

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: P314120

Luminaire Tested: **24FCZ2-70HE-UNV-L83050-CA125-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: P314120
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-CA125-W2A-U-3000K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.125" ACRYLIC 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: 6070.0 lumens
Efficiency: N/A
Efficacy: 105.4 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

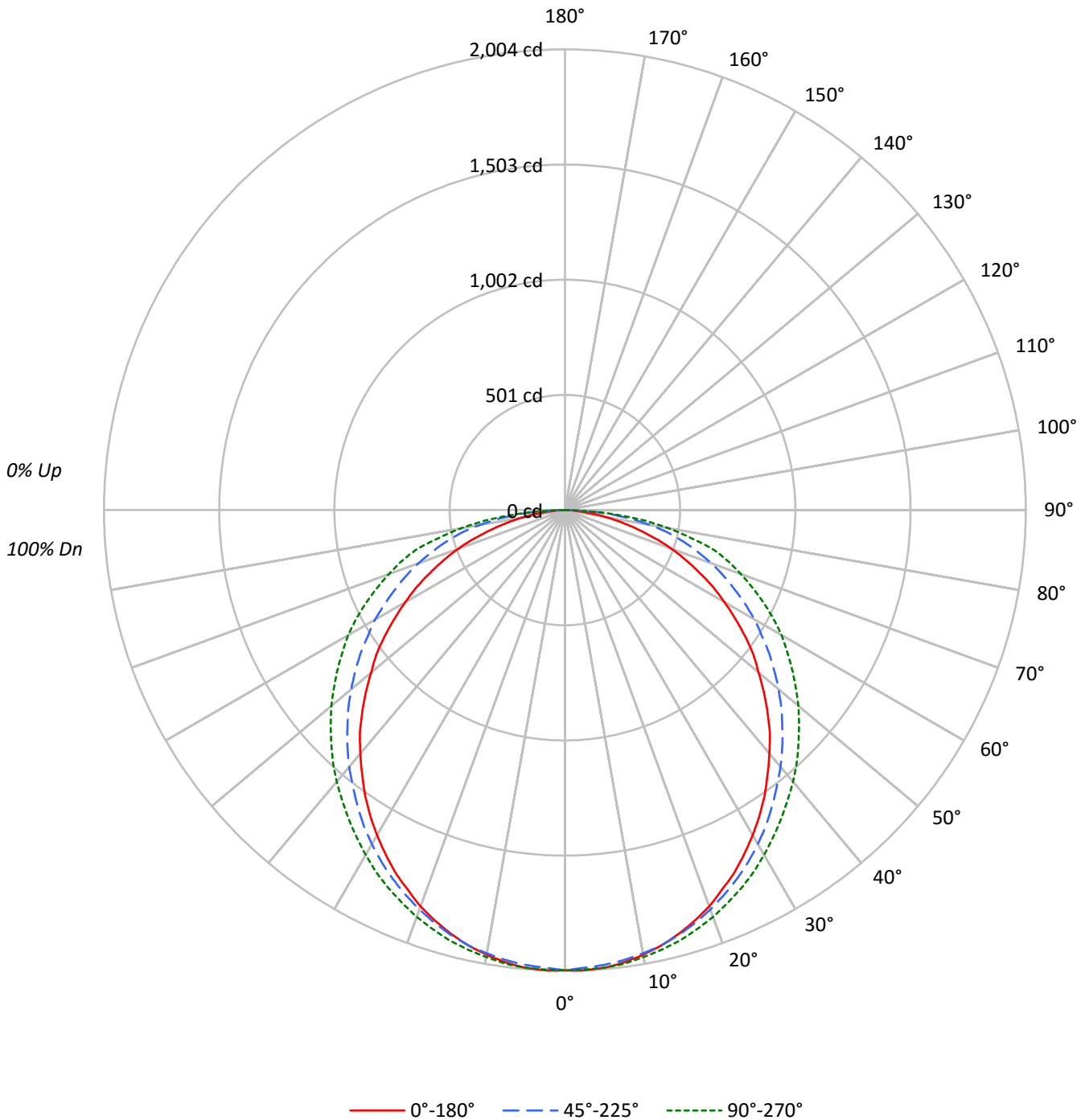
Input Watts (W): 57.6
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P314120

CATALOG NUMBER: 24FCZ2-70HE-UNV-L83050-CA125-W2A-U-3000K

Luminous Intensity Polar Plot





TEST NUMBER: P314120

CATALOG NUMBER: 24FCZ2-70HE-UNV-L83050-CA125-W2A-U-3000K

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°	2693	2693	2693
5°	2698	2682	2698
10°	2683	2674	2696
15°	2659	2665	2699
20°	2627	2647	2696
25°	2586	2628	2694
30°	2538	2606	2691
35°	2488	2580	2693
40°	2430	2561	2710
45°	2372	2544	2732
50°	2302	2538	2774
55°	2244	2542	2830
60°	2157	2563	2926
65°	2058	2590	3033
70°	1949	2670	3201
75°	1738	2785	3497
80°	1482	2949	3574
85°	1057	2922	3419



TEST NUMBER: P314120

CATALOG NUMBER: 24FCZ2-70HE-UNV-L83050-CA125-W2A-U-3000K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	189.4	3.1
10°-20°	541.7	8.9
20°-30°	818.2	13.5
30°-40°	986.1	16.2
40°-50°	1035.2	17.1
50°-60°	968.5	16.0
60°-70°	799.8	13.2
70°-80°	545.0	9.0
80°-90°	185.9	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°	1549.4	25.5
0°-40°	2535.5	41.8
0°-60°	4539.3	74.8
0°-90°	6070.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6070.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2002	2002	2002	2002	2002	
5°	1998	1996	1986	1998	1998	190
15°	1909	1911	1913	1933	1937	538
25°	1742	1750	1770	1804	1814	802
35°	1514	1531	1571	1623	1639	946
45°	1247	1273	1337	1410	1436	961
55°	957	995	1084	1172	1206	854
65°	646	701	814	916	953	641
75°	334	411	536	636	673	356
85°	68	135	189	214	222	86
90°	0	0	0	0	0	



TEST NUMBER: P314120

CATALOG NUMBER: 24FCZ2-70HE-UNV-L83050-CA125-W2A-U-3000K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2001.8	2001.8	2001.8	2001.8	2001.8
2.5°	2003.8	2001.8	1991.8	2001.8	1999.8
5°	1997.8	1995.8	1985.7	1997.8	1997.8
7.5°	1983.7	1983.7	1973.6	1987.7	1989.7
10°	1963.6	1963.6	1957.5	1973.6	1973.6
12.5°	1939.4	1939.4	1939.4	1955.5	1957.5
15°	1909.2	1911.2	1913.2	1933.4	1937.4
17.5°	1872.9	1877.0	1883.0	1907.2	1911.2
20°	1834.7	1838.7	1848.8	1877.0	1883.0
22.5°	1786.3	1796.4	1810.5	1842.7	1848.8
25°	1742.0	1750.1	1770.2	1804.5	1814.5
27.5°	1687.7	1699.7	1725.9	1762.2	1776.3
30°	1633.3	1645.4	1677.6	1719.9	1732.0
32.5°	1574.9	1593.0	1627.2	1671.6	1685.6
35°	1514.5	1530.6	1570.9	1623.2	1639.3
37.5°	1448.0	1470.2	1514.5	1570.9	1591.0
40°	1383.6	1407.7	1458.1	1518.5	1542.7
42.5°	1319.1	1343.3	1399.7	1468.1	1492.3
45°	1246.6	1272.8	1337.2	1409.7	1435.9
47.5°	1174.1	1206.3	1276.8	1353.4	1381.5
50°	1099.6	1135.8	1212.4	1292.9	1325.2
52.5°	1033.1	1067.4	1147.9	1234.5	1264.7
55°	956.6	994.9	1083.5	1172.1	1206.3
57.5°	878.1	920.4	1015.0	1111.7	1145.9
60°	801.5	847.9	952.6	1049.3	1087.5
62.5°	727.0	773.3	882.1	982.8	1021.1
65°	646.5	700.8	813.6	916.3	952.6
67.5°	569.9	628.3	747.2	847.9	884.1
70°	495.4	551.8	678.7	777.4	813.6
72.5°	414.9	479.3	606.2	708.9	747.2
75°	334.3	410.8	535.7	636.4	672.6
77.5°	259.8	338.3	463.2	545.8	563.9
80°	191.3	271.9	380.6	439.0	461.2
82.5°	122.8	203.4	290.0	332.3	350.4
85°	68.5	134.9	189.3	213.5	221.5
87.5°	28.2	58.4	76.5	86.6	86.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)