

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: P310937

Luminaire Tested: **24FCZ2-50-UNV-L82765-CP250-W2A-U-5500K**

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: P310937
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-15)
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-CP250-W2A-U-5500K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.250" POLYCARB SHEET
Light Source: (168) 5500K 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: 4413.0 lumens
Efficiency: N/A
Efficacy: 100.5 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.29 / 1.38
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

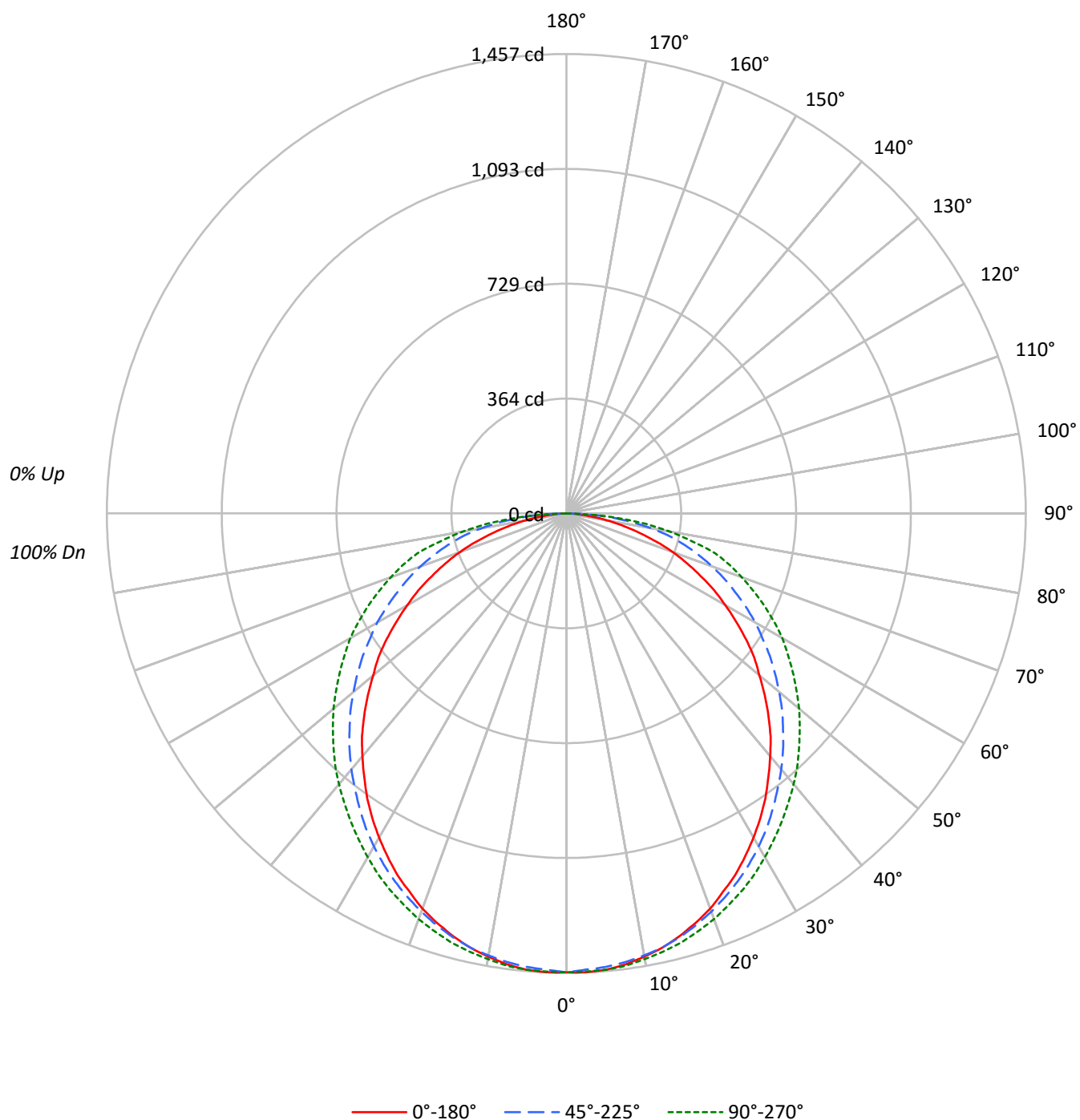
Input Watts (W): 43.9
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	98	94	105	100	96	92	96	92	89		92	89	87		82
2	98	89	81	75	95	87	80	74	83	78	73		80	75	71		67
3	89	77	69	62	86	76	68	61	73	66	60		70	64	59		56
4	81	68	59	52	79	67	58	52	64	57	51		62	56	50		47
5	74	61	52	45	72	60	51	44	58	50	44		56	49	43		41
6	69	55	46	39	67	54	45	39	52	44	38		50	43	38		36
7	64	50	41	34	62	49	40	34	47	39	34		46	39	34		31
8	59	45	37	31	57	45	36	30	43	36	30		42	35	30		28
9	55	41	33	27	54	41	33	27	40	32	27		39	32	27		25
10	52	38	30	25	50	38	30	25	37	30	25		36	29	25		23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1958	1958	1958
5°	1962	1950	1962
10°	1950	1944	1960
15°	1933	1937	1962
20°	1910	1925	1960
25°	1880	1911	1958
30°	1845	1895	1956
35°	1808	1876	1958
40°	1767	1862	1970
45°	1725	1850	1986
50°	1673	1845	2017
55°	1631	1848	2057
60°	1568	1864	2127
65°	1496	1883	2205
70°	1417	1941	2327
75°	1263	2025	2542
80°	1078	2144	2598
85°	769	2124	2487



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	137.7	3.1
10°-20°	393.8	8.9
20°-30°	594.8	13.5
30°-40°	716.9	16.2
40°-50°	752.6	17.1
50°-60°	704.1	16.0
60°-70°	581.5	13.2
70°-80°	396.3	9.0
80°-90°	135.1	3.1
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°	1126.4	25.5
0°-40°	1843.3	41.8
0°-60°	3300.1	74.8
0°-90°	4413.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4413.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1455	1455	1455	1455	1455	
5°	1452	1451	1444	1452	1452	138
15°	1388	1390	1391	1406	1408	391
25°	1266	1272	1287	1312	1319	583
35°	1101	1113	1142	1180	1192	688
45°	906	925	972	1025	1044	699
55°	696	723	788	852	877	621
65°	470	510	592	666	692	466
75°	243	299	390	463	489	259
85°	50	98	138	155	161	62
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1455.4	1455.4	1455.4	1455.4	1455.4
2.5°	1456.8	1455.4	1448.0	1455.4	1453.9
5°	1452.4	1451.0	1443.7	1452.4	1452.4
7.5°	1442.2	1442.2	1434.9	1445.1	1446.6
10°	1427.6	1427.6	1423.2	1434.9	1434.9
12.5°	1410.0	1410.0	1410.0	1421.7	1423.2
15°	1388.0	1389.5	1390.9	1405.6	1408.5
17.5°	1361.7	1364.6	1369.0	1386.6	1389.5
20°	1333.8	1336.8	1344.1	1364.6	1369.0
22.5°	1298.7	1306.0	1316.3	1339.7	1344.1
25°	1266.5	1272.3	1287.0	1311.9	1319.2
27.5°	1227.0	1235.7	1254.8	1281.1	1291.4
30°	1187.4	1196.2	1219.6	1250.4	1259.2
32.5°	1145.0	1158.1	1183.0	1215.2	1225.5
35°	1101.0	1112.8	1142.0	1180.1	1191.8
37.5°	1052.7	1068.8	1101.0	1142.0	1156.7
40°	1005.9	1023.4	1060.0	1104.0	1121.5
42.5°	959.0	976.6	1017.6	1067.4	1084.9
45°	906.3	925.3	972.2	1024.9	1043.9
47.5°	853.6	877.0	928.3	983.9	1004.4
50°	799.4	825.8	881.4	940.0	963.4
52.5°	751.1	776.0	834.6	897.5	919.5
55°	695.5	723.3	787.7	852.1	877.0
57.5°	638.4	669.1	737.9	808.2	833.1
60°	582.7	616.4	692.5	762.8	790.6
62.5°	528.6	562.2	641.3	714.5	742.3
65°	470.0	509.5	591.5	666.2	692.5
67.5°	414.4	456.8	543.2	616.4	642.8
70°	360.2	401.2	493.4	565.2	591.5
72.5°	301.6	348.5	440.7	515.4	543.2
75°	243.0	298.7	389.5	462.7	489.0
77.5°	188.9	246.0	336.8	396.8	410.0
80°	139.1	197.7	276.7	319.2	335.3
82.5°	89.3	147.9	210.8	241.6	254.8
85°	49.8	98.1	137.6	155.2	161.1
87.5°	20.5	42.5	55.6	63.0	63.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)