

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: P314402

Luminaire Tested: **24FCZ2-50-UNV-L83050-S-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: P314402
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: 24FCZ2-50-UNV-L83050-S-CP125-W2A-U-4000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.125" POLYCARB SHEET
Light Source: (168) 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: 4930.0 lumens
Efficiency: N/A
Efficacy: 112.8 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.27 / 1.35
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

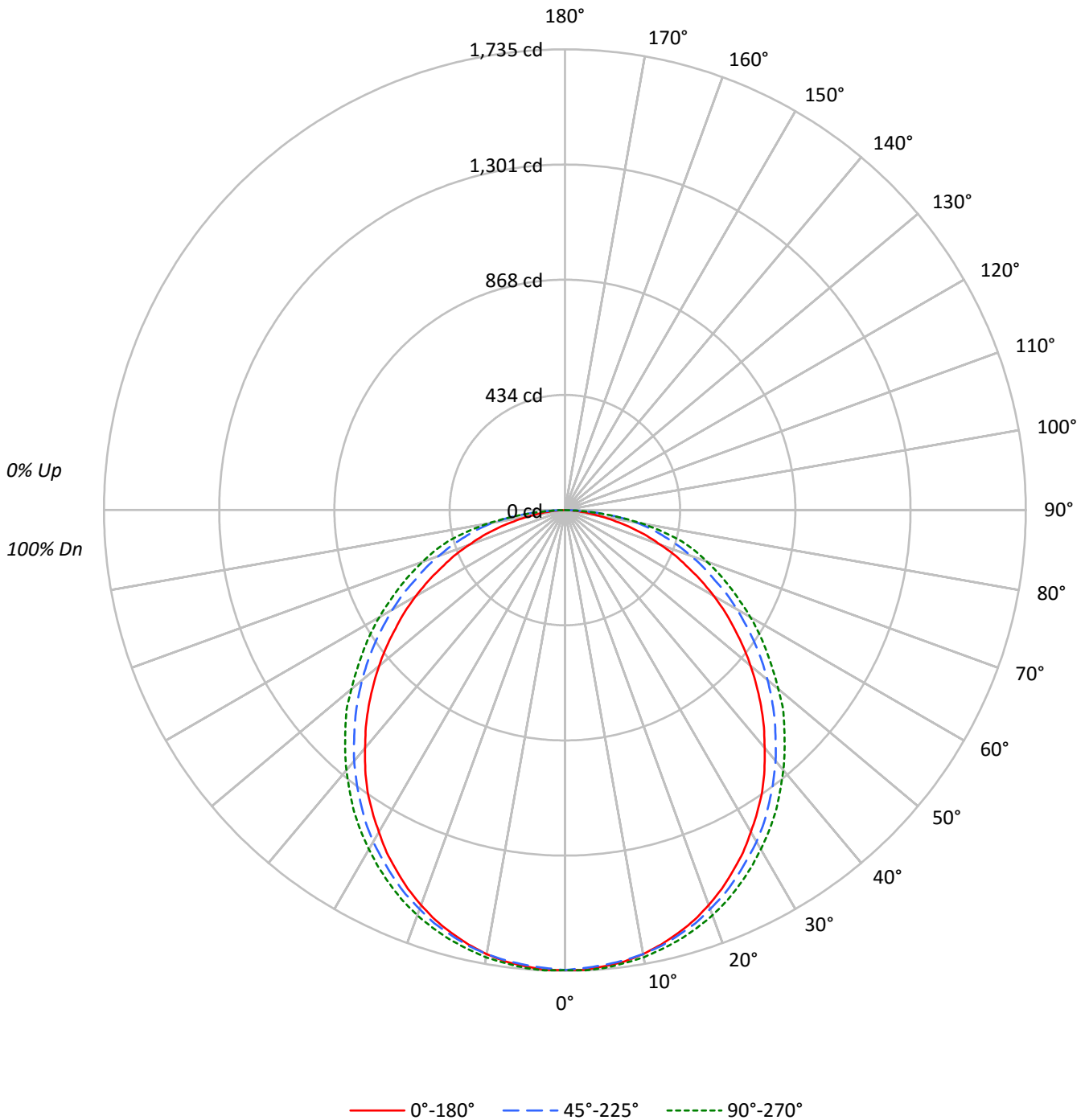
Input Watts (W): 43.7
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	2330	2330	2330
5°	2329	2322	2337
10°	2319	2319	2336
15°	2297	2308	2332
20°	2267	2289	2325
25°	2225	2267	2311
30°	2175	2241	2292
35°	2127	2204	2274
40°	2055	2167	2247
45°	1987	2124	2223
50°	1911	2085	2196
55°	1826	2046	2175
60°	1740	2014	2170
65°	1630	1979	2184
70°	1509	1990	2242
75°	1351	2027	2369
80°	1092	2148	2318
85°	821	1885	1837



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	164.0	3.3
10°-20°	468.5	9.5
20°-30°	704.3	14.3
30°-40°	838.9	17.0
40°-50°	858.6	17.4
50°-60°	773.0	15.7
60°-70°	607.0	12.3
70°-80°	394.0	8.0
80°-90°	121.8	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°	1336.7	27.1
0°-40°	2175.6	44.1
0°-60°	3807.2	77.2
0°-90°	4930.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4930.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1732	1732	1732	1732	1732	
5°	1724	1727	1719	1729	1730	164
15°	1649	1654	1657	1671	1674	465
25°	1499	1511	1527	1552	1557	690
35°	1295	1311	1342	1375	1384	808
45°	1044	1070	1116	1159	1168	805
55°	778	813	872	918	927	698
65°	512	551	622	673	686	510
75°	260	310	390	443	456	275
85°	53	99	122	119	119	64
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1731.9	1731.9	1731.9	1731.9	1731.9
2.5°	1733.5	1733.5	1725.7	1733.5	1735.1
5°	1724.1	1727.2	1719.4	1728.8	1730.4
7.5°	1714.7	1714.7	1710.0	1719.4	1721.0
10°	1697.5	1699.1	1697.5	1708.5	1710.0
12.5°	1675.6	1678.7	1680.3	1691.2	1692.8
15°	1648.9	1653.6	1656.8	1670.9	1674.0
17.5°	1619.2	1623.9	1631.7	1647.4	1650.5
20°	1583.2	1589.4	1598.8	1619.2	1623.9
22.5°	1544.0	1550.3	1566.0	1584.7	1592.6
25°	1498.6	1511.1	1526.8	1551.9	1556.6
27.5°	1453.2	1464.2	1484.5	1511.1	1517.4
30°	1400.0	1417.2	1442.2	1468.9	1475.1
32.5°	1348.3	1365.5	1395.3	1423.4	1431.3
35°	1295.0	1310.7	1342.0	1374.9	1384.3
37.5°	1234.0	1254.3	1288.8	1321.7	1331.1
40°	1169.8	1194.8	1234.0	1268.4	1279.4
42.5°	1108.7	1135.3	1174.5	1212.0	1224.6
45°	1044.5	1069.5	1116.5	1158.8	1168.2
47.5°	978.7	1006.9	1057.0	1099.3	1115.0
50°	912.9	942.7	995.9	1039.8	1049.2
52.5°	847.2	878.5	934.9	981.9	986.5
55°	778.3	812.7	872.2	917.6	927.0
57.5°	715.6	745.4	809.6	856.6	867.5
60°	646.7	679.6	748.5	792.4	806.5
62.5°	581.0	615.4	687.5	731.3	743.8
65°	512.1	551.2	621.7	673.4	685.9
67.5°	452.6	490.1	565.3	615.4	627.9
70°	383.7	425.9	505.8	557.5	570.0
72.5°	324.2	368.0	447.9	498.0	516.8
75°	259.9	310.1	389.9	443.2	455.7
77.5°	197.3	255.2	336.7	377.4	377.4
80°	140.9	202.0	277.2	296.0	299.1
82.5°	92.4	151.9	205.1	203.6	203.6
85°	53.2	98.7	122.1	119.0	119.0
87.5°	20.4	40.7	43.8	43.8	42.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)