

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: P310951

Luminaire Tested: **24FCZ2-55HE-UNV-L82765-CA125-W2A-U-3500K**

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: P310951
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-CA125-W2A-U-3500K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.125" ACRYLIC SHEET
Light Source: (336) 3500K 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: 4939.0 lumens
Efficiency: N/A
Efficacy: 114.1 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

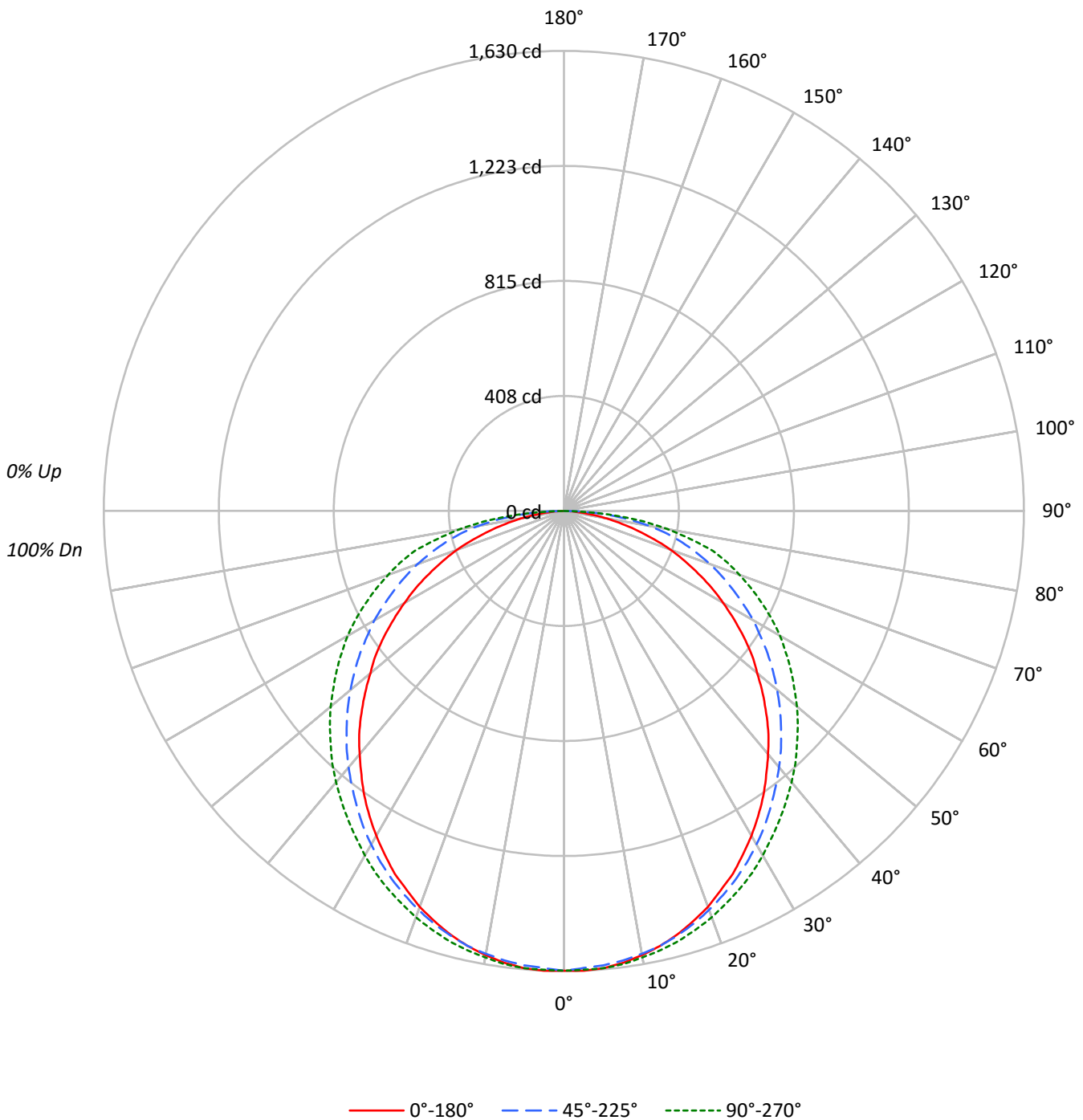
Input Watts (W): 43.3
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	92	89	92	89	87	88	86	84	82
2	98	89	81	75	95	87	80	74	83	78	73	80	75	71	77	73	69	67
3	89	77	69	62	86	76	68	61	73	66	60	70	64	59	67	62	58	56
4	81	68	59	52	79	67	58	52	64	57	51	62	56	50	60	54	50	47
5	74	61	52	45	72	60	51	44	58	50	44	56	49	43	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36
7	64	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31
8	59	45	37	31	57	45	36	30	43	36	30	42	35	30	41	34	30	28
9	55	41	33	27	54	41	33	27	40	32	27	39	32	27	38	31	27	25
10	52	38	30	25	50	38	30	25	37	30	25	36	29	25	35	29	24	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2192	2192	2192
5°	2196	2182	2196
10°	2183	2176	2194
15°	2164	2168	2196
20°	2137	2154	2194
25°	2104	2138	2192
30°	2065	2121	2190
35°	2024	2099	2191
40°	1977	2084	2205
45°	1930	2070	2223
50°	1873	2065	2257
55°	1826	2068	2303
60°	1755	2086	2381
65°	1675	2108	2468
70°	1586	2172	2604
75°	1414	2266	2845
80°	1206	2400	2908
85°	860	2377	2783



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	154.2	3.1
10°-20°	440.8	8.9
20°-30°	665.7	13.5
30°-40°	802.4	16.2
40°-50°	842.4	17.1
50°-60°	788.1	16.0
60°-70°	650.8	13.2
70°-80°	443.5	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°	1260.7	25.5
0°-40°	2063.1	41.8
0°-60°	3693.5	74.8
0°-90°	4939.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4939.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1629	1629	1629	1629	1629	
5°	1626	1624	1616	1626	1626	154
15°	1554	1555	1557	1573	1576	438
25°	1418	1424	1440	1468	1476	652
35°	1232	1245	1278	1321	1334	770
45°	1014	1036	1088	1147	1168	782
55°	778	810	882	954	982	695
65°	526	570	662	746	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°	1628.8	1628.8	1628.8	1628.8	1628.8
2.5°	1630.5	1628.8	1620.6	1628.8	1627.2
5°	1625.6	1623.9	1615.7	1625.6	1625.6
7.5°	1614.1	1614.1	1605.9	1617.4	1619.0
10°	1597.7	1597.7	1592.8	1605.9	1605.9
12.5°	1578.0	1578.0	1578.0	1591.1	1592.8
15°	1553.5	1555.1	1556.7	1573.1	1576.4
17.5°	1524.0	1527.2	1532.2	1551.8	1555.1
20°	1492.8	1496.1	1504.3	1527.2	1532.2
22.5°	1453.5	1461.7	1473.2	1499.4	1504.3
25°	1417.5	1424.0	1440.4	1468.2	1476.4
27.5°	1373.2	1383.0	1404.3	1433.8	1445.3
30°	1329.0	1338.8	1365.0	1399.4	1409.3
32.5°	1281.4	1296.2	1324.0	1360.1	1371.6
35°	1232.3	1245.4	1278.2	1320.8	1333.9
37.5°	1178.2	1196.2	1232.3	1278.2	1294.6
40°	1125.8	1145.4	1186.4	1235.6	1255.2
42.5°	1073.3	1093.0	1138.9	1194.6	1214.3
45°	1014.3	1035.6	1088.1	1147.1	1168.4
47.5°	955.3	981.6	1038.9	1101.2	1124.1
50°	894.7	924.2	986.5	1052.0	1078.2
52.5°	840.6	868.5	934.0	1004.5	1029.1
55°	778.4	809.5	881.6	953.7	981.6
57.5°	714.5	748.9	825.9	904.5	932.4
60°	652.2	689.9	775.1	853.7	884.9
62.5°	591.6	629.2	717.7	799.7	830.8
65°	526.0	570.3	662.0	745.6	775.1
67.5°	463.7	511.3	607.9	689.9	719.4
70°	403.1	449.0	552.2	632.5	662.0
72.5°	337.6	390.0	493.2	576.8	607.9
75°	272.0	334.3	435.9	517.8	547.3
77.5°	211.4	275.3	376.9	444.1	458.8
80°	155.7	221.2	309.7	357.2	375.3
82.5°	100.0	165.5	236.0	270.4	285.1
85°	55.7	109.8	154.0	173.7	180.3
87.5°	22.9	47.5	62.3	70.5	70.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)