

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: P310973

Luminaire Tested: **24FCZ2-55HE-UNV-L82765-CP187-W2A-U-5500K**

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: P310973
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-5500K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.187" POLYCARB SHEET
Light Source: (336) 5500K 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: 4937.0 lumens
Efficiency: N/A
Efficacy: 111.4 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

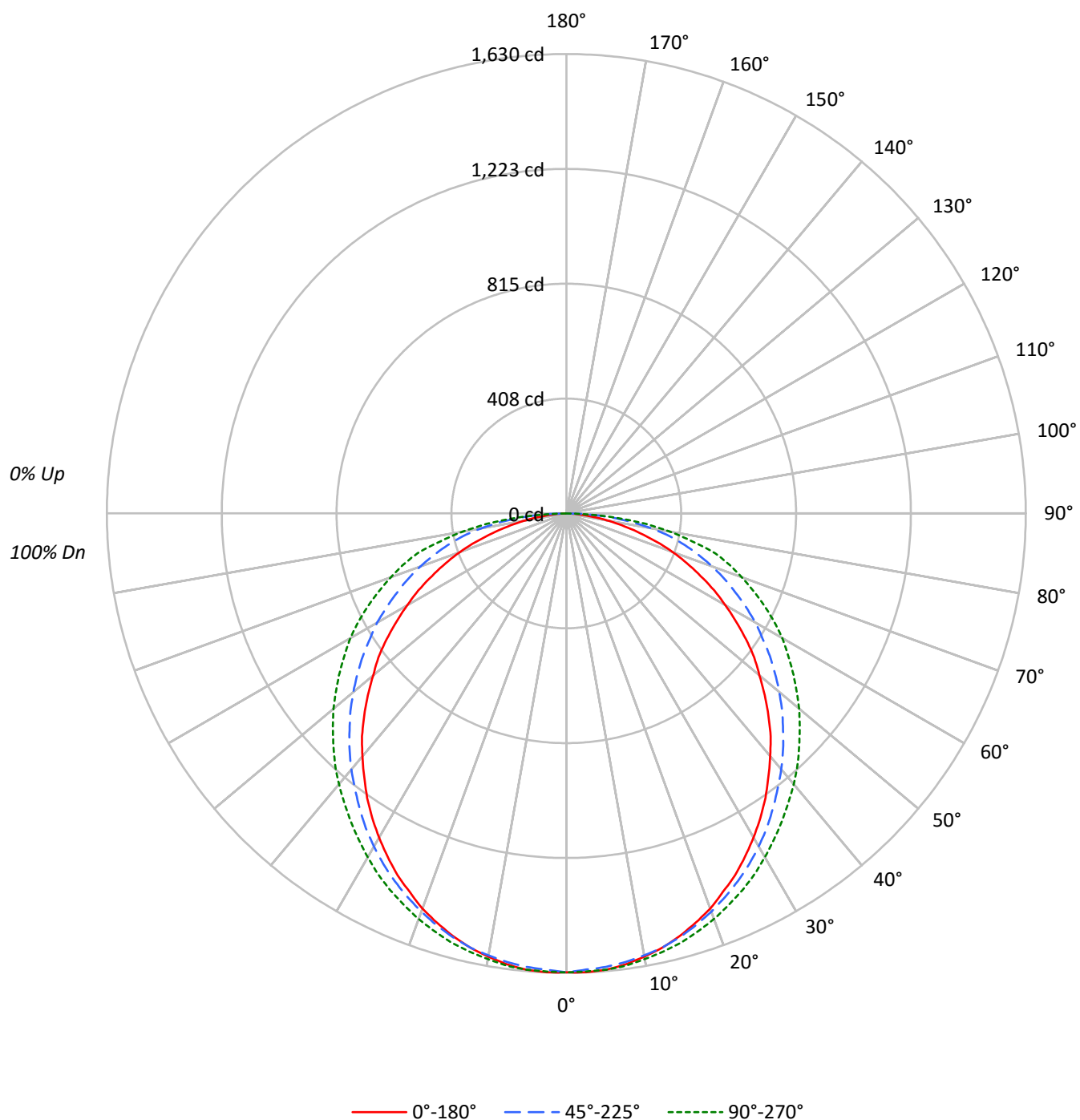
Input Watts (W): 44.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2191	2191	2191
5°	2195	2181	2195
10°	2182	2175	2193
15°	2163	2168	2195
20°	2137	2153	2193
25°	2104	2138	2191
30°	2064	2120	2189
35°	2023	2099	2190
40°	1976	2083	2204
45°	1929	2069	2222
50°	1872	2064	2256
55°	1825	2067	2302
60°	1754	2085	2380
65°	1674	2107	2467
70°	1585	2172	2603
75°	1413	2265	2844
80°	1206	2399	2906
85°	860	2377	2782



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	154.1	3.1
10°-20°	440.6	8.9
20°-30°	665.5	13.5
30°-40°	802.0	16.2
40°-50°	842.0	17.1
50°-60°	787.8	16.0
60°-70°	650.5	13.2
70°-80°	443.3	9.0
80°-90°	151.2	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°	1260.2	25.5
0°-40°	2062.2	41.8
0°-60°	3692.0	74.8
0°-90°	4937.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4937.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1628	1628	1628	1628	1628	
5°	1625	1623	1615	1625	1625	154
15°	1553	1554	1556	1572	1576	438
25°	1417	1423	1440	1468	1476	652
35°	1232	1245	1278	1320	1333	770
45°	1014	1035	1088	1147	1168	782
55°	778	809	881	953	981	694
65°	526	570	662	745	775	522
75°	272	334	436	518	547	290
85°	56	110	154	174	180	70
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1628.2	1628.2	1628.2	1628.2	1628.2
2.5°	1629.8	1628.2	1620.0	1628.2	1626.5
5°	1624.9	1623.3	1615.1	1624.9	1624.9
7.5°	1613.4	1613.4	1605.2	1616.7	1618.4
10°	1597.1	1597.1	1592.1	1605.2	1605.2
12.5°	1577.4	1577.4	1577.4	1590.5	1592.1
15°	1552.8	1554.5	1556.1	1572.5	1575.8
17.5°	1523.3	1526.6	1531.5	1551.2	1554.5
20°	1492.2	1495.5	1503.7	1526.6	1531.5
22.5°	1452.9	1461.1	1472.6	1498.8	1503.7
25°	1416.9	1423.4	1439.8	1467.7	1475.8
27.5°	1372.7	1382.5	1403.8	1433.3	1444.7
30°	1328.4	1338.3	1364.5	1398.9	1408.7
32.5°	1280.9	1295.7	1323.5	1359.5	1371.0
35°	1231.8	1244.9	1277.6	1320.2	1333.3
37.5°	1177.7	1195.7	1231.8	1277.6	1294.0
40°	1125.3	1145.0	1185.9	1235.1	1254.7
42.5°	1072.9	1092.6	1138.4	1194.1	1213.8
45°	1013.9	1035.2	1087.6	1146.6	1167.9
47.5°	955.0	981.2	1038.5	1100.7	1123.7
50°	894.4	923.8	986.1	1051.6	1077.8
52.5°	840.3	868.1	933.7	1004.1	1028.7
55°	778.1	809.2	881.2	953.3	981.2
57.5°	714.2	748.6	825.6	904.2	932.0
60°	651.9	689.6	774.8	853.4	884.5
62.5°	591.3	629.0	717.4	799.3	830.5
65°	525.8	570.0	661.8	745.3	774.8
67.5°	463.6	511.1	607.7	689.6	719.1
70°	402.9	448.8	552.0	632.3	661.8
72.5°	337.4	389.8	493.0	576.6	607.7
75°	271.9	334.2	435.7	517.6	547.1
77.5°	211.3	275.2	376.7	443.9	458.6
80°	155.6	221.1	309.6	357.1	375.1
82.5°	99.9	165.4	235.9	270.3	285.0
85°	55.7	109.7	154.0	173.6	180.2
87.5°	22.9	47.5	62.2	70.4	70.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)