

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: P314500

Luminaire Tested: **24FCZ2-70HE-UNV-L83050-S-CP125-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: P314500
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: 24FCZ2-70HE-UNV-L83050-S-CP125-W2A-U-3000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.125" 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: 6253.9 lumens
Efficiency: N/A
Efficacy: 108.6 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

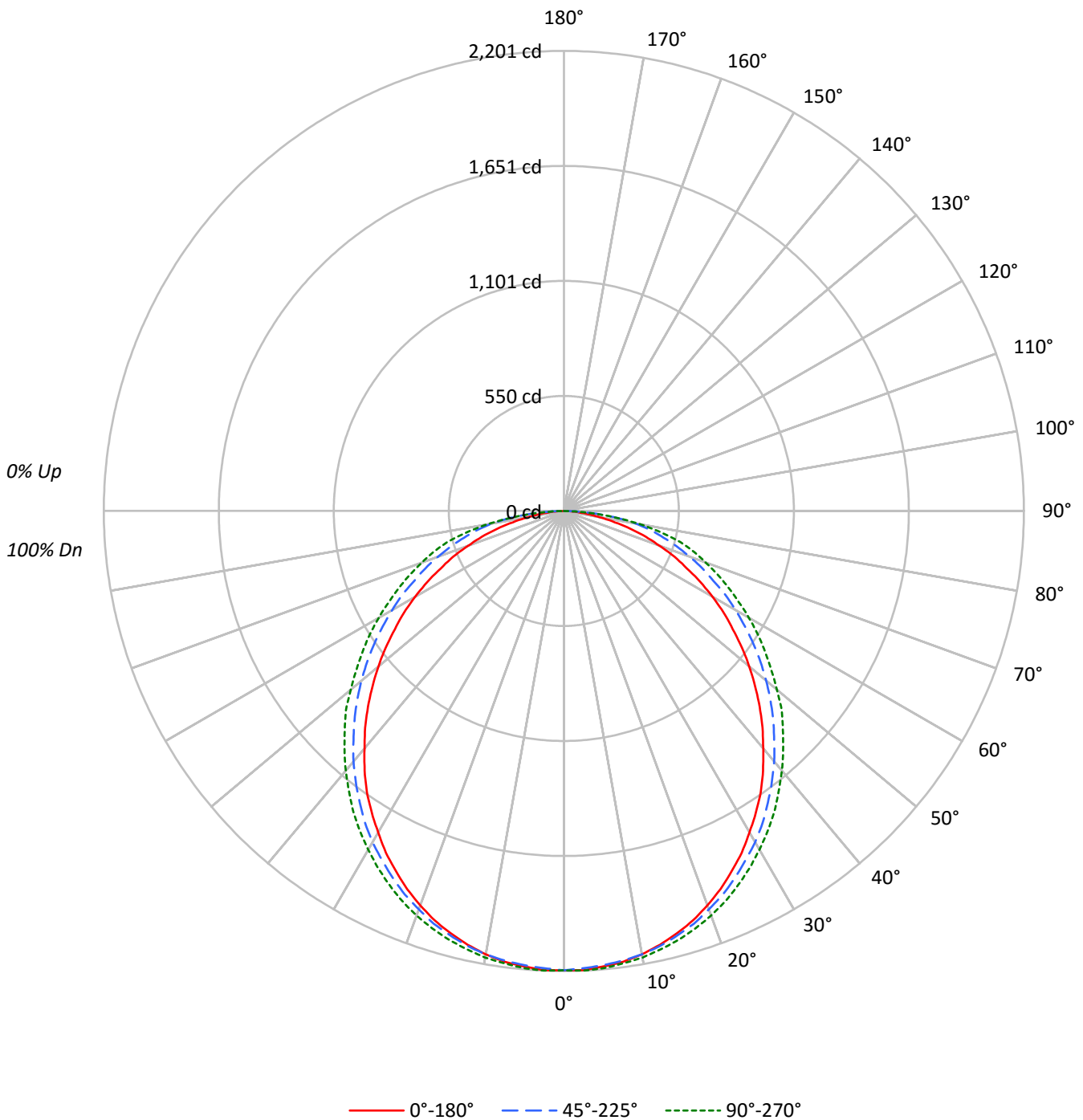
Input Watts (W): 57.6
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	99	95	106	101	97	93	97	93	90	93	90	88	89	87	85	83
2	98	90	83	77	96	88	81	76	84	79	74	81	76	72	78	74	71	69
3	89	79	70	64	87	77	69	63	74	67	62	71	66	61	69	64	60	58
4	82	70	61	54	80	68	60	54	66	59	53	63	57	52	61	56	51	49
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	42
6	70	56	47	40	68	55	47	40	53	46	40	52	45	40	50	44	39	37
7	64	51	42	36	63	50	42	36	48	41	35	47	40	35	46	39	35	33
8	60	46	38	32	58	46	37	32	44	37	32	43	36	31	42	36	31	29
9	56	43	34	29	55	42	34	29	41	34	28	40	33	28	39	33	28	26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2956	2956	2956
5°	2954	2946	2965
10°	2942	2942	2964
15°	2914	2928	2958
20°	2876	2904	2950
25°	2822	2875	2931
30°	2759	2843	2907
35°	2698	2796	2884
40°	2606	2749	2851
45°	2521	2695	2820
50°	2424	2645	2786
55°	2316	2596	2759
60°	2208	2555	2753
65°	2068	2511	2770
70°	1915	2524	2845
75°	1714	2571	3005
80°	1385	2724	2940
85°	1042	2391	2331



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	208.0	3.3
10°-20°	594.3	9.5
20°-30°	893.4	14.3
30°-40°	1064.2	17.0
40°-50°	1089.1	17.4
50°-60°	980.5	15.7
60°-70°	770.0	12.3
70°-80°	499.8	8.0
80°-90°	154.5	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°	1695.7	27.1
0°-40°	2759.9	44.1
0°-60°	4829.6	77.2
0°-90°	6253.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6253.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2197	2197	2197	2197	2197	
5°	2187	2191	2181	2193	2195	208
15°	2092	2098	2102	2120	2124	590
25°	1901	1917	1937	1969	1975	876
35°	1643	1663	1702	1744	1756	1025
45°	1325	1357	1416	1470	1482	1022
55°	987	1031	1106	1164	1176	885
65°	650	699	789	854	870	647
75°	330	393	495	562	578	349
85°	68	125	155	151	151	82
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2197.1	2197.1	2197.1	2197.1	2197.1
2.5°	2199.1	2199.1	2189.1	2199.1	2201.0
5°	2187.1	2191.1	2181.2	2193.1	2195.1
7.5°	2175.2	2175.2	2169.3	2181.2	2183.2
10°	2153.4	2155.4	2153.4	2167.3	2169.3
12.5°	2125.6	2129.5	2131.5	2145.4	2147.4
15°	2091.8	2097.7	2101.7	2119.6	2123.6
17.5°	2054.0	2060.0	2069.9	2089.8	2093.8
20°	2008.4	2016.3	2028.2	2054.0	2060.0
22.5°	1958.7	1966.6	1986.5	2010.3	2020.3
25°	1901.1	1917.0	1936.8	1968.6	1974.6
27.5°	1843.5	1857.4	1883.2	1917.0	1924.9
30°	1775.9	1797.8	1829.6	1863.3	1871.3
32.5°	1710.4	1732.2	1770.0	1805.7	1815.7
35°	1642.8	1662.7	1702.4	1744.1	1756.1
37.5°	1565.4	1591.2	1634.9	1676.6	1688.5
40°	1483.9	1515.7	1565.4	1609.1	1623.0
42.5°	1406.4	1440.2	1489.9	1537.6	1553.4
45°	1325.0	1356.8	1416.4	1470.0	1481.9
47.5°	1241.6	1277.3	1340.9	1394.5	1414.4
50°	1158.1	1195.9	1263.4	1319.0	1331.0
52.5°	1074.7	1114.4	1185.9	1245.5	1251.5
55°	987.3	1031.0	1106.5	1164.1	1176.0
57.5°	907.8	945.6	1027.0	1086.6	1100.5
60°	820.4	862.1	949.5	1005.2	1023.0
62.5°	737.0	780.7	872.1	927.7	943.6
65°	649.6	699.2	788.6	854.2	870.1
67.5°	574.1	621.8	717.1	780.7	796.6
70°	486.7	540.3	641.6	707.2	723.1
72.5°	411.2	466.8	568.1	631.7	655.5
75°	329.8	393.3	494.6	562.2	578.1
77.5°	250.3	323.8	427.1	478.7	478.7
80°	178.8	256.3	351.6	375.4	379.4
82.5°	117.2	192.7	260.2	258.2	258.2
85°	67.5	125.1	154.9	151.0	151.0
87.5°	25.8	51.6	55.6	55.6	53.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)