

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: P313902

Luminaire Tested: **24FCZ2-40HE-UNV-L83050-CP125-W2A-U-4000K**

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: P313902
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-L83050-CP125-W2A-U-4000K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.125" POLYCARB SHEET
Light Source: (336) 4000K 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: 3820.0 lumens
Efficiency: N/A
Efficacy: 122.8 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

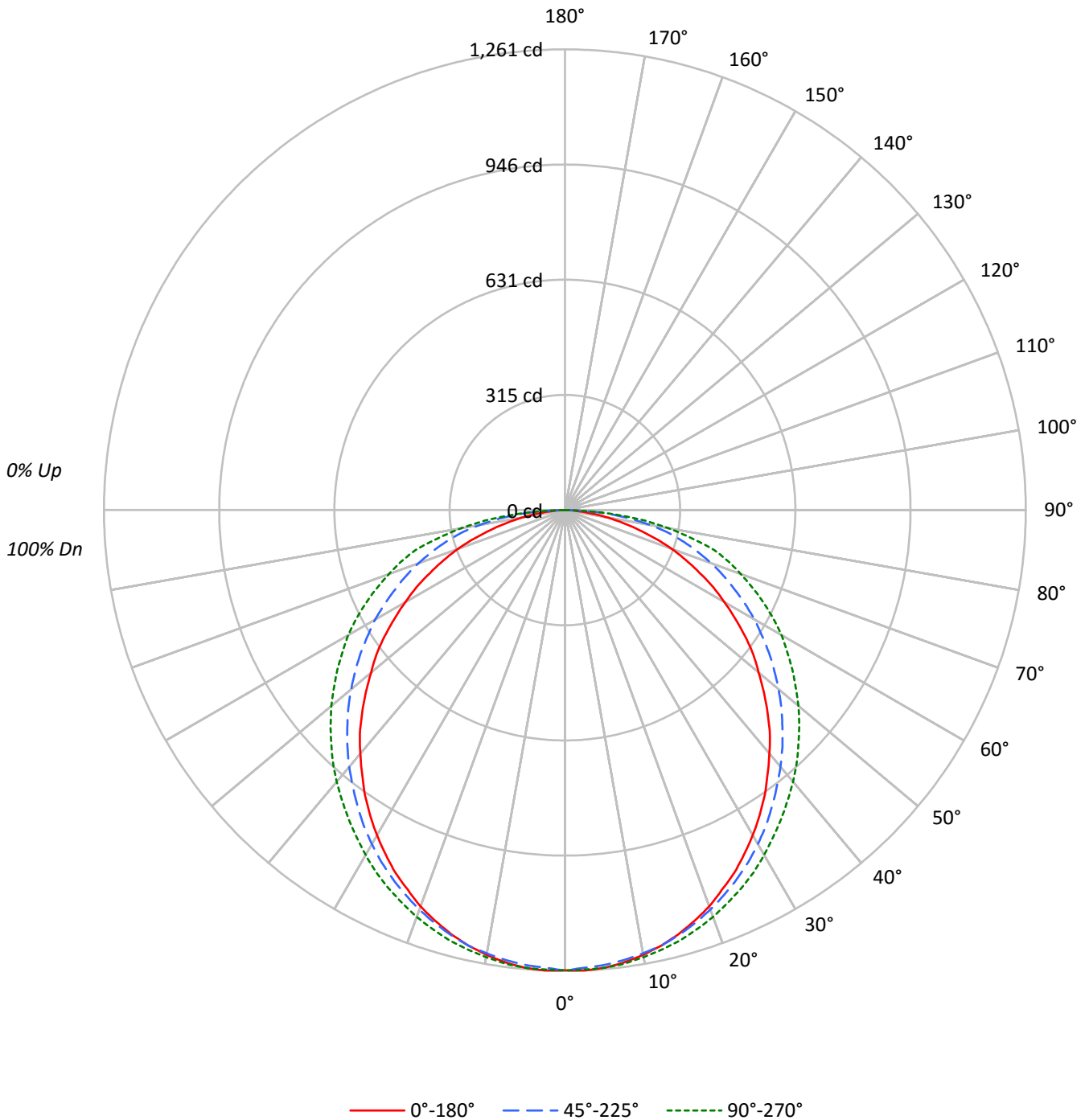
Input Watts (W): 31.1
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	50	30	10	0	
RCR																						
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100				100
1	108	103	98	94	105	100	96	92	96	92	89	92	89	87	88	86	84	82				82
2	98	89	81	75	95	87	80	74	83	78	73	80	75	71	77	73	69	67				67
3	89	77	69	62	86	76	68	61	73	66	60	70	64	59	67	62	58	56				56
4	81	68	59	52	79	67	58	52	64	57	51	62	56	50	60	54	50	47				47
5	74	61	52	45	72	60	51	44	58	50	44	56	49	43	54	48	43	41				41
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36				36
7	64	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31				31
8	59	45	37	31	57	45	36	30	43	36	30	42	35	30	41	34	30	28				28
9	55	41	33	27	54	41	33	27	40	32	27	39	32	27	38	31	27	25				25
10	52	38	30	25	50	38	30	25	37	30	25	36	29	25	35	29	24	23				23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1695	1695	1695
5°	1698	1688	1698
10°	1688	1683	1697
15°	1674	1677	1698
20°	1653	1666	1697
25°	1628	1654	1695
30°	1597	1640	1693
35°	1566	1624	1695
40°	1529	1612	1705
45°	1493	1601	1720
50°	1449	1597	1746
55°	1412	1600	1781
60°	1357	1613	1842
65°	1295	1630	1909
70°	1227	1680	2014
75°	1094	1752	2201
80°	933	1856	2249
85°	665	1839	2152



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	119.2	3.1
10°-20°	340.9	8.9
20°-30°	514.9	13.5
30°-40°	620.6	16.2
40°-50°	651.5	17.1
50°-60°	609.5	16.0
60°-70°	503.4	13.2
70°-80°	343.0	9.0
80°-90°	117.0	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°	975.1	25.5
0°-40°	1595.6	41.8
0°-60°	2856.7	74.8
0°-90°	3820.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3820.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1260	1260	1260	1260	1260	
5°	1257	1256	1250	1257	1257	119
15°	1202	1203	1204	1217	1219	339
25°	1096	1101	1114	1136	1142	504
35°	953	963	989	1022	1032	596
45°	784	801	842	887	904	605
55°	602	626	682	738	759	537
65°	407	441	512	577	600	404
75°	210	259	337	400	423	224
85°	43	85	119	134	139	54
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1259.8	1259.8	1259.8	1259.8	1259.8
2.5°	1261.1	1259.8	1253.5	1259.8	1258.5
5°	1257.3	1256.0	1249.7	1257.3	1257.3
7.5°	1248.4	1248.4	1242.1	1250.9	1252.2
10°	1235.7	1235.7	1231.9	1242.1	1242.1
12.5°	1220.5	1220.5	1220.5	1230.7	1231.9
15°	1201.5	1202.8	1204.0	1216.7	1219.2
17.5°	1178.7	1181.2	1185.0	1200.2	1202.8
20°	1154.6	1157.1	1163.5	1181.2	1185.0
22.5°	1124.2	1130.5	1139.4	1159.7	1163.5
25°	1096.3	1101.4	1114.1	1135.6	1141.9
27.5°	1062.1	1069.7	1086.2	1109.0	1117.9
30°	1027.9	1035.5	1055.8	1082.4	1090.0
32.5°	991.1	1002.5	1024.1	1051.9	1060.8
35°	953.1	963.2	988.6	1021.5	1031.7
37.5°	911.3	925.2	953.1	988.6	1001.3
40°	870.7	885.9	917.6	955.6	970.8
42.5°	830.2	845.4	880.8	923.9	939.1
45°	784.5	801.0	841.6	887.2	903.7
47.5°	738.9	759.2	803.5	851.7	869.4
50°	692.0	714.8	763.0	813.7	834.0
52.5°	650.2	671.7	722.4	776.9	795.9
55°	602.0	626.1	681.9	737.6	759.2
57.5°	552.6	579.2	638.8	699.6	721.2
60°	504.4	533.6	599.5	660.3	684.4
62.5°	457.5	486.7	555.1	618.5	642.6
65°	406.8	441.1	512.0	576.7	599.5
67.5°	358.7	395.4	470.2	533.6	556.4
70°	311.8	347.3	427.1	489.2	512.0
72.5°	261.1	301.6	381.5	446.1	470.2
75°	210.4	258.6	337.1	400.5	423.3
77.5°	163.5	212.9	291.5	343.5	354.9
80°	120.4	171.1	239.5	276.3	290.2
82.5°	77.3	128.0	182.5	209.1	220.5
85°	43.1	84.9	119.1	134.3	139.4
87.5°	17.7	36.8	48.2	54.5	54.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)