

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: P310427

Luminaire Tested: **24FCZ2-70HE-UNV-L82765-RDP-CP187-W2A-U-2700K**

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: P310427
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-19)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 24FCZ2-70HE-UNV-L82765-RDP-CP187-W2A-U-2700K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.187" POLYCARB SHEET
Light Source: (336) 2700K 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: 3723.0 lumens
Efficiency: N/A
Efficacy: 64.5 lumens/watt
Spacing Criteria (0/90/45): 1.26 / 1.3 / 1.41
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

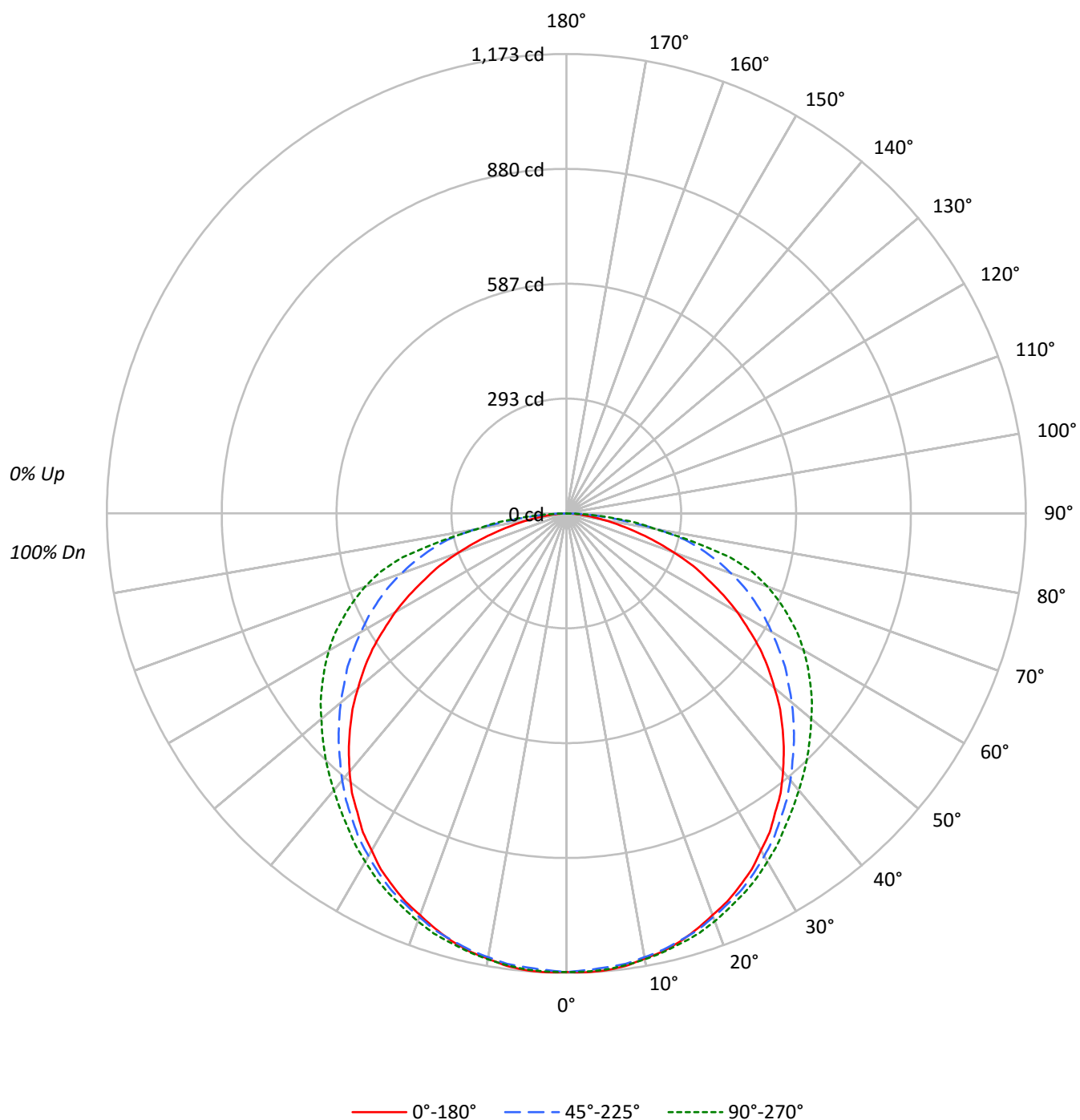
Input Watts (W): 57.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	98	94	105	100	96	92	96	93	89		92	89	87		82
2	97	89	81	75	95	87	80	74	83	77	72		80	75	71		67
3	88	77	68	62	86	76	67	61	72	66	60		70	64	59		56
4	81	68	59	52	78	67	58	51	64	57	51		62	55	50		47
5	74	60	51	44	72	59	51	44	57	49	43		55	48	43		40
6	68	54	45	38	66	53	45	38	51	44	38		50	43	37		35
7	63	49	40	34	61	48	40	34	47	39	33		45	38	33		31
8	59	45	36	30	57	44	36	30	43	35	30		41	34	29		27
9	55	41	33	27	53	40	32	27	39	32	27		38	31	26		24
10	51	38	30	24	50	37	29	24	36	29	24		35	29	24		22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1575	1575	1575
5°	1581	1571	1579
10°	1577	1572	1579
15°	1574	1572	1582
20°	1563	1571	1586
25°	1557	1574	1590
30°	1544	1569	1595
35°	1529	1565	1601
40°	1511	1563	1622
45°	1486	1564	1658
50°	1453	1573	1708
55°	1417	1598	1785
60°	1357	1630	1883
65°	1270	1687	1999
70°	1155	1765	2150
75°	979	1863	2246
80°	773	1874	1817
85°	570	1425	1596



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	111.1	3.0
10°-20°	319.6	8.6
20°-30°	488.8	13.1
30°-40°	597.5	16.0
40°-50°	636.8	17.1
50°-60°	608.9	16.4
60°-70°	515.8	13.9
70°-80°	346.7	9.3
80°-90°	97.8	2.6
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°	919.5	24.7
0°-40°	1517.0	40.7
0°-60°	2762.7	74.2
0°-90°	3723.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3723.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1171	1171	1171	1171	1171	
5°	1171	1169	1163	1169	1169	111
15°	1130	1130	1128	1138	1136	319
25°	1049	1053	1060	1069	1071	483
35°	931	938	953	971	975	583
45°	781	794	822	857	872	602
55°	604	626	681	735	761	538
65°	399	440	530	600	628	396
75°	188	257	358	419	432	202
85°	37	76	92	100	103	46
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1170.8	1170.8	1170.8	1170.8	1170.8
2.5°	1172.6	1172.6	1167.1	1170.8	1170.8
5°	1170.8	1168.9	1163.4	1168.9	1168.9
7.5°	1165.2	1163.4	1159.7	1165.2	1163.4
10°	1154.2	1154.2	1150.5	1156.0	1156.0
12.5°	1144.9	1143.1	1141.2	1148.6	1146.8
15°	1130.2	1130.2	1128.3	1137.5	1135.7
17.5°	1111.7	1113.5	1115.4	1122.8	1124.6
20°	1091.4	1095.1	1096.9	1108.0	1108.0
22.5°	1072.9	1074.8	1078.4	1089.5	1089.5
25°	1048.9	1052.6	1060.0	1069.2	1071.1
27.5°	1024.9	1026.7	1036.0	1048.9	1050.7
30°	993.5	999.0	1010.1	1024.9	1026.7
32.5°	965.8	971.3	984.3	999.0	1002.7
35°	930.7	938.1	952.9	971.3	975.0
37.5°	899.3	904.9	923.3	943.6	949.2
40°	860.5	871.6	890.1	914.1	923.3
42.5°	821.8	832.8	855.0	886.4	897.5
45°	781.1	794.1	821.8	856.8	871.6
47.5°	740.5	755.3	786.7	827.3	843.9
50°	694.3	712.8	751.6	797.8	816.2
52.5°	650.0	672.2	714.7	766.4	790.4
55°	603.9	626.0	681.4	735.0	760.8
57.5°	552.1	581.7	642.6	703.6	731.3
60°	504.1	531.8	605.7	672.2	699.9
62.5°	452.4	489.4	568.8	638.9	666.6
65°	398.9	439.5	530.0	600.2	627.9
67.5°	350.9	395.2	491.2	561.4	589.1
70°	293.6	349.0	448.7	518.9	546.6
72.5°	240.1	301.0	404.4	472.7	498.6
75°	188.4	256.7	358.3	419.2	432.1
77.5°	140.3	212.4	310.2	336.1	326.9
80°	99.7	169.9	241.9	229.0	234.5
82.5°	64.6	129.3	149.6	169.9	175.4
85°	36.9	75.7	92.3	99.7	103.4
87.5°	16.6	27.7	36.9	36.9	35.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)