

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: P314400

Luminaire Tested: **24FCZ2-50-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: P314400
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-3000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.125" POLYCARB SHEET
Light Source: (168) 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: 4437.0 lumens
Efficiency: N/A
Efficacy: 104.2 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

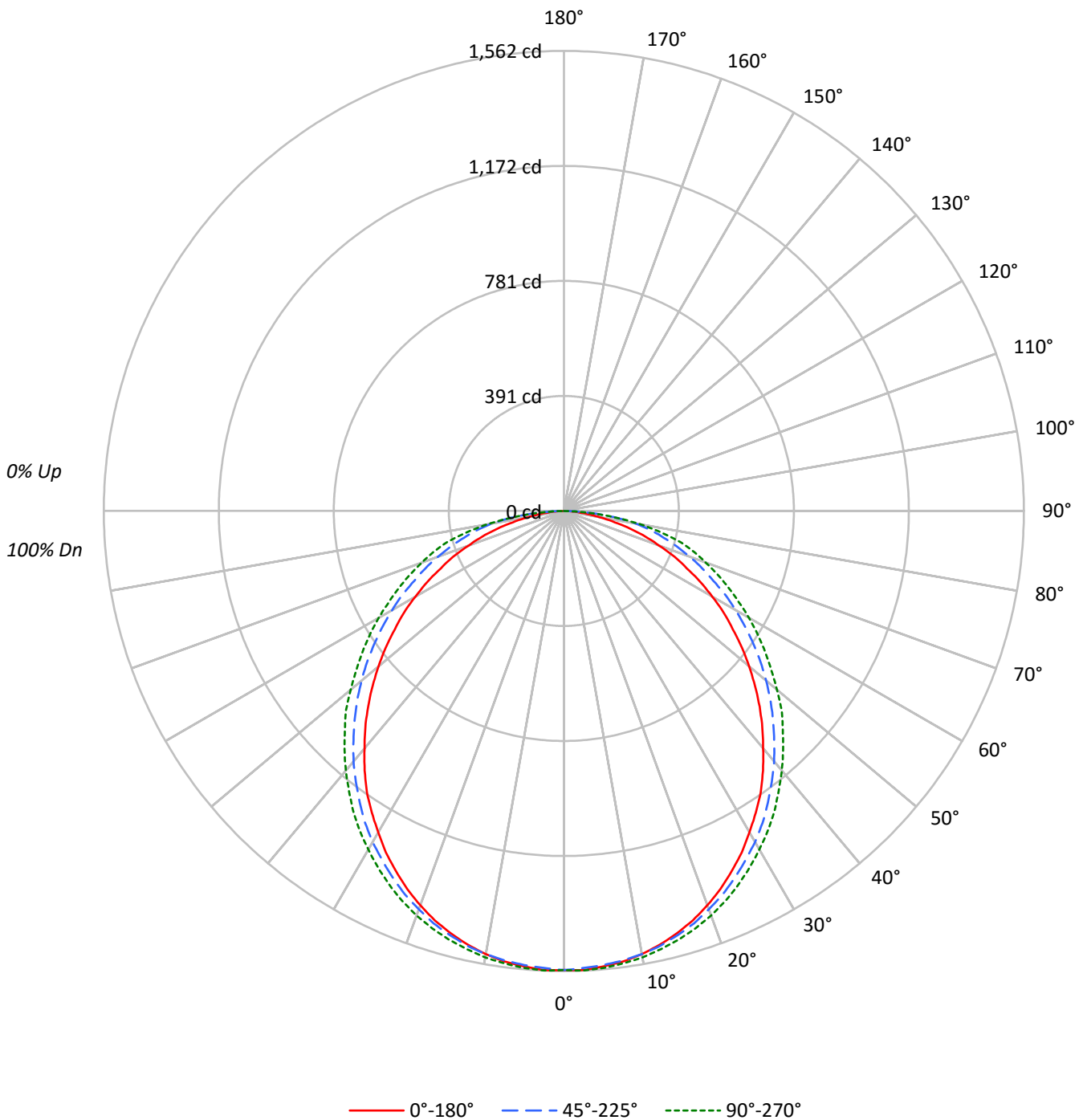
Input Watts (W): 42.6
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2097	2097	2097
5°	2096	2090	2103
10°	2087	2087	2103
15°	2067	2077	2099
20°	2040	2060	2093
25°	2002	2040	2080
30°	1958	2017	2063
35°	1914	1984	2046
40°	1849	1951	2022
45°	1789	1912	2001
50°	1720	1876	1977
55°	1643	1841	1957
60°	1566	1813	1953
65°	1467	1781	1965
70°	1358	1791	2018
75°	1216	1824	2132
80°	982	1933	2086
85°	739	1697	1653



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	147.6	3.3
10°-20°	421.7	9.5
20°-30°	633.8	14.3
30°-40°	755.0	17.0
40°-50°	772.7	17.4
50°-60°	695.7	15.7
60°-70°	546.3	12.3
70°-80°	354.6	8.0
80°-90°	109.7	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°	1203.1	27.1
0°-40°	1958.1	44.1
0°-60°	3426.5	77.2
0°-90°	4437.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4437.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1559	1559	1559	1559	1559	
5°	1552	1554	1548	1556	1557	147
15°	1484	1488	1491	1504	1507	418
25°	1349	1360	1374	1397	1401	621
35°	1166	1180	1208	1237	1246	727
45°	940	963	1005	1043	1051	725
55°	700	732	785	826	834	628
65°	461	496	560	606	617	459
75°	234	279	351	399	410	248
85°	48	89	110	107	107	58
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1558.7	1558.7	1558.7	1558.7	1558.7
2.5°	1560.2	1560.2	1553.1	1560.2	1561.6
5°	1551.7	1554.5	1547.5	1555.9	1557.3
7.5°	1543.2	1543.2	1539.0	1547.5	1548.9
10°	1527.7	1529.2	1527.7	1537.6	1539.0
12.5°	1508.0	1510.8	1512.2	1522.1	1523.5
15°	1484.1	1488.3	1491.1	1503.8	1506.6
17.5°	1457.3	1461.5	1468.5	1482.6	1485.5
20°	1424.9	1430.5	1439.0	1457.3	1461.5
22.5°	1389.6	1395.3	1409.4	1426.3	1433.3
25°	1348.8	1360.0	1374.1	1396.7	1400.9
27.5°	1307.9	1317.7	1336.1	1360.0	1365.7
30°	1260.0	1275.5	1298.0	1322.0	1327.6
32.5°	1213.5	1229.0	1255.7	1281.1	1288.2
35°	1165.5	1179.6	1207.8	1237.4	1245.9
37.5°	1110.6	1128.9	1159.9	1189.5	1198.0
40°	1052.8	1075.3	1110.6	1141.6	1151.4
42.5°	997.8	1021.8	1057.0	1090.8	1102.1
45°	940.0	962.6	1004.9	1042.9	1051.4
47.5°	880.8	906.2	951.3	989.4	1003.5
50°	821.7	848.4	896.4	935.8	944.3
52.5°	762.5	790.6	841.4	883.7	887.9
55°	700.4	731.5	785.0	825.9	834.3
57.5°	644.1	670.9	728.6	770.9	780.8
60°	582.1	611.7	673.7	713.1	725.8
62.5°	522.9	553.9	618.7	658.2	669.4
65°	460.9	496.1	559.5	606.0	617.3
67.5°	407.3	441.1	508.8	553.9	565.2
70°	345.3	383.3	455.2	501.7	513.0
72.5°	291.7	331.2	403.1	448.2	465.1
75°	234.0	279.1	350.9	398.8	410.1
77.5°	177.6	229.7	303.0	339.7	339.7
80°	126.8	181.8	249.5	266.4	269.2
82.5°	83.2	136.7	184.6	183.2	183.2
85°	47.9	88.8	109.9	107.1	107.1
87.5°	18.3	36.6	39.5	39.5	38.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)