

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: P310893

Luminaire Tested: **24FCZ2-50HE-UNV-L82765-CP250-W2A-U-5700K**

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: P310893
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: 24FCZ2-50HE-UNV-L82765-CP250-W2A-U-5700K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.250" POLYCARB SHEET
Light Source: (336) 5700K 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: 4446.0 lumens
Efficiency: N/A
Efficacy: 112.6 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

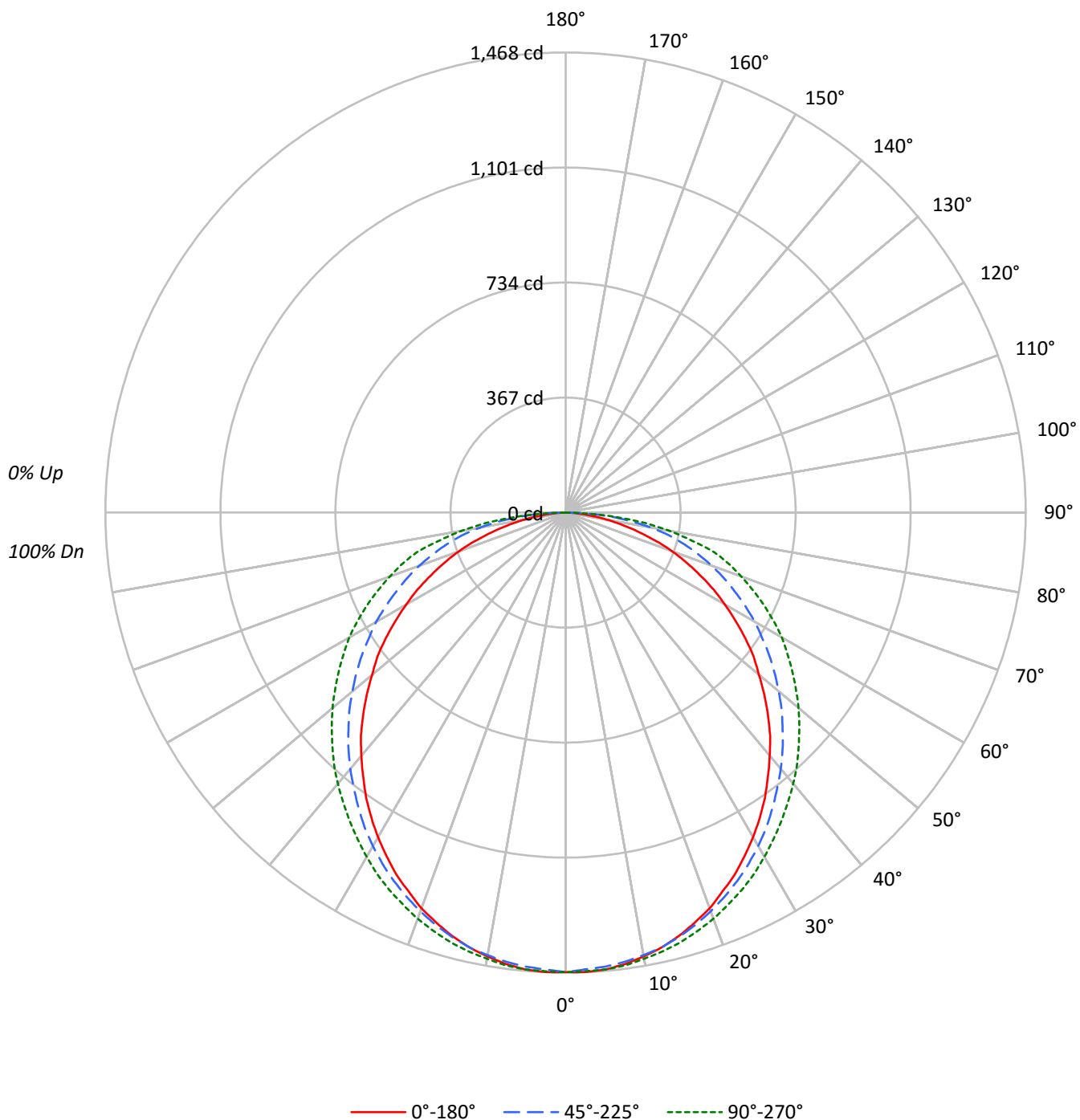
Input Watts (W): 39.5
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1973	1973	1973
5°	1976	1964	1976
10°	1965	1959	1975
15°	1948	1952	1977
20°	1924	1939	1975
25°	1894	1925	1973
30°	1859	1909	1971
35°	1822	1890	1972
40°	1780	1876	1985
45°	1737	1864	2001
50°	1686	1859	2032
55°	1644	1862	2073
60°	1580	1877	2144
65°	1507	1897	2221
70°	1428	1956	2344
75°	1273	2040	2561
80°	1086	2160	2617
85°	775	2141	2506



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	138.8	3.1
10°-20°	396.8	8.9
20°-30°	599.3	13.5
30°-40°	722.3	16.2
40°-50°	758.3	17.1
50°-60°	709.4	16.0
60°-70°	585.8	13.2
70°-80°	399.2	9.0
80°-90°	136.2	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°	1134.8	25.5
0°-40°	1857.1	41.8
0°-60°	3324.8	74.8
0°-90°	4446.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4446.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1466	1466	1466	1466	1466	
5°	1463	1462	1454	1463	1463	139
15°	1398	1400	1401	1416	1419	394
25°	1276	1282	1297	1322	1329	587
35°	1109	1121	1151	1189	1201	693
45°	913	932	980	1033	1052	704
55°	701	729	794	858	884	625
65°	474	513	596	671	698	470
75°	245	301	392	466	493	261
85°	50	99	139	156	162	63
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1466.3	1466.3	1466.3	1466.3	1466.3
2.5°	1467.7	1466.3	1458.9	1466.3	1464.8
5°	1463.3	1461.8	1454.5	1463.3	1463.3
7.5°	1453.0	1453.0	1445.6	1455.9	1457.4
10°	1438.2	1438.2	1433.8	1445.6	1445.6
12.5°	1420.5	1420.5	1420.5	1432.3	1433.8
15°	1398.4	1399.9	1401.3	1416.1	1419.0
17.5°	1371.8	1374.8	1379.2	1396.9	1399.9
20°	1343.8	1346.8	1354.1	1374.8	1379.2
22.5°	1308.4	1315.8	1326.1	1349.7	1354.1
25°	1276.0	1281.9	1296.6	1321.7	1329.1
27.5°	1236.1	1245.0	1264.2	1290.7	1301.0
30°	1196.3	1205.2	1228.8	1259.7	1268.6
32.5°	1153.5	1166.8	1191.9	1224.3	1234.7
35°	1109.3	1121.1	1150.6	1188.9	1200.7
37.5°	1060.6	1076.8	1109.3	1150.6	1165.3
40°	1013.4	1031.1	1068.0	1112.2	1129.9
42.5°	966.2	983.9	1025.2	1075.3	1093.1
45°	913.1	932.3	979.5	1032.6	1051.7
47.5°	860.0	883.6	935.2	991.3	1011.9
50°	805.4	832.0	888.0	947.0	970.6
52.5°	756.7	781.8	840.8	904.2	926.4
55°	700.7	728.7	793.6	858.5	883.6
57.5°	643.1	674.1	743.5	814.3	839.3
60°	587.1	621.0	697.7	768.5	796.6
62.5°	532.5	566.4	646.1	719.9	747.9
65°	473.5	513.3	595.9	671.2	697.7
67.5°	417.5	460.2	547.3	621.0	647.6
70°	362.9	404.2	497.1	569.4	595.9
72.5°	303.9	351.1	444.0	519.2	547.3
75°	244.9	300.9	392.4	466.1	492.7
77.5°	190.3	247.8	339.3	399.8	413.0
80°	140.1	199.1	278.8	321.6	337.8
82.5°	90.0	149.0	212.4	243.4	256.7
85°	50.2	98.8	138.7	156.4	162.3
87.5°	20.7	42.8	56.1	63.4	63.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)