

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: P311591

Luminaire Tested: **24FCZ2-50-UNV-L82765-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: P311591
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-L82765-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: 4686.0 lumens
Efficiency: N/A
Efficacy: 108.5 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

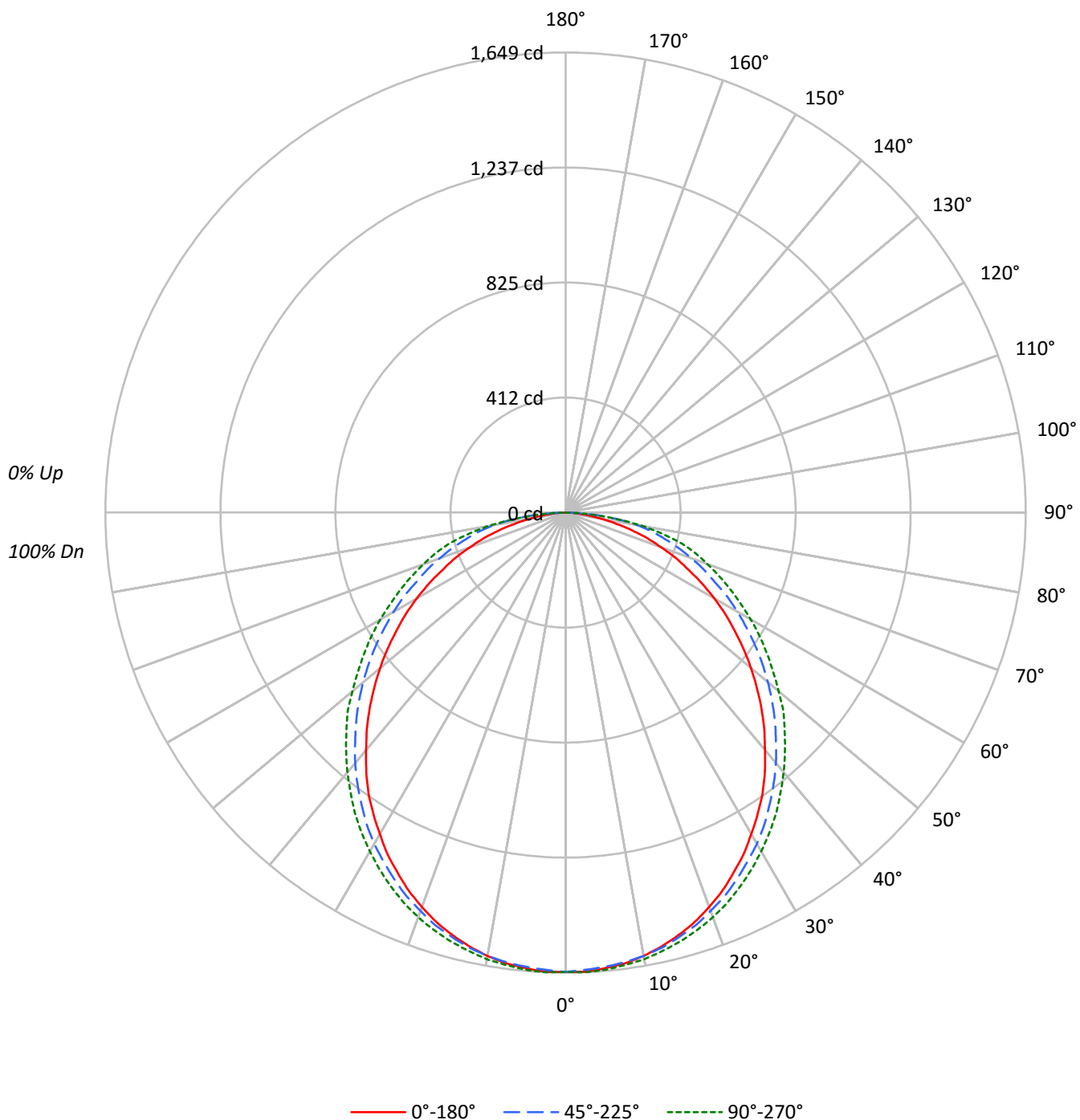
Input Watts (W): 43.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				0
RW	70	50	30	10	70	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		100
1	108	103	99	95	106	101	97	93	97	93	90		93	90	88		83
2	98	90	83	77	96	88	81	76	84	79	74		81	76	72		69
3	89	79	70	64	87	77	69	63	74	67	62		71	66	61		58
4	82	70	61	54	80	68	60	54	66	59	53		63	57	52		49
5	75	62	53	46	73	61	53	46	59	51	46		57	50	45		42
6	70	56	47	40	68	55	47	40	53	46	40		52	45	40		37
7	64	51	42	36	63	50	42	36	48	41	35		47	40	35		33
8	60	46	38	32	58	46	37	32	44	37	32		43	36	31		29
9	56	43	34	29	55	42	34	29	41	34	28		40	33	28		26
10	53	39	31	26	51	39	31	26	38	31	26		37	30	26		24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2215	2215	2215
5°	2213	2207	2221
10°	2204	2204	2221
15°	2183	2194	2216
20°	2155	2176	2210
25°	2115	2154	2196
30°	2067	2130	2178
35°	2022	2095	2161
40°	1953	2060	2136
45°	1889	2019	2113
50°	1816	1982	2088
55°	1735	1945	2067
60°	1654	1915	2063
65°	1550	1881	2075
70°	1435	1891	2131
75°	1285	1927	2252
80°	1038	2042	2203
85°	781	1792	1746



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	155.8	3.3
10°-20°	445.3	9.5
20°-30°	669.4	14.3
30°-40°	797.4	17.0
40°-50°	816.1	17.4
50°-60°	734.7	15.7
60°-70°	577.0	12.3
70°-80°	374.5	8.0
80°-90°	115.8	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°	1270.6	27.1
0°-40°	2067.9	44.1
0°-60°	3618.7	77.2
0°-90°	4686.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4686.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1646	1646	1646	1646	1646	
5°	1639	1642	1634	1643	1645	156
15°	1567	1572	1575	1588	1591	442
25°	1424	1436	1451	1475	1480	656
35°	1231	1246	1276	1307	1316	768
45°	993	1017	1061	1102	1110	765
55°	740	772	829	872	881	663
65°	487	524	591	640	652	485
75°	247	295	371	421	433	261
85°	51	94	116	113	113	61
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1646.2	1646.2	1646.2	1646.2	1646.2
2.5°	1647.7	1647.7	1640.3	1647.7	1649.2
5°	1638.8	1641.8	1634.3	1643.2	1644.7
7.5°	1629.8	1629.8	1625.4	1634.3	1635.8
10°	1613.5	1615.0	1613.5	1623.9	1625.4
12.5°	1592.6	1595.6	1597.1	1607.5	1609.0
15°	1567.3	1571.8	1574.8	1588.2	1591.1
17.5°	1539.1	1543.5	1551.0	1565.8	1568.8
20°	1504.8	1510.8	1519.7	1539.1	1543.5
22.5°	1467.6	1473.6	1488.4	1506.3	1513.8
25°	1424.4	1436.4	1451.2	1475.1	1479.5
27.5°	1381.3	1391.7	1411.0	1436.4	1442.3
30°	1330.7	1347.0	1370.9	1396.2	1402.1
32.5°	1281.6	1297.9	1326.2	1353.0	1360.4
35°	1230.9	1245.8	1275.6	1306.9	1315.8
37.5°	1172.9	1192.2	1225.0	1256.2	1265.2
40°	1111.9	1135.7	1172.9	1205.6	1216.1
42.5°	1053.8	1079.1	1116.3	1152.1	1164.0
45°	992.8	1016.6	1061.3	1101.5	1110.4
47.5°	930.3	957.1	1004.7	1044.9	1059.8
50°	867.8	896.0	946.7	988.3	997.3
52.5°	805.2	835.0	888.6	933.3	937.7
55°	739.8	772.5	829.1	872.2	881.2
57.5°	680.2	708.5	769.5	814.2	824.6
60°	614.7	646.0	711.5	753.2	766.6
62.5°	552.2	585.0	653.4	695.1	707.0
65°	486.7	523.9	590.9	640.0	651.9
67.5°	430.2	465.9	537.3	585.0	596.9
70°	364.7	404.9	480.8	529.9	541.8
72.5°	308.1	349.8	425.7	473.3	491.2
75°	247.1	294.7	370.6	421.2	433.1
77.5°	187.5	242.6	320.0	358.7	358.7
80°	134.0	192.0	263.5	281.3	284.3
82.5°	87.8	144.4	195.0	193.5	193.5
85°	50.6	93.8	116.1	113.1	113.1
87.5°	19.3	38.7	41.7	41.7	40.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)