

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: P314276

Luminaire Tested: **24FCZ2-40HE-UNV-L83050-S-CP125-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: P314276
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-1)
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-S-CP125-W2A-U-3500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.125" POLYCARB 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: 3823.0 lumens
Efficiency: N/A
Efficacy: 125.8 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.27 / 1.35
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

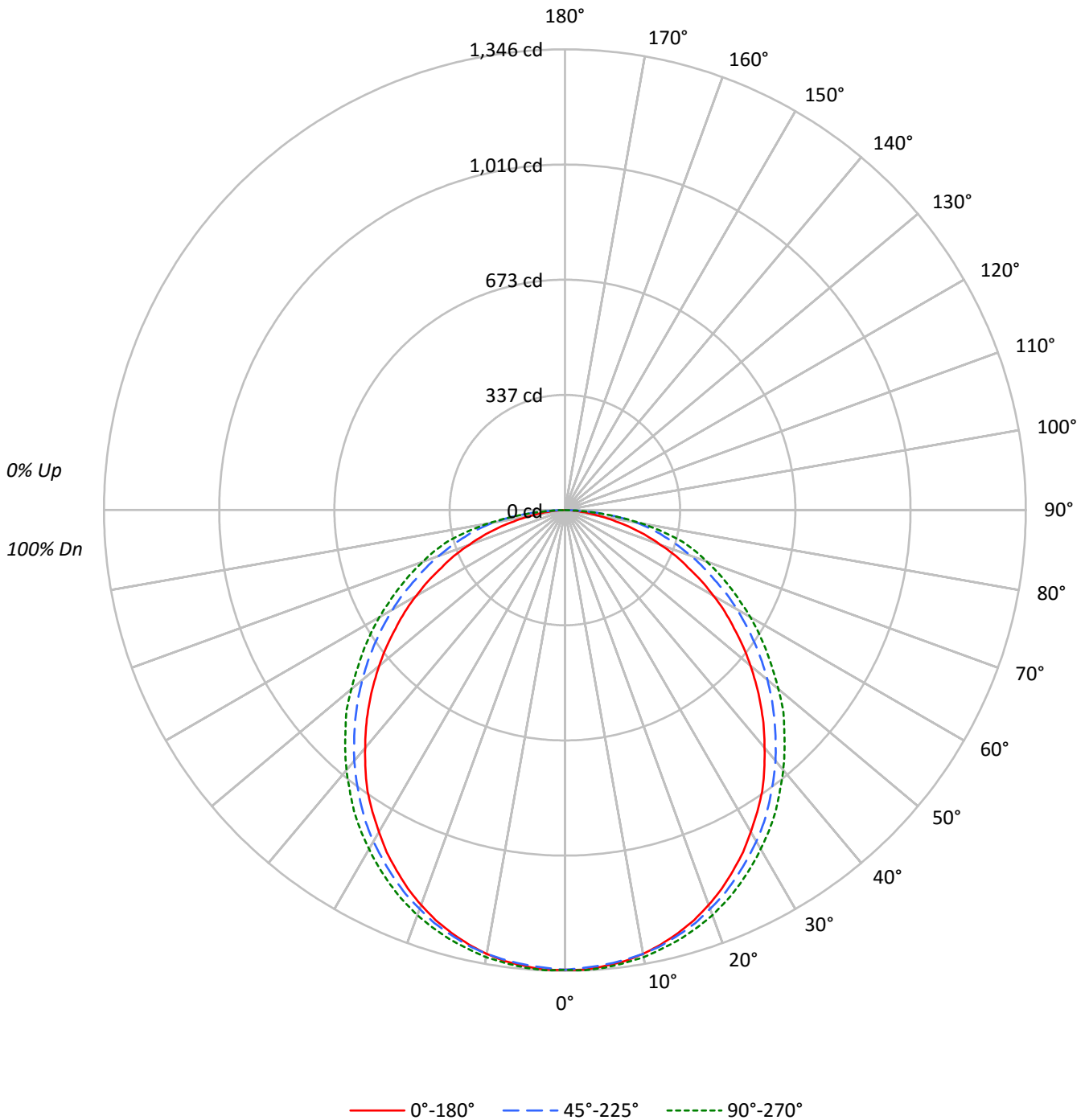
Input Watts (W): 30.4
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P314276

CATALOG NUMBER: 24FCZ2-40HE-UNV-L83050-S-CP125-W2A-U-3500K

Luminous Intensity Polar Plot





TEST NUMBER: P314276

CATALOG NUMBER: 24FCZ2-40HE-UNV-L83050-S-CP125-W2A-U-3500K

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	99	95	106	101	97	93	97	93	90	93	90	88	89	87	85	83
2	98	90	83	77	96	88	81	76	84	79	74	81	76	72	78	74	71	69
3	89	79	70	64	87	77	69	63	74	67	62	71	66	61	69	64	60	58
4	82	70	61	54	80	68	60	54	66	59	53	63	57	52	61	56	51	49
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	42
6	70	56	47	40	68	55	47	40	53	46	40	52	45	40	50	44	39	37
7	64	51	42	36	63	50	42	36	48	41	35	47	40	35	46	39	35	33
8	60	46	38	32	58	46	37	32	44	37	32	43	36	31	42	36	31	29
9	56	43	34	29	55	42	34	29	41	34	28	40	33	28	39	33	28	26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1807	1807	1807
5°	1806	1801	1812
10°	1798	1798	1812
15°	1781	1790	1808
20°	1758	1775	1803
25°	1725	1758	1792
30°	1687	1738	1777
35°	1649	1709	1763
40°	1593	1681	1743
45°	1541	1647	1724
50°	1482	1617	1703
55°	1416	1587	1686
60°	1350	1562	1683
65°	1264	1535	1693
70°	1170	1543	1739
75°	1048	1572	1837
80°	847	1665	1797
85°	638	1462	1425



TEST NUMBER: P314276

CATALOG NUMBER: 24FCZ2-40HE-UNV-L83050-S-CP125-W2A-U-3500K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	127.1	3.3
10°-20°	363.3	9.5
20°-30°	546.1	14.3
30°-40°	650.5	17.0
40°-50°	665.8	17.4
50°-60°	599.4	15.7
60°-70°	470.7	12.3
70°-80°	305.5	8.0
80°-90°	94.5	2.5
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°	1036.6	27.1
0°-40°	1687.1	44.1
0°-60°	2952.3	77.2
0°-90°	3823.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3823.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1343	1343	1343	1343	1343	
5°	1337	1339	1333	1341	1342	127
15°	1279	1282	1285	1296	1298	361
25°	1162	1172	1184	1203	1207	535
35°	1004	1016	1041	1066	1074	626
45°	810	829	866	899	906	624
55°	604	630	676	712	719	541
65°	397	427	482	522	532	395
75°	202	240	302	344	353	213
85°	41	76	95	92	92	50
90°	0	0	0	0	0	



TEST NUMBER: P314276

CATALOG NUMBER: 24FCZ2-40HE-UNV-L83050-S-CP125-W2A-U-3500K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1343.0	1343.0	1343.0	1343.0	1343.0
2.5°	1344.3	1344.3	1338.2	1344.3	1345.5
5°	1337.0	1339.4	1333.3	1340.6	1341.8
7.5°	1329.7	1329.7	1326.0	1333.3	1334.5
10°	1316.3	1317.5	1316.3	1324.8	1326.0
12.5°	1299.3	1301.8	1303.0	1311.5	1312.7
15°	1278.7	1282.3	1284.8	1295.7	1298.1
17.5°	1255.6	1259.3	1265.3	1277.5	1279.9
20°	1227.7	1232.5	1239.8	1255.6	1259.3
22.5°	1197.3	1202.2	1214.3	1228.9	1235.0
25°	1162.1	1171.8	1184.0	1203.4	1207.0
27.5°	1126.9	1135.4	1151.2	1171.8	1176.7
30°	1085.6	1099.0	1118.4	1139.0	1143.9
32.5°	1045.5	1058.9	1082.0	1103.8	1109.9
35°	1004.2	1016.4	1040.7	1066.2	1073.5
37.5°	956.9	972.7	999.4	1024.9	1032.2
40°	907.1	926.5	956.9	983.6	992.1
42.5°	859.7	880.4	910.7	939.9	949.6
45°	810.0	829.4	865.8	898.6	905.9
47.5°	759.0	780.8	819.7	852.5	864.6
50°	708.0	731.0	772.3	806.3	813.6
52.5°	657.0	681.2	725.0	761.4	765.0
55°	603.5	630.2	676.4	711.6	718.9
57.5°	554.9	578.0	627.8	664.2	672.7
60°	501.5	527.0	580.4	614.4	625.4
62.5°	450.5	477.2	533.1	567.1	576.8
65°	397.1	427.4	482.1	522.2	531.9
67.5°	350.9	380.1	438.4	477.2	486.9
70°	297.5	330.3	392.2	432.3	442.0
72.5°	251.4	285.4	347.3	386.2	400.7
75°	201.6	240.4	302.4	343.7	353.4
77.5°	153.0	197.9	261.1	292.7	292.7
80°	109.3	156.6	214.9	229.5	231.9
82.5°	71.6	117.8	159.1	157.9	157.9
85°	41.3	76.5	94.7	92.3	92.3
87.5°	15.8	31.6	34.0	34.0	32.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)