

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: P313746

Luminaire Tested: **24FCZ2-70HE-UNV-L83050-RDP-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: P313746
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-19)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 24FCZ2-70HE-UNV-L83050-RDP-CA125-W2A-U-3500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 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: 4320.0 lumens
Efficiency: N/A
Efficacy: 74.9 lumens/watt
Spacing Criteria (0/90/45): 1.26 / 1.3 / 1.41
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

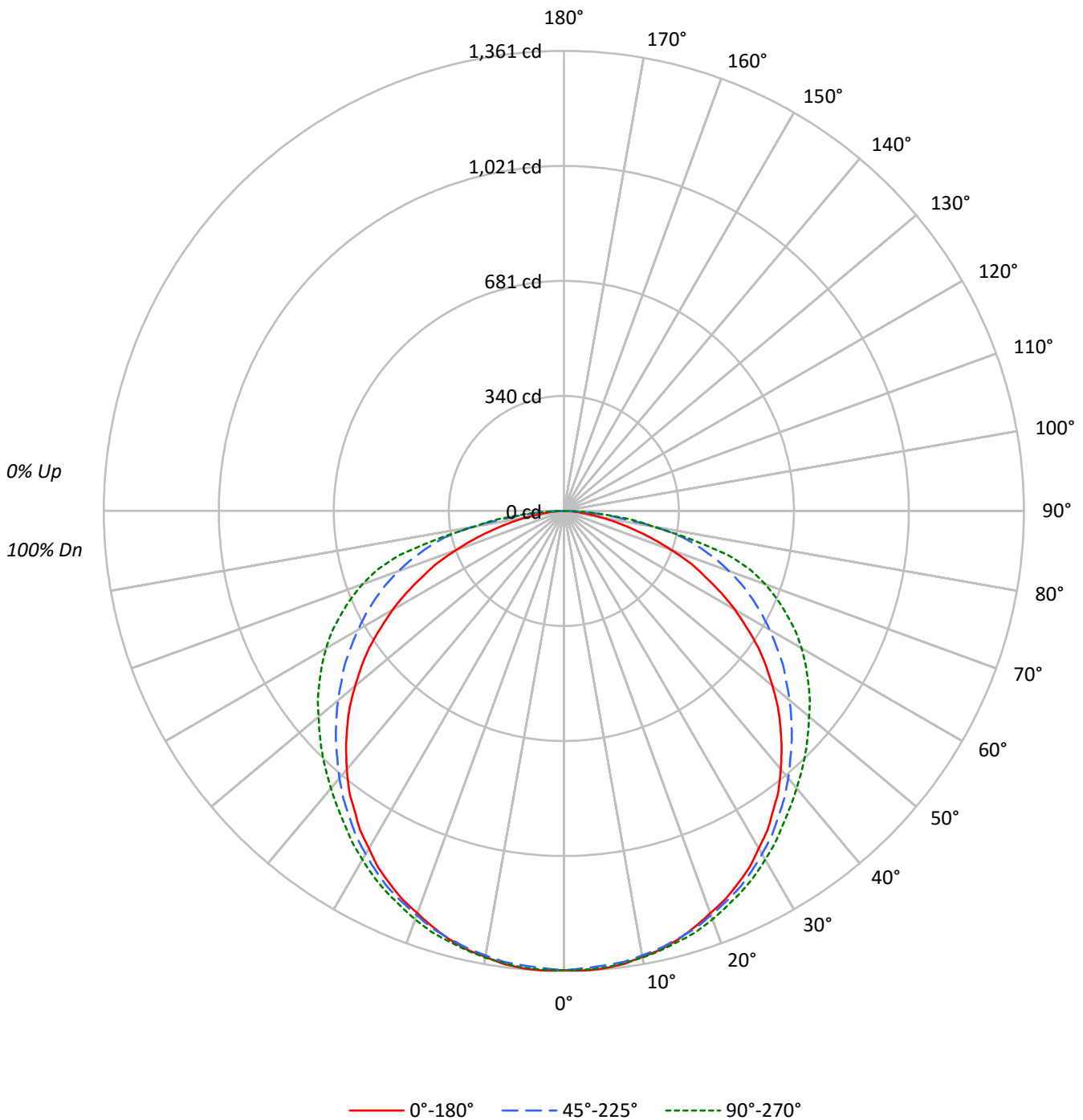
Input Watts (W): 57.7
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P313746

CATALOG NUMBER: 24FCZ2-70HE-UNV-L83050-RDP-CA125-W2A-U-3500K

Luminous Intensity Polar Plot





TEST NUMBER: P313746

CATALOG NUMBER: 24FCZ2-70HE-UNV-L83050-RDP-CA125-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	98	94	105	100	96	92	96	93	89	92	89	87	88	86	84	82
2	97	89	81	75	95	87	80	74	83	77	72	80	75	71	77	73	69	67
3	88	77	68	62	86	76	67	61	72	66	60	70	64	59	67	62	58	56
4	81	68	59	52	78	67	58	51	64	57	51	62	55	50	59	54	49	47
5	74	60	51	44	72	59	51	44	57	49	43	55	48	43	53	47	42	40
6	68	54	45	38	66	53	45	38	51	44	38	50	43	37	48	42	37	35
7	63	49	40	34	61	48	40	34	47	39	33	45	38	33	44	38	33	31
8	59	45	36	30	57	44	36	30	43	35	30	41	34	29	40	34	29	27
9	55	41	33	27	53	40	32	27	39	32	27	38	31	26	37	31	26	24
10	51	38	30	24	50	37	29	24	36	29	24	35	29	24	34	28	24	22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1828	1828	1828
5°	1835	1823	1832
10°	1830	1824	1833
15°	1827	1824	1836
20°	1813	1822	1841
25°	1807	1826	1845
30°	1791	1821	1851
35°	1774	1816	1858
40°	1754	1814	1882
45°	1725	1814	1925
50°	1686	1825	1982
55°	1644	1855	2071
60°	1574	1891	2185
65°	1473	1958	2319
70°	1340	2048	2495
75°	1136	2161	2607
80°	896	2175	2108
85°	662	1653	1853



TEST NUMBER: P313746

CATALOG NUMBER: 24FCZ2-70HE-UNV-L83050-RDP-CA125-W2A-U-3500K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	128.9	3.0
10°-20°	370.9	8.6
20°-30°	567.2	13.1
30°-40°	693.3	16.0
40°-50°	739.0	17.1
50°-60°	706.5	16.4
60°-70°	598.5	13.9
70°-80°	402.3	9.3
80°-90°	113.5	2.6
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°	1066.9	24.7
0°-40°	1760.2	40.7
0°-60°	3205.7	74.2
0°-90°	4320.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4320.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1358	1358	1358	1358	1358	
5°	1358	1356	1350	1356	1356	129
15°	1311	1311	1309	1320	1318	370
25°	1217	1221	1230	1241	1243	561
35°	1080	1088	1106	1127	1131	677
45°	906	921	954	994	1011	699
55°	701	726	791	853	883	624
65°	463	510	615	696	728	459
75°	219	298	416	486	501	234
85°	43	88	107	116	120	53
90°	0	0	0	0	0	



TEST NUMBER: P313746

CATALOG NUMBER: 24FCZ2-70HE-UNV-L83050-RDP-CA125-W2A-U-3500K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1358.5	1358.5	1358.5	1358.5	1358.5
2.5°	1360.7	1360.7	1354.2	1358.5	1358.5
5°	1358.5	1356.4	1349.9	1356.4	1356.4
7.5°	1352.1	1349.9	1345.7	1352.1	1349.9
10°	1339.2	1339.2	1334.9	1341.4	1341.4
12.5°	1328.5	1326.4	1324.2	1332.8	1330.7
15°	1311.4	1311.4	1309.2	1319.9	1317.8
17.5°	1289.9	1292.1	1294.2	1302.8	1304.9
20°	1266.4	1270.7	1272.8	1285.7	1285.7
22.5°	1244.9	1247.1	1251.4	1264.2	1264.2
25°	1217.1	1221.4	1230.0	1240.7	1242.8
27.5°	1189.2	1191.4	1202.1	1217.1	1219.2
30°	1152.8	1159.2	1172.1	1189.2	1191.4
32.5°	1120.7	1127.1	1142.1	1159.2	1163.5
35°	1080.0	1088.5	1105.7	1127.1	1131.4
37.5°	1043.5	1050.0	1071.4	1095.0	1101.4
40°	998.5	1011.4	1032.8	1060.7	1071.4
42.5°	953.5	966.4	992.1	1028.5	1041.4
45°	906.4	921.4	953.5	994.2	1011.4
47.5°	859.3	876.4	912.8	960.0	979.2
50°	805.7	827.1	872.1	925.7	947.1
52.5°	754.3	780.0	829.3	889.2	917.1
55°	700.7	726.4	790.7	852.8	882.8
57.5°	640.7	675.0	745.7	816.4	848.5
60°	585.0	617.1	702.8	780.0	812.1
62.5°	525.0	567.8	660.0	741.4	773.5
65°	462.8	510.0	615.0	696.4	728.5
67.5°	407.1	458.6	570.0	651.4	683.5
70°	340.7	405.0	520.7	602.1	634.3
72.5°	278.6	349.3	469.3	548.5	578.5
75°	218.6	297.8	415.7	486.4	501.4
77.5°	162.9	246.4	360.0	390.0	379.3
80°	115.7	197.1	280.7	265.7	272.1
82.5°	75.0	150.0	173.6	197.1	203.6
85°	42.9	87.9	107.1	115.7	120.0
87.5°	19.3	32.1	42.9	42.9	40.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)