2795	2795
5°	2800	2783	2800
10°	2784	2775	2798
15°	2760	2766	2801
20°	2726	2747	2798
25°	2684	2727	2795
30°	2633	2705	2792
35°	2581	2678	2794
40°	2522	2658	2812
45°	2461	2641	2835
50°	2389	2633	2879
55°	2329	2638	2936
60°	2238	2660	3037
65°	2136	2688	3147
70°	2022	2771	3321
75°	1803	2890	3629
80°	1538	3061	3708
85°	1098	3034	3549



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	196.6	3.1
10°-20°	562.1	8.9
20°-30°	849.1	13.5
30°-40°	1023.3	16.2
40°-50°	1074.3	17.1
50°-60°	1005.1	16.0
60°-70°	830.0	13.2
70°-80°	565.6	9.0
80°-90°	192.9	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°	1607.8	25.5
0°-40°	2631.1	41.8
0°-60°	4710.5	74.8
0°-90°	6299.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6299.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2077	2077	2077	2077	2077	
5°	2073	2071	2061	2073	2073	197
15°	1981	1983	1985	2006	2010	558
25°	1808	1816	1837	1872	1883	832
35°	1572	1588	1630	1684	1701	982
45°	1294	1321	1388	1463	1490	998
55°	993	1032	1124	1216	1252	886
65°	671	727	844	951	988	665
75°	347	426	556	660	698	370
85°	71	140	196	222	230	89
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2077.4	2077.4	2077.4	2077.4	2077.4
2.5°	2079.4	2077.4	2066.9	2077.4	2075.3
5°	2073.2	2071.1	2060.6	2073.2	2073.2
7.5°	2058.5	2058.5	2048.1	2062.7	2064.8
10°	2037.6	2037.6	2031.4	2048.1	2048.1
12.5°	2012.6	2012.6	2012.6	2029.3	2031.4
15°	1981.2	1983.3	1985.4	2006.3	2010.5
17.5°	1943.6	1947.8	1954.1	1979.1	1983.3
20°	1903.9	1908.1	1918.5	1947.8	1954.1
22.5°	1853.7	1864.2	1878.8	1912.3	1918.5
25°	1807.8	1816.1	1837.0	1872.5	1883.0
27.5°	1751.3	1763.9	1791.0	1828.7	1843.3
30°	1694.9	1707.4	1740.9	1784.8	1797.3
32.5°	1634.3	1653.1	1688.6	1734.6	1749.2
35°	1571.6	1588.3	1630.1	1684.5	1701.2
37.5°	1502.6	1525.6	1571.6	1630.1	1651.0
40°	1435.8	1460.8	1513.1	1575.8	1600.9
42.5°	1368.9	1394.0	1452.5	1523.5	1548.6
45°	1293.6	1320.8	1387.7	1462.9	1490.1
47.5°	1218.4	1251.8	1325.0	1404.4	1433.7
50°	1141.1	1178.7	1258.1	1341.7	1375.2
52.5°	1072.1	1107.6	1191.2	1281.1	1312.5
55°	992.7	1032.4	1124.4	1216.3	1251.8
57.5°	911.2	955.1	1053.3	1153.6	1189.2
60°	831.8	879.8	988.5	1088.8	1128.5
62.5°	754.5	802.5	915.4	1019.9	1059.6
65°	670.9	727.3	844.3	950.9	988.5
67.5°	591.4	652.0	775.4	879.8	917.5
70°	514.1	572.6	704.3	806.7	844.3
72.5°	430.5	497.4	629.1	735.6	775.4
75°	346.9	426.3	555.9	660.4	698.0
77.5°	269.6	351.1	480.7	566.4	585.2
80°	198.5	282.1	395.0	455.6	478.6
82.5°	127.5	211.1	300.9	344.8	363.6
85°	71.1	140.0	196.5	221.5	229.9
87.5°	29.3	60.6	79.4	89.9	89.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)