

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: P310808

Luminaire Tested: **24FCZ2-45-UNV-L82765-CA08-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: P310808
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: 24FCZ2-45-UNV-L82765-CA08-W2A-U-4000K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.08" ACRYLIC 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: 4136.0 lumens
Efficiency: N/A
Efficacy: 108.8 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

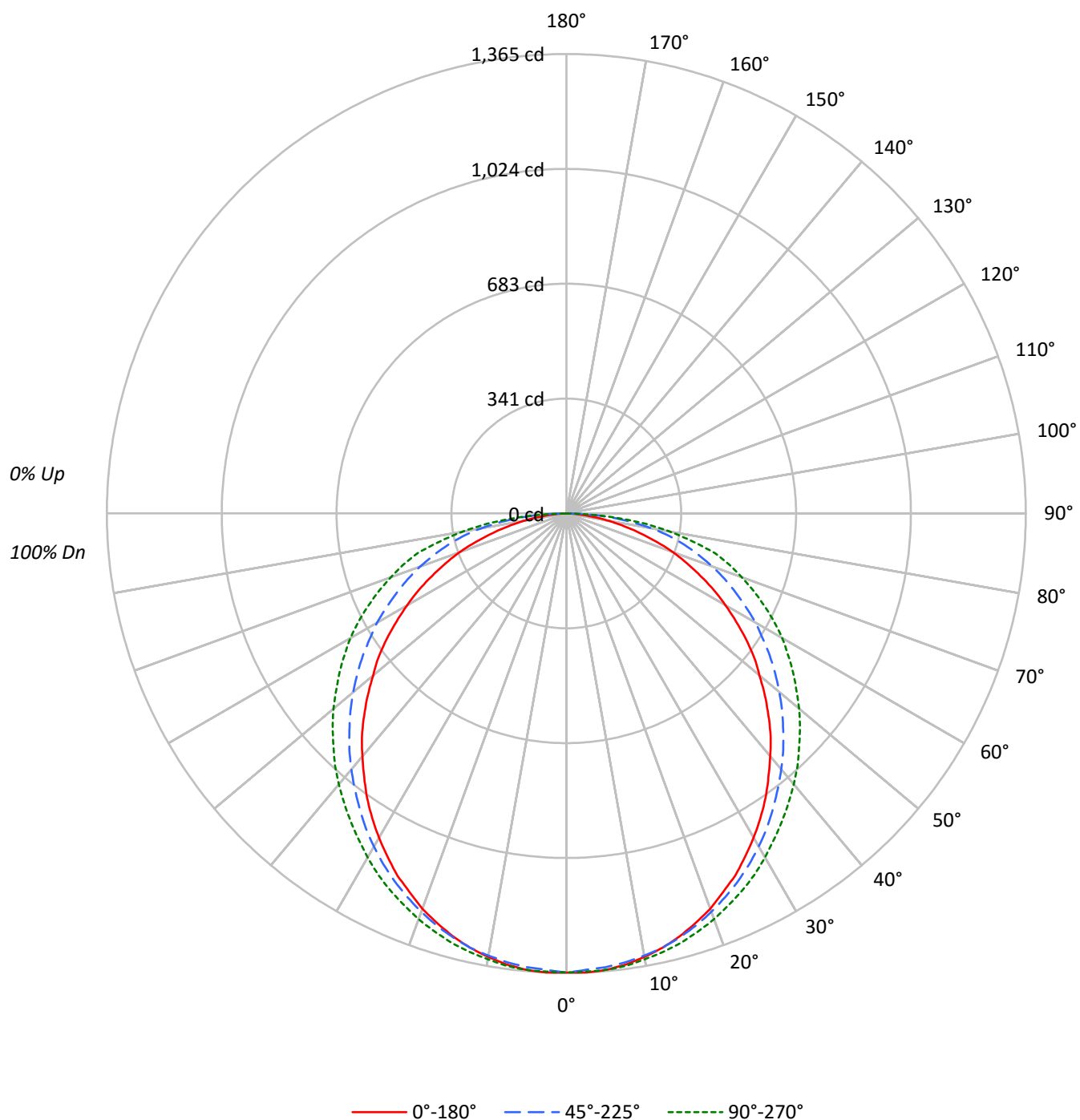
Input Watts (W): 38
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1835	1835	1835
5°	1839	1827	1839
10°	1828	1822	1837
15°	1812	1816	1839
20°	1790	1804	1837
25°	1762	1791	1836
30°	1729	1776	1833
35°	1695	1758	1835
40°	1656	1745	1846
45°	1616	1734	1862
50°	1568	1729	1890
55°	1529	1732	1928
60°	1470	1747	1994
65°	1402	1765	2067
70°	1328	1819	2181
75°	1184	1897	2383
80°	1010	2010	2435
85°	721	1991	2330



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	129.1	3.1
10°-20°	369.1	8.9
20°-30°	557.5	13.5
30°-40°	671.9	16.2
40°-50°	705.4	17.1
50°-60°	659.9	16.0
60°-70°	545.0	13.2
70°-80°	371.4	9.0
80°-90°	126.7	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°	1055.7	25.5
0°-40°	1727.6	41.8
0°-60°	3093.0	74.8
0°-90°	4136.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4136.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1364	1364	1364	1364	1364	
5°	1361	1360	1353	1361	1361	129
15°	1301	1302	1304	1317	1320	367
25°	1187	1192	1206	1230	1236	546
35°	1032	1043	1070	1106	1117	645
45°	849	867	911	961	978	655
55°	652	678	738	799	822	582
65°	440	478	554	624	649	437
75°	228	280	365	434	458	243
85°	47	92	129	146	151	58
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1364.0	1364.0	1364.0	1364.0	1364.0
2.5°	1365.4	1364.0	1357.2	1364.0	1362.6
5°	1361.3	1359.9	1353.0	1361.3	1361.3
7.5°	1351.7	1351.7	1344.8	1354.4	1355.8
10°	1337.9	1337.9	1333.8	1344.8	1344.8
12.5°	1321.5	1321.5	1321.5	1332.5	1333.8
15°	1300.9	1302.3	1303.6	1317.4	1320.1
17.5°	1276.2	1278.9	1283.1	1299.5	1302.3
20°	1250.1	1252.9	1259.7	1278.9	1283.1
22.5°	1217.2	1224.0	1233.7	1255.6	1259.7
25°	1187.0	1192.5	1206.2	1229.5	1236.4
27.5°	1149.9	1158.2	1176.0	1200.7	1210.3
30°	1112.9	1121.1	1143.1	1171.9	1180.1
32.5°	1073.1	1085.5	1108.8	1139.0	1148.6
35°	1031.9	1042.9	1070.4	1106.0	1117.0
37.5°	986.6	1001.7	1031.9	1070.4	1084.1
40°	942.7	959.2	993.5	1034.7	1051.1
42.5°	898.8	915.3	953.7	1000.4	1016.8
45°	849.4	867.3	911.2	960.6	978.4
47.5°	800.0	822.0	870.0	922.2	941.4
50°	749.2	773.9	826.1	881.0	902.9
52.5°	704.0	727.3	782.2	841.2	861.8
55°	651.8	677.9	738.3	798.6	822.0
57.5°	598.3	627.1	691.6	757.5	780.8
60°	546.2	577.7	649.1	714.9	741.0
62.5°	495.4	526.9	601.0	669.7	695.7
65°	440.5	477.5	554.4	624.4	649.1
67.5°	388.3	428.1	509.1	577.7	602.4
70°	337.6	376.0	462.4	529.7	554.4
72.5°	282.7	326.6	413.0	483.0	509.1
75°	227.8	279.9	365.0	433.6	458.3
77.5°	177.0	230.5	315.6	371.9	384.2
80°	130.4	185.3	259.4	299.2	314.2
82.5°	83.7	138.6	197.6	226.4	238.8
85°	46.7	91.9	129.0	145.5	150.9
87.5°	19.2	39.8	52.1	59.0	59.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)