

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: P310685

Luminaire Tested: **24FCZ2-40HE-UNV-L82765-CA125-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: P310685
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: 24FCZ2-40HE-UNV-L82765-CA125-W2A-U-5500K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.125" ACRYLIC 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

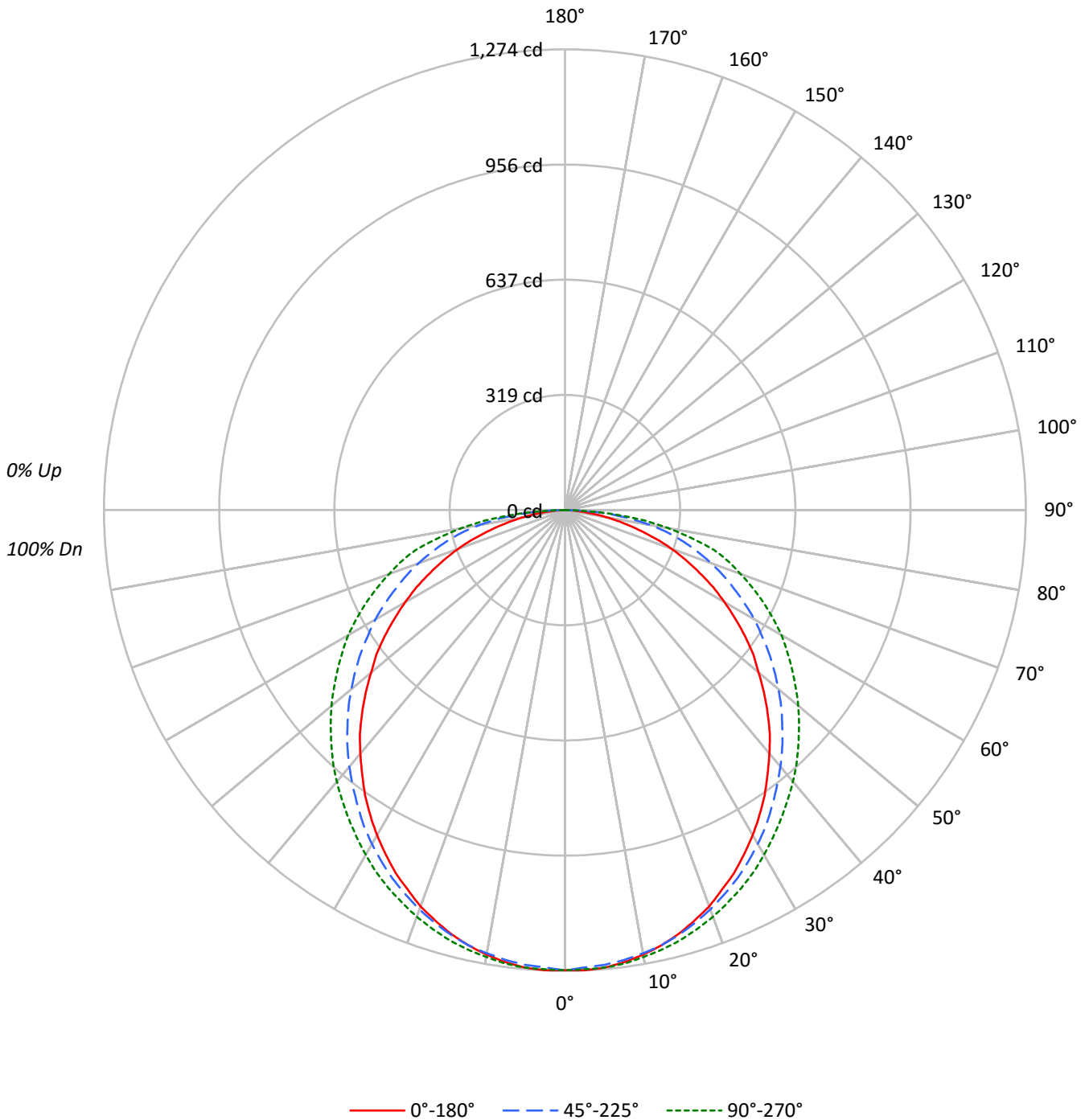
Lumens per Lamp: N/A
Luminaire Lumens: 3858.0 lumens
Efficiency: N/A
Efficacy: 123.3 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.29 / 1.38
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 31.3
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°	1712	1712	1712
5°	1715	1705	1715
10°	1705	1700	1714
15°	1690	1694	1715
20°	1670	1683	1714
25°	1644	1670	1712
30°	1613	1657	1710
35°	1581	1640	1711
40°	1545	1628	1722
45°	1508	1617	1737
50°	1463	1613	1763
55°	1426	1615	1799
60°	1371	1629	1860
65°	1308	1646	1927
70°	1239	1697	2034
75°	1105	1770	2222
80°	942	1874	2271
85°	672	1857	2174



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	120.4	3.1
10°-20°	344.3	8.9
20°-30°	520.0	13.5
30°-40°	626.8	16.2
40°-50°	658.0	17.1
50°-60°	615.6	16.0
60°-70°	508.4	13.2
70°-80°	346.4	9.0
80°-90°	118.1	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°	984.8	25.5
0°-40°	1611.5	41.8
0°-60°	2885.1	74.8
0°-90°	3858.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3858.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1272	1272	1272	1272	1272	
5°	1270	1268	1262	1270	1270	120
15°	1214	1215	1216	1229	1231	342
25°	1107	1112	1125	1147	1153	509
35°	963	973	998	1032	1042	602
45°	792	809	850	896	913	611
55°	608	632	689	745	767	543
65°	411	445	517	582	605	408
75°	212	261	340	404	428	227
85°	44	86	120	136	141	54
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1272.3	1272.3	1272.3	1272.3	1272.3
2.5°	1273.6	1272.3	1265.9	1272.3	1271.1
5°	1269.8	1268.5	1262.1	1269.8	1269.8
7.5°	1260.8	1260.8	1254.4	1263.4	1264.7
10°	1248.0	1248.0	1244.2	1254.4	1254.4
12.5°	1232.7	1232.7	1232.7	1242.9	1244.2
15°	1213.5	1214.7	1216.0	1228.8	1231.4
17.5°	1190.4	1193.0	1196.8	1212.2	1214.7
20°	1166.1	1168.7	1175.1	1193.0	1196.8
22.5°	1135.4	1141.8	1150.7	1171.2	1175.1
25°	1107.2	1112.3	1125.1	1146.9	1153.3
27.5°	1072.7	1080.3	1097.0	1120.0	1129.0
30°	1038.1	1045.8	1066.3	1093.1	1100.8
32.5°	1001.0	1012.5	1034.3	1062.4	1071.4
35°	962.6	972.8	998.4	1031.7	1041.9
37.5°	920.3	934.4	962.6	998.4	1011.2
40°	879.4	894.7	926.7	965.1	980.5
42.5°	838.4	853.8	889.6	933.1	948.5
45°	792.3	809.0	849.9	896.0	912.7
47.5°	746.2	766.7	811.5	860.2	878.1
50°	698.9	721.9	770.6	821.8	842.2
52.5°	656.6	678.4	729.6	784.6	803.8
55°	608.0	632.3	688.6	745.0	766.7
57.5°	558.1	585.0	645.1	706.6	728.3
60°	509.4	538.9	605.4	666.9	691.2
62.5°	462.1	491.5	560.6	624.6	649.0
65°	410.9	445.4	517.1	582.4	605.4
67.5°	362.2	399.4	474.9	538.9	561.9
70°	314.9	350.7	431.4	494.1	517.1
72.5°	263.7	304.6	385.3	450.6	474.9
75°	212.5	261.1	340.5	404.5	427.5
77.5°	165.1	215.0	294.4	346.9	358.4
80°	121.6	172.8	241.9	279.0	293.1
82.5°	78.1	129.3	184.3	211.2	222.7
85°	43.5	85.8	120.3	135.7	140.8
87.5°	17.9	37.1	48.6	55.0	55.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)