

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: P310437

Luminaire Tested: **24FCZ2-70HE-UNV-L82765-RDP-CP250-W2A-U-3000K**

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: P310437
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-CP250-W2A-U-3000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.250" POLYCARB SHEET
Light Source: (336) 3000K 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: 3799.0 lumens
Efficiency: N/A
Efficacy: 66.3 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

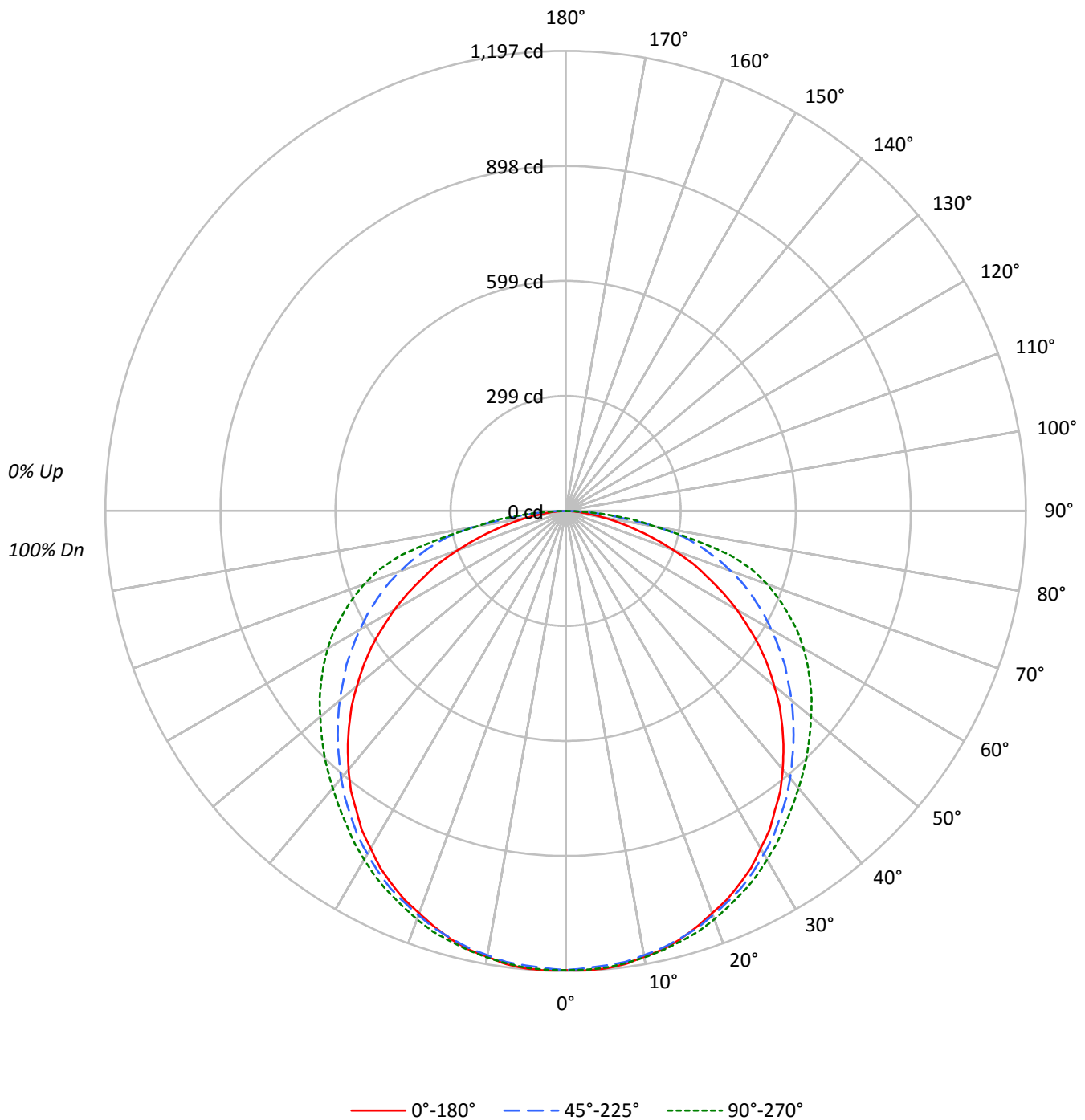
Input Watts (W): 57.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	1607	1607	1607
5°	1614	1603	1611
10°	1609	1604	1612
15°	1606	1604	1614
20°	1595	1603	1619
25°	1589	1606	1623
30°	1575	1601	1628
35°	1560	1597	1634
40°	1542	1595	1655
45°	1517	1596	1692
50°	1483	1605	1743
55°	1445	1631	1821
60°	1384	1663	1922
65°	1296	1722	2040
70°	1179	1801	2194
75°	999	1901	2292
80°	789	1912	1854
85°	582	1454	1629



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	113.3	3.0
10°-20°	326.2	8.6
20°-30°	498.8	13.1
30°-40°	609.7	16.0
40°-50°	649.8	17.1
50°-60°	621.3	16.4
60°-70°	526.3	13.9
70°-80°	353.7	9.3
80°-90°	99.8	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°	938.2	24.7
0°-40°	1548.0	40.7
0°-60°	2819.1	74.2
0°-90°	3799.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3799.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1195	1195	1195	1195	1195	
5°	1195	1193	1187	1193	1193	114
15°	1153	1153	1151	1161	1159	325
25°	1070	1074	1082	1091	1093	493
35°	950	957	972	991	995	595
45°	797	810	838	874	889	615
55°	616	639	695	750	776	549
65°	407	448	541	612	641	404
75°	192	262	366	428	441	206
85°	38	77	94	102	106	47
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1194.7	1194.7	1194.7	1194.7	1194.7
2.5°	1196.6	1196.6	1190.9	1194.7	1194.7
5°	1194.7	1192.8	1187.1	1192.8	1192.8
7.5°	1189.0	1187.1	1183.4	1189.0	1187.1
10°	1177.7	1177.7	1173.9	1179.6	1179.6
12.5°	1168.3	1166.4	1164.5	1172.1	1170.2
15°	1153.2	1153.2	1151.3	1160.8	1158.9
17.5°	1134.4	1136.3	1138.1	1145.7	1147.6
20°	1113.7	1117.4	1119.3	1130.6	1130.6
22.5°	1094.8	1096.7	1100.5	1111.8	1111.8
25°	1070.3	1074.1	1081.6	1091.0	1092.9
27.5°	1045.8	1047.7	1057.1	1070.3	1072.2
30°	1013.8	1019.4	1030.7	1045.8	1047.7
32.5°	985.5	991.2	1004.4	1019.4	1023.2
35°	949.7	957.2	972.3	991.2	994.9
37.5°	917.7	923.3	942.2	962.9	968.6
40°	878.1	889.4	908.3	932.8	942.2
42.5°	838.5	849.8	872.5	904.5	915.8
45°	797.1	810.3	838.5	874.3	889.4
47.5°	755.6	770.7	802.7	844.2	861.1
50°	708.5	727.4	766.9	814.0	832.9
52.5°	663.3	685.9	729.2	782.0	806.5
55°	616.2	638.8	695.3	750.0	776.4
57.5°	563.4	593.6	655.8	717.9	746.2
60°	514.4	542.7	618.1	685.9	714.2
62.5°	461.7	499.4	580.4	652.0	680.2
65°	407.0	448.5	540.8	612.4	640.7
67.5°	358.0	403.3	501.2	572.8	601.1
70°	299.6	356.1	457.9	529.5	557.8
72.5°	245.0	307.1	412.7	482.4	508.8
75°	192.2	261.9	365.6	427.7	440.9
77.5°	143.2	216.7	316.6	343.0	333.5
80°	101.8	173.4	246.8	233.7	239.3
82.5°	66.0	131.9	152.6	173.4	179.0
85°	37.7	77.3	94.2	101.8	105.5
87.5°	17.0	28.3	37.7	37.7	35.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)