

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: P310400

Luminaire Tested: **24FCZ2-70HE-UNV-L82765-RDP-CA08-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: P310400
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-CA08-W2A-U-2700K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.08" ACRYLIC 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: 3978.0 lumens
Efficiency: N/A
Efficacy: 68.9 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

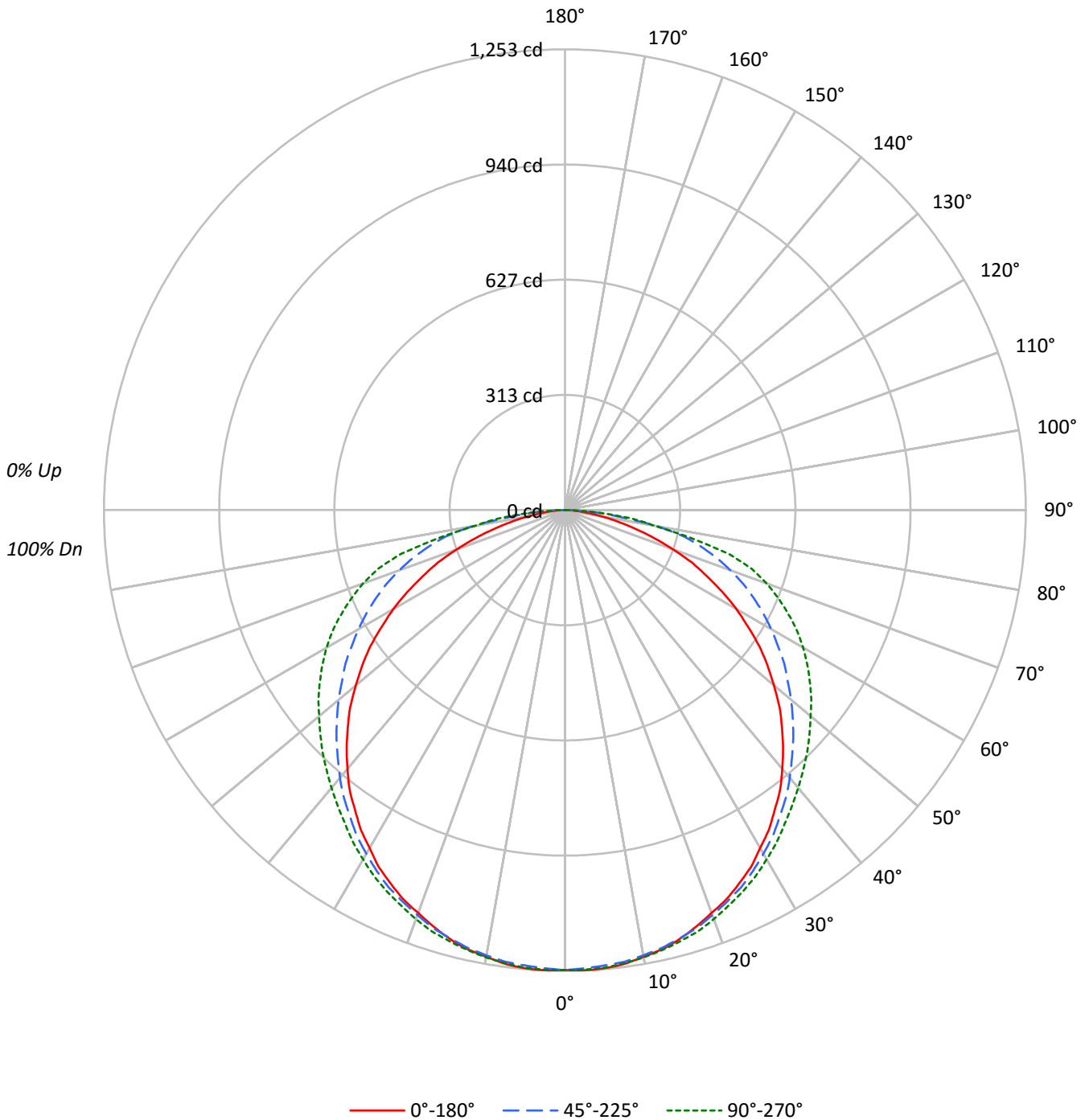
Input Watts (W): 57.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				10	0
RW	70	50	30	10	70	50	30	10	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	102	102	102	100
1	108	103	98	94	105	100	96	92	96	93	89	92	89	87	88	86	84	82
2	97	89	81	75	95	87	80	74	83	77	72	80	75	71	77	73	69	67
3	88	77	68	62	86	76	67	61	72	66	60	70	64	59	67	62	58	56
4	81	68	59	52	78	67	58	51	64	57	51	62	55	50	59	54	49	47
5	74	60	51	44	72	59	51	44	57	49	43	55	48	43	53	47	42	40
6	68	54	45	38	66	53	45	38	51	44	38	50	43	37	48	42	37	35
7	63	49	40	34	61	48	40	34	47	39	33	45	38	33	44	38	33	31
8	59	45	36	30	57	44	36	30	43	35	30	41	34	29	40	34	29	27
9	55	41	33	27	53	40	32	27	39	32	27	38	31	26	37	31	26	24
10	51	38	30	24	50	37	29	24	36	29	24	35	29	24	34	28	24	22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1683	1683	1683
5°	1690	1679	1687
10°	1685	1680	1688
15°	1682	1679	1690
20°	1670	1678	1695
25°	1664	1681	1699
30°	1649	1677	1704
35°	1634	1672	1711
40°	1615	1671	1733
45°	1588	1671	1772
50°	1553	1681	1825
55°	1514	1708	1907
60°	1450	1742	2012
65°	1357	1803	2136
70°	1234	1886	2297
75°	1046	1990	2400
80°	825	2003	1942
85°	610	1524	1706



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	118.7	3.0
10°-20°	341.5	8.6
20°-30°	522.3	13.1
30°-40°	638.5	16.0
40°-50°	680.5	17.1
50°-60°	650.6	16.4
60°-70°	551.2	13.9
70°-80°	370.4	9.3
80°-90°	104.5	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°	982.4	24.7
0°-40°	1620.9	40.7
0°-60°	2952.0	74.2
0°-90°	3978.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3978.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1251	1251	1251	1251	1251	
5°	1251	1249	1243	1249	1249	119
15°	1208	1208	1206	1216	1214	340
25°	1121	1125	1133	1142	1144	517
35°	994	1002	1018	1038	1042	623
45°	835	848	878	916	931	644
55°	645	669	728	785	813	575
65°	426	470	566	641	671	423
75°	201	274	383	448	462	216
85°	40	81	99	106	110	49
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1251.0	1251.0	1251.0	1251.0	1251.0
2.5°	1252.9	1252.9	1247.0	1251.0	1251.0
5°	1251.0	1249.0	1243.1	1249.0	1249.0
7.5°	1245.0	1243.1	1239.1	1245.0	1243.1
10°	1233.2	1233.2	1229.3	1235.2	1235.2
12.5°	1223.3	1221.4	1219.4	1227.3	1225.3
15°	1207.6	1207.6	1205.6	1215.5	1213.5
17.5°	1187.8	1189.8	1191.8	1199.7	1201.6
20°	1166.1	1170.1	1172.0	1183.9	1183.9
22.5°	1146.4	1148.4	1152.3	1164.1	1164.1
25°	1120.7	1124.7	1132.6	1142.4	1144.4
27.5°	1095.1	1097.1	1106.9	1120.7	1122.7
30°	1061.5	1067.5	1079.3	1095.1	1097.1
32.5°	1031.9	1037.9	1051.7	1067.5	1071.4
35°	994.5	1002.4	1018.1	1037.9	1041.8
37.5°	960.9	966.8	986.6	1008.3	1014.2
40°	919.5	931.3	951.1	976.7	986.6
42.5°	878.0	889.9	913.6	947.1	958.9
45°	834.6	848.4	878.0	915.5	931.3
47.5°	791.2	807.0	840.6	884.0	901.7
50°	741.9	761.6	803.1	852.4	872.1
52.5°	694.5	718.2	763.6	818.9	844.5
55°	645.2	668.9	728.1	785.3	812.9
57.5°	590.0	621.5	686.7	751.8	781.4
60°	538.7	568.3	647.2	718.2	747.8
62.5°	483.4	522.9	607.7	682.7	712.3
65°	426.2	469.6	566.3	641.3	670.9
67.5°	374.9	422.3	524.9	599.8	629.4
70°	313.7	372.9	479.5	554.5	584.0
72.5°	256.5	321.6	432.1	505.1	532.7
75°	201.3	274.3	382.8	447.9	461.7
77.5°	150.0	226.9	331.5	359.1	349.2
80°	106.5	181.5	258.5	244.7	250.6
82.5°	69.1	138.1	159.8	181.5	187.4
85°	39.5	80.9	98.7	106.5	110.5
87.5°	17.8	29.6	39.5	39.5	37.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)