

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: P310974

Luminaire Tested: **24FCZ2-55HE-UNV-L82765-CP187-W2A-U-5700K**

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: P310974
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-5700K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.187" POLYCARB SHEET
Light Source: (336) 5700K 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: 4950.0 lumens
Efficiency: N/A
Efficacy: 111.7 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

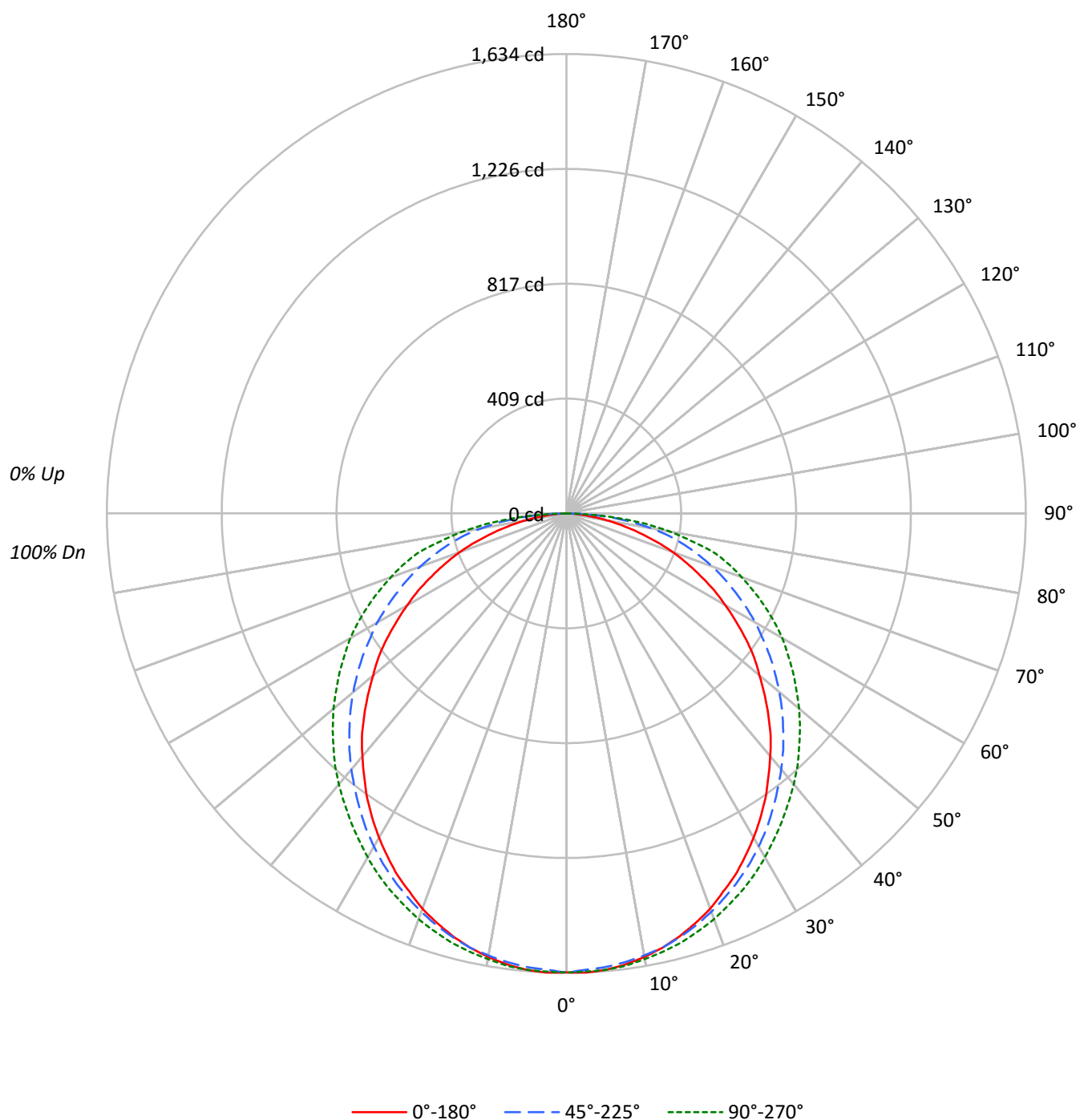
Input Watts (W): 44.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2197	2197	2197
5°	2200	2187	2200
10°	2188	2181	2199
15°	2169	2173	2201
20°	2142	2159	2199
25°	2109	2143	2197
30°	2069	2126	2194
35°	2029	2104	2196
40°	1982	2088	2210
45°	1934	2075	2228
50°	1877	2070	2262
55°	1830	2073	2308
60°	1759	2090	2387
65°	1678	2112	2473
70°	1589	2177	2610
75°	1417	2271	2851
80°	1209	2405	2914
85°	861	2384	2790



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	154.5	3.1
10°-20°	441.8	8.9
20°-30°	667.2	13.5
30°-40°	804.2	16.2
40°-50°	844.2	17.1
50°-60°	789.8	16.0
60°-70°	652.3	13.2
70°-80°	444.5	9.0
80°-90°	151.6	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°	1263.5	25.5
0°-40°	2067.6	41.8
0°-60°	3701.7	74.8
0°-90°	4950.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4950.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1632	1632	1632	1632	1632	
5°	1629	1628	1619	1629	1629	155
15°	1557	1559	1560	1577	1580	439
25°	1421	1427	1444	1472	1480	654
35°	1235	1248	1281	1324	1337	772
45°	1017	1038	1090	1150	1171	784
55°	780	811	884	956	984	696
65°	527	572	664	747	777	523
75°	273	335	437	519	548	291
85°	56	110	154	174	181	70
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1632.5	1632.5	1632.5	1632.5	1632.5
2.5°	1634.1	1632.5	1624.3	1632.5	1630.8
5°	1629.2	1627.5	1619.3	1629.2	1629.2
7.5°	1617.7	1617.7	1609.5	1621.0	1622.6
10°	1601.3	1601.3	1596.3	1609.5	1609.5
12.5°	1581.6	1581.6	1581.6	1594.7	1596.3
15°	1556.9	1558.6	1560.2	1576.6	1579.9
17.5°	1527.4	1530.6	1535.6	1555.3	1558.6
20°	1496.2	1499.4	1507.7	1530.6	1535.6
22.5°	1456.7	1465.0	1476.4	1502.7	1507.7
25°	1420.6	1427.2	1443.6	1471.5	1479.7
27.5°	1376.3	1386.1	1407.5	1437.0	1448.5
30°	1331.9	1341.8	1368.1	1402.5	1412.4
32.5°	1284.3	1299.1	1327.0	1363.1	1374.6
35°	1235.0	1248.2	1281.0	1323.7	1336.8
37.5°	1180.8	1198.9	1235.0	1281.0	1297.4
40°	1128.3	1148.0	1189.0	1238.3	1258.0
42.5°	1075.7	1095.4	1141.4	1197.3	1217.0
45°	1016.6	1037.9	1090.5	1149.6	1171.0
47.5°	957.5	983.8	1041.2	1103.6	1126.6
50°	896.7	926.3	988.7	1054.4	1080.6
52.5°	842.5	870.4	936.1	1006.7	1031.4
55°	780.1	811.3	883.6	955.8	983.8
57.5°	716.1	750.5	827.7	906.6	934.5
60°	653.6	691.4	776.8	855.6	886.9
62.5°	592.9	630.7	719.3	801.5	832.7
65°	527.2	571.5	663.5	747.3	776.8
67.5°	464.8	512.4	609.3	691.4	721.0
70°	404.0	450.0	553.5	633.9	663.5
72.5°	338.3	390.9	494.3	578.1	609.3
75°	272.6	335.0	436.9	519.0	548.5
77.5°	211.9	275.9	377.7	445.1	459.8
80°	156.0	221.7	310.4	358.0	376.1
82.5°	100.2	165.9	236.5	271.0	285.8
85°	55.8	110.0	154.4	174.1	180.7
87.5°	23.0	47.6	62.4	70.6	70.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)