

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: P311611

Luminaire Tested: **24FCZ2-50-UNV-L82765-S-CP250-W2A-U-5000K**

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: P311611
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-CP250-W2A-U-5000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.250" POLYCARB SHEET
Light Source: (168) 5000K 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: 4592.0 lumens
Efficiency: N/A
Efficacy: 105.1 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

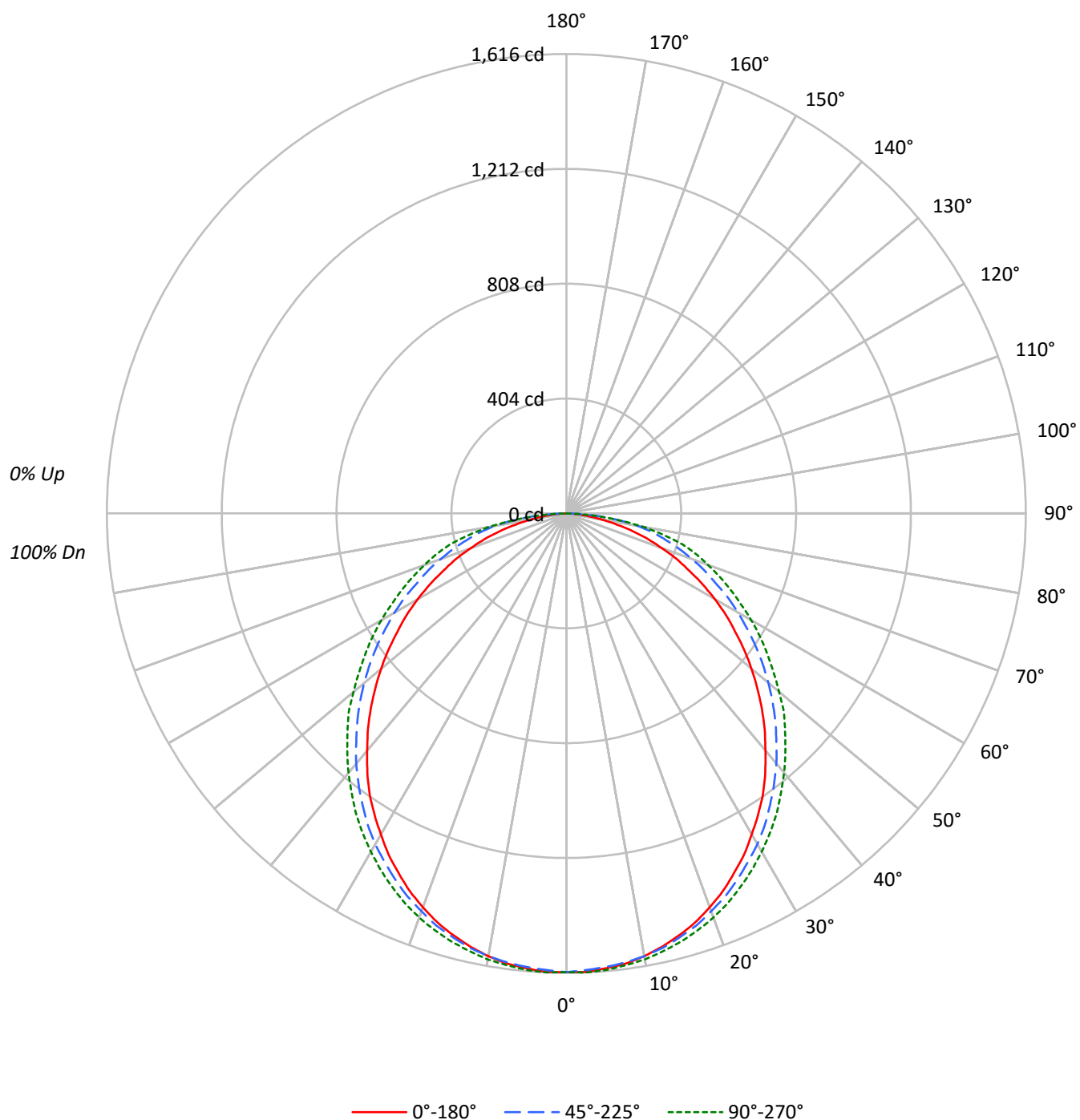
Input Watts (W): 43.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2171	2171	2171
5°	2169	2163	2177
10°	2160	2160	2176
15°	2139	2150	2172
20°	2111	2132	2166
25°	2072	2111	2152
30°	2026	2087	2135
35°	1981	2053	2118
40°	1914	2019	2093
45°	1851	1979	2070
50°	1780	1942	2046
55°	1700	1906	2026
60°	1621	1876	2021
65°	1519	1844	2034
70°	1406	1853	2089
75°	1259	1888	2206
80°	1017	2001	2159
85°	766	1757	1712



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	152.7	3.3
10°-20°	436.4	9.5
20°-30°	656.0	14.3
30°-40°	781.4	17.0
40°-50°	799.7	17.4
50°-60°	720.0	15.7
60°-70°	565.4	12.3
70°-80°	367.0	8.0
80°-90°	113.5	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°	1245.1	27.1
0°-40°	2026.5	44.1
0°-60°	3546.1	77.2
0°-90°	4592.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4592.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1613	1613	1613	1613	1613	
5°	1606	1609	1602	1610	1612	153
15°	1536	1540	1543	1556	1559	433
25°	1396	1408	1422	1446	1450	643
35°	1206	1221	1250	1281	1289	753
45°	973	996	1040	1079	1088	750
55°	725	757	812	855	864	650
65°	477	513	579	627	639	475
75°	242	289	363	413	424	256
85°	50	92	114	111	111	60
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1613.2	1613.2	1613.2	1613.2	1613.2
2.5°	1614.7	1614.7	1607.4	1614.7	1616.1
5°	1605.9	1608.8	1601.5	1610.3	1611.7
7.5°	1597.2	1597.2	1592.8	1601.5	1603.0
10°	1581.1	1582.6	1581.1	1591.3	1592.8
12.5°	1560.7	1563.6	1565.1	1575.3	1576.7
15°	1535.9	1540.3	1543.2	1556.3	1559.2
17.5°	1508.2	1512.6	1519.8	1534.4	1537.4
20°	1474.6	1480.5	1489.2	1508.2	1512.6
22.5°	1438.2	1444.0	1458.6	1476.1	1483.4
25°	1395.9	1407.5	1422.1	1445.5	1449.8
27.5°	1353.6	1363.8	1382.7	1407.5	1413.4
30°	1304.0	1320.0	1343.4	1368.2	1374.0
32.5°	1255.8	1271.9	1299.6	1325.9	1333.2
35°	1206.3	1220.8	1250.0	1280.6	1289.4
37.5°	1149.4	1168.3	1200.4	1231.0	1239.8
40°	1089.6	1112.9	1149.4	1181.5	1191.7
42.5°	1032.7	1057.5	1093.9	1128.9	1140.6
45°	972.9	996.2	1040.0	1079.4	1088.1
47.5°	911.6	937.9	984.5	1023.9	1038.5
50°	850.4	878.1	927.7	968.5	977.3
52.5°	789.1	818.3	870.8	914.5	918.9
55°	724.9	757.0	812.4	854.7	863.5
57.5°	666.6	694.3	754.1	797.8	808.1
60°	602.4	633.0	697.2	738.0	751.2
62.5°	541.1	573.2	640.3	681.2	692.8
65°	477.0	513.4	579.1	627.2	638.9
67.5°	421.5	456.5	526.6	573.2	584.9
70°	357.4	396.7	471.1	519.3	530.9
72.5°	301.9	342.8	417.2	463.8	481.3
75°	242.1	288.8	363.2	412.8	424.4
77.5°	183.8	237.8	313.6	351.5	351.5
80°	131.3	188.2	258.2	275.7	278.6
82.5°	86.1	141.5	191.1	189.6	189.6
85°	49.6	91.9	113.8	110.9	110.9
87.5°	19.0	37.9	40.8	40.8	39.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)