

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: P311551

Luminaire Tested: **24FCZ2-50HE-UNV-L82765-S-CP125-W2A-U-6500K**

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: P311551
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: 24FCZ2-50HE-UNV-L82765-S-CP125-W2A-U-6500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.125" POLYCARB SHEET
Light Source: (336) 6500K 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

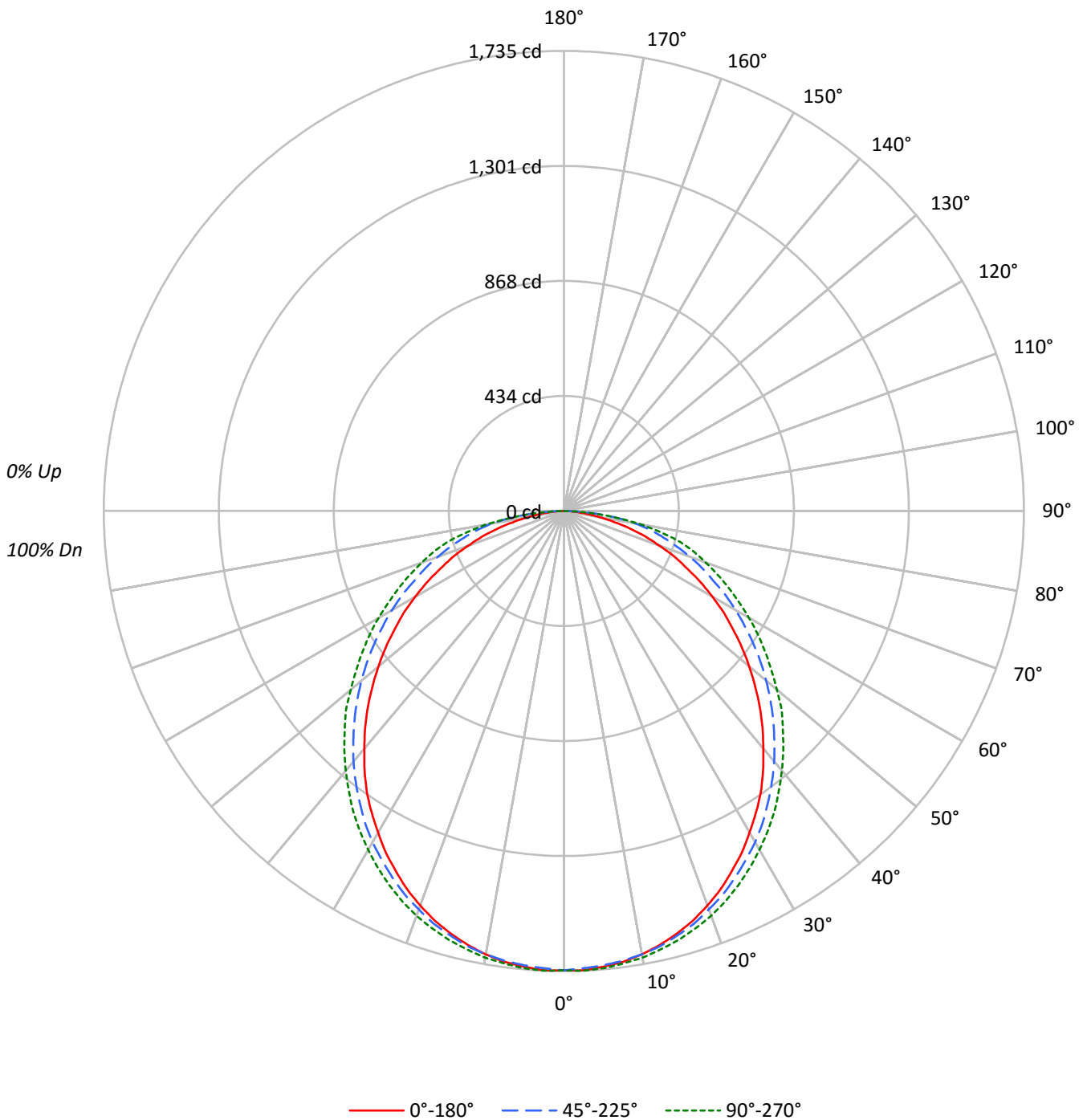
Lumens per Lamp: N/A
Luminaire Lumens: 4931.0 lumens
Efficiency: N/A
Efficacy: 123.0 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 40.1
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°	2331	2331	2331
5°	2329	2323	2338
10°	2320	2320	2337
15°	2297	2308	2332
20°	2267	2290	2326
25°	2225	2267	2311
30°	2175	2241	2292
35°	2128	2205	2274
40°	2055	2168	2248
45°	1988	2125	2223
50°	1911	2085	2197
55°	1826	2046	2175
60°	1741	2015	2171
65°	1631	1980	2184
70°	1509	1990	2243
75°	1352	2027	2370
80°	1093	2148	2318
85°	823	1886	1837



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	164.0	3.3
10°-20°	468.6	9.5
20°-30°	704.4	14.3
30°-40°	839.1	17.0
40°-50°	858.7	17.4
50°-60°	773.1	15.7
60°-70°	607.1	12.3
70°-80°	394.1	8.0
80°-90°	121.9	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°	1337.0	27.1
0°-40°	2176.1	44.1
0°-60°	3807.9	77.2
0°-90°	4931.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4931.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1732	1732	1732	1732	1732	
5°	1724	1728	1720	1729	1731	164
15°	1649	1654	1657	1671	1674	465
25°	1499	1511	1527	1552	1557	690
35°	1295	1311	1342	1375	1385	808
45°	1045	1070	1117	1159	1168	805
55°	778	813	872	918	927	698
65°	512	551	622	674	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°	1732.3	1732.3	1732.3	1732.3	1732.3
2.5°	1733.9	1733.9	1726.0	1733.9	1735.4
5°	1724.5	1727.6	1719.8	1729.2	1730.7
7.5°	1715.1	1715.1	1710.4	1719.8	1721.3
10°	1697.8	1699.4	1697.8	1708.8	1710.4
12.5°	1675.9	1679.0	1680.6	1691.6	1693.1
15°	1649.3	1654.0	1657.1	1671.2	1674.3
17.5°	1619.5	1624.2	1632.1	1647.7	1650.8
20°	1583.5	1589.8	1599.2	1619.5	1624.2
22.5°	1544.3	1550.6	1566.3	1585.1	1592.9
25°	1498.9	1511.4	1527.1	1552.2	1556.9
27.5°	1453.5	1464.5	1484.8	1511.4	1517.7
30°	1400.2	1417.5	1442.5	1469.2	1475.4
32.5°	1348.6	1365.8	1395.5	1423.7	1431.6
35°	1295.3	1311.0	1342.3	1375.2	1384.6
37.5°	1234.2	1254.6	1289.0	1321.9	1331.3
40°	1170.0	1195.1	1234.2	1268.7	1279.6
42.5°	1108.9	1135.5	1174.7	1212.3	1224.8
45°	1044.7	1069.8	1116.7	1159.0	1168.4
47.5°	978.9	1007.1	1057.2	1099.5	1115.2
50°	913.1	942.9	996.1	1040.0	1049.4
52.5°	847.4	878.7	935.1	982.1	986.7
55°	778.4	812.9	872.4	917.8	927.2
57.5°	715.8	745.5	809.8	856.7	867.7
60°	646.9	679.8	748.7	792.5	806.6
62.5°	581.1	615.5	687.6	731.4	744.0
65°	512.2	551.3	621.8	673.5	686.0
67.5°	452.7	490.2	565.4	615.5	628.1
70°	383.7	426.0	505.9	557.6	570.1
72.5°	324.2	368.1	448.0	498.1	516.9
75°	260.0	310.1	390.0	443.3	455.8
77.5°	197.3	255.3	336.7	377.5	377.5
80°	141.0	202.0	277.2	296.0	299.2
82.5°	92.4	151.9	205.2	203.6	203.6
85°	53.3	98.7	122.2	119.0	119.0
87.5°	20.4	40.7	43.9	43.9	42.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)