

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: P310972

Luminaire Tested: **24FCZ2-55HE-UNV-L82765-CP187-W2A-U-5000K**

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: P310972
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: 24FCZ2-55HE-UNV-L82765-CP187-W2A-U-5000K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.187" POLYCARB SHEET
Light Source: (336) 5000K 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: 4889.0 lumens
Efficiency: N/A
Efficacy: 110.9 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.29 / 1.38
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

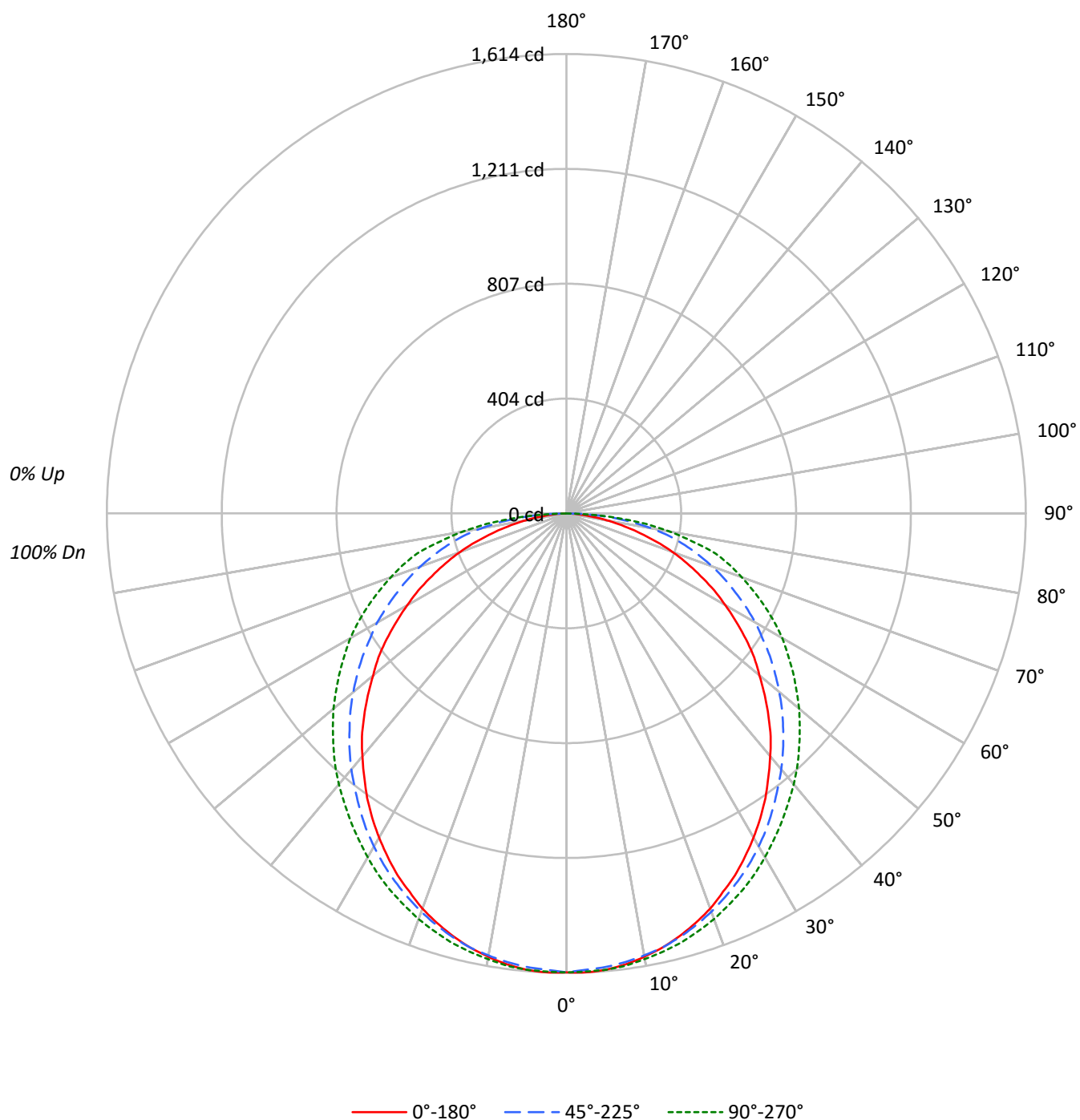
Input Watts (W): 44.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2169	2169	2169
5°	2173	2160	2173
10°	2161	2154	2172
15°	2142	2147	2174
20°	2116	2132	2172
25°	2083	2117	2170
30°	2044	2099	2167
35°	2004	2078	2169
40°	1957	2063	2182
45°	1911	2050	2201
50°	1854	2044	2234
55°	1807	2047	2279
60°	1737	2065	2357
65°	1658	2086	2443
70°	1570	2150	2578
75°	1400	2243	2817
80°	1194	2376	2879
85°	852	2354	2754



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	152.6	3.1
10°-20°	436.3	8.9
20°-30°	659.0	13.5
30°-40°	794.3	16.2
40°-50°	833.8	17.1
50°-60°	780.1	16.0
60°-70°	644.2	13.2
70°-80°	439.0	9.0
80°-90°	149.7	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°	1247.9	25.5
0°-40°	2042.2	41.8
0°-60°	3656.1	74.8
0°-90°	4889.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4889.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1612	1612	1612	1612	1612	
5°	1609	1608	1599	1609	1609	153
15°	1538	1539	1541	1557	1560	433
25°	1403	1410	1426	1453	1462	646
35°	1220	1233	1265	1307	1320	762
45°	1004	1025	1077	1136	1156	774
55°	770	801	873	944	972	688
65°	521	564	655	738	767	516
75°	269	331	432	513	542	287
85°	55	109	152	172	178	69
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1612.3	1612.3	1612.3	1612.3	1612.3
2.5°	1614.0	1612.3	1604.2	1612.3	1610.7
5°	1609.1	1607.5	1599.4	1609.1	1609.1
7.5°	1597.8	1597.8	1589.6	1601.0	1602.6
10°	1581.5	1581.5	1576.7	1589.6	1589.6
12.5°	1562.1	1562.1	1562.1	1575.0	1576.7
15°	1537.7	1539.4	1541.0	1557.2	1560.4
17.5°	1508.5	1511.8	1516.6	1536.1	1539.4
20°	1477.7	1481.0	1489.1	1511.8	1516.6
22.5°	1438.8	1446.9	1458.3	1484.2	1489.1
25°	1403.1	1409.6	1425.8	1453.4	1461.5
27.5°	1359.3	1369.0	1390.1	1419.3	1430.7
30°	1315.5	1325.2	1351.2	1385.3	1395.0
32.5°	1268.5	1283.1	1310.6	1346.3	1357.7
35°	1219.8	1232.8	1265.2	1307.4	1320.4
37.5°	1166.3	1184.1	1219.8	1265.2	1281.4
40°	1114.4	1133.8	1174.4	1223.0	1242.5
42.5°	1062.5	1081.9	1127.3	1182.5	1202.0
45°	1004.1	1025.2	1077.1	1135.5	1156.5
47.5°	945.7	971.6	1028.4	1090.0	1112.7
50°	885.7	914.9	976.5	1041.4	1067.3
52.5°	832.1	859.7	924.6	994.3	1018.7
55°	770.5	801.3	872.7	944.1	971.6
57.5°	707.2	741.3	817.5	895.4	923.0
60°	645.6	682.9	767.2	845.1	875.9
62.5°	585.6	622.9	710.5	791.6	822.4
65°	520.7	564.5	655.3	738.0	767.2
67.5°	459.0	506.1	601.8	682.9	712.1
70°	399.0	444.5	546.6	626.1	655.3
72.5°	334.1	386.1	488.2	571.0	601.8
75°	269.3	330.9	431.5	512.6	541.8
77.5°	209.2	272.5	373.1	439.6	454.2
80°	154.1	219.0	306.6	353.6	371.5
82.5°	98.9	163.8	233.6	267.6	282.2
85°	55.2	108.7	152.5	171.9	178.4
87.5°	22.7	47.0	61.6	69.7	69.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)