

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: P310737

Luminaire Tested: **24FCZ2-40-UNV-L82765-CP125-W2A-U-4500K**

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: P310737
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: 24FCZ2-40-UNV-L82765-CP125-W2A-U-4500K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.125" POLYCARB SHEET
Light Source: (168) 4500K 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: 3673.0 lumens
Efficiency: N/A
Efficacy: 110.3 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

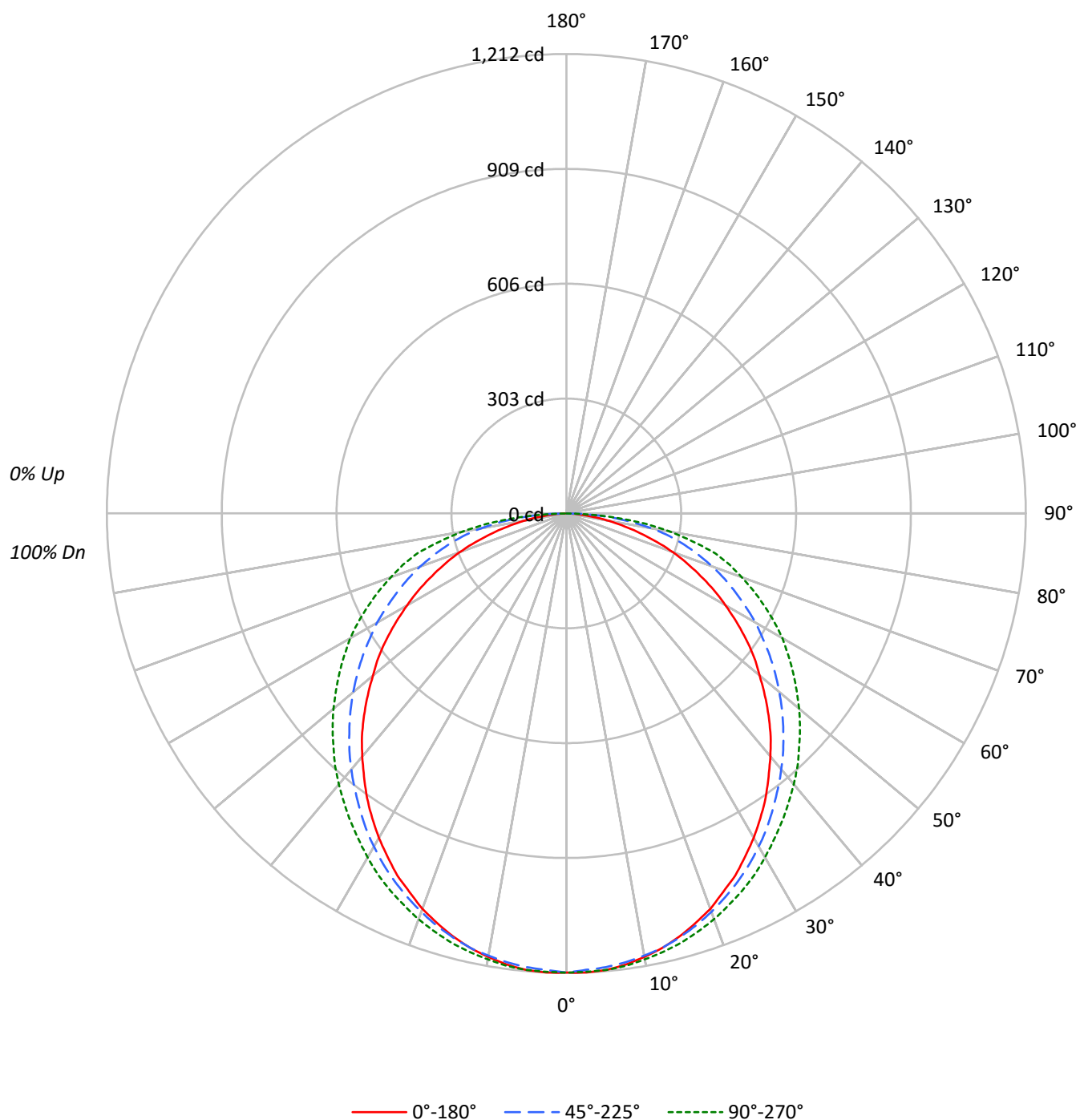
Input Watts (W): 33.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1630	1630	1630
5°	1633	1623	1633
10°	1623	1618	1632
15°	1609	1613	1633
20°	1590	1602	1631
25°	1565	1590	1630
30°	1535	1577	1628
35°	1505	1561	1629
40°	1470	1550	1640
45°	1435	1540	1653
50°	1393	1536	1679
55°	1358	1538	1712
60°	1305	1551	1771
65°	1245	1567	1835
70°	1179	1616	1937
75°	1052	1685	2116
80°	897	1784	2163
85°	639	1769	2069



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	114.6	3.1
10°-20°	327.8	8.9
20°-30°	495.1	13.5
30°-40°	596.7	16.2
40°-50°	626.4	17.1
50°-60°	586.1	16.0
60°-70°	484.0	13.2
70°-80°	329.8	9.0
80°-90°	112.5	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°	937.5	25.5
0°-40°	1534.2	41.8
0°-60°	2746.7	74.8
0°-90°	3673.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3673.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1211	1211	1211	1211	1211	
5°	1209	1208	1202	1209	1209	115
15°	1155	1156	1158	1170	1172	326
25°	1054	1059	1071	1092	1098	485
35°	916	926	950	982	992	573
45°	754	770	809	853	869	582
55°	579	602	656	709	730	517
65°	391	424	492	554	576	388
75°	202	249	324	385	407	216
85°	41	82	115	129	134	52
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1211.3	1211.3	1211.3	1211.3	1211.3
2.5°	1212.5	1211.3	1205.2	1211.3	1210.1
5°	1208.9	1207.7	1201.6	1208.9	1208.9
7.5°	1200.4	1200.4	1194.3	1202.8	1204.0
10°	1188.2	1188.2	1184.5	1194.3	1194.3
12.5°	1173.5	1173.5	1173.5	1183.3	1184.5
15°	1155.3	1156.5	1157.7	1169.9	1172.3
17.5°	1133.3	1135.8	1139.4	1154.0	1156.5
20°	1110.2	1112.6	1118.7	1135.8	1139.4
22.5°	1080.9	1087.0	1095.6	1115.1	1118.7
25°	1054.1	1059.0	1071.2	1091.9	1098.0
27.5°	1021.2	1028.5	1044.4	1066.3	1074.8
30°	988.3	995.6	1015.1	1040.7	1048.0
32.5°	953.0	963.9	984.7	1011.5	1020.0
35°	916.4	926.2	950.5	982.2	992.0
37.5°	876.2	889.6	916.4	950.5	962.7
40°	837.2	851.8	882.3	918.9	933.5
42.5°	798.2	812.8	847.0	888.4	903.0
45°	754.3	770.2	809.2	853.0	868.9
47.5°	710.5	730.0	772.6	818.9	836.0
50°	665.4	687.3	733.6	782.4	801.9
52.5°	625.2	645.9	694.6	747.0	765.3
55°	578.9	602.0	655.6	709.2	730.0
57.5°	531.3	556.9	614.2	672.7	693.4
60°	485.0	513.0	576.4	634.9	658.1
62.5°	439.9	468.0	533.8	594.7	617.8
65°	391.2	424.1	492.3	554.5	576.4
67.5°	344.9	380.2	452.1	513.0	535.0
70°	299.8	333.9	410.7	470.4	492.3
72.5°	251.0	290.0	366.8	429.0	452.1
75°	202.3	248.6	324.2	385.1	407.0
77.5°	157.2	204.7	280.3	330.3	341.2
80°	115.8	164.5	230.3	265.7	279.1
82.5°	74.3	123.1	175.5	201.1	212.0
85°	41.4	81.6	114.6	129.2	134.0
87.5°	17.1	35.3	46.3	52.4	52.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)