

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: P313752

Luminaire Tested: **24FCZ2-70HE-UNV-L83050-RDP-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: P313752
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-CP125-W2A-U-4000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 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: 4448.0 lumens
Efficiency: N/A
Efficacy: 75.4 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

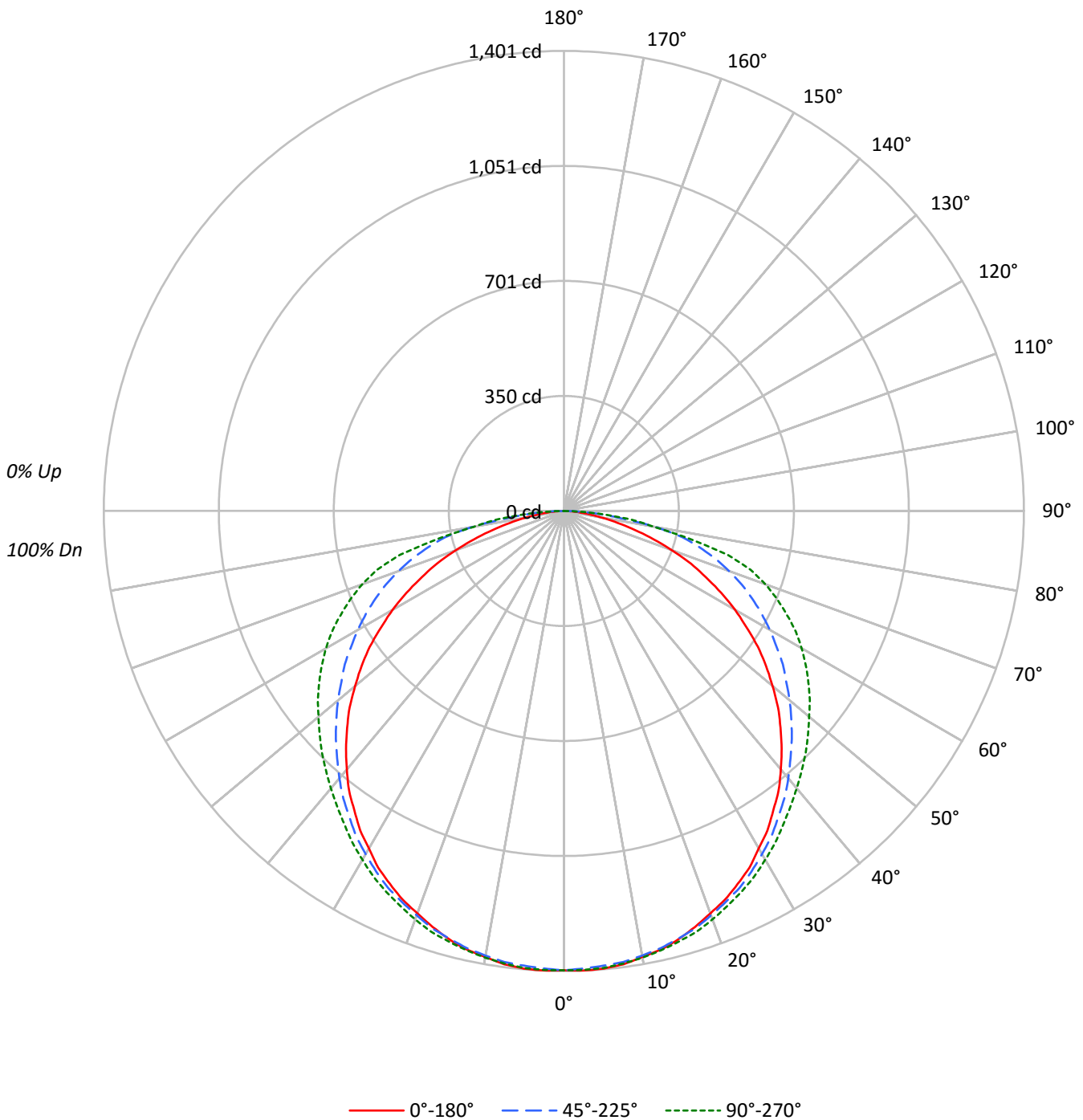
Input Watts (W): 59
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	1882	1882	1882
5°	1889	1877	1886
10°	1884	1878	1887
15°	1881	1878	1890
20°	1867	1876	1895
25°	1860	1880	1900
30°	1844	1875	1906
35°	1827	1870	1913
40°	1806	1868	1937
45°	1776	1868	1982
50°	1737	1879	2041
55°	1692	1910	2132
60°	1621	1947	2250
65°	1517	2016	2388
70°	1380	2109	2569
75°	1170	2225	2684
80°	923	2239	2171
85°	681	1703	1908



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	132.7	3.0
10°-20°	381.9	8.6
20°-30°	584.0	13.1
30°-40°	713.9	16.0
40°-50°	760.9	17.1
50°-60°	727.5	16.4
60°-70°	616.3	13.9
70°-80°	414.2	9.3
80°-90°	116.8	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°	1098.5	24.7
0°-40°	1812.4	40.7
0°-60°	3300.7	74.2
0°-90°	4448.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4448.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1399	1399	1399	1399	1399	
5°	1399	1397	1390	1397	1397	133
15°	1350	1350	1348	1359	1357	381
25°	1253	1258	1266	1277	1280	578
35°	1112	1121	1138	1160	1165	697
45°	933	949	982	1024	1041	720
55°	721	748	814	878	909	643
65°	477	525	633	717	750	473
75°	225	307	428	501	516	241
85°	44	90	110	119	124	55
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1398.8	1398.8	1398.8	1398.8	1398.8
2.5°	1401.0	1401.0	1394.4	1398.8	1398.8
5°	1398.8	1396.6	1389.9	1396.6	1396.6
7.5°	1392.2	1389.9	1385.5	1392.2	1389.9
10°	1378.9	1378.9	1374.5	1381.1	1381.1
12.5°	1367.9	1365.7	1363.5	1372.3	1370.1
15°	1350.2	1350.2	1348.0	1359.1	1356.9
17.5°	1328.2	1330.4	1332.6	1341.4	1343.6
20°	1303.9	1308.3	1310.5	1323.8	1323.8
22.5°	1281.8	1284.0	1288.5	1301.7	1301.7
25°	1253.2	1257.6	1266.4	1277.4	1279.6
27.5°	1224.5	1226.7	1237.7	1253.2	1255.4
30°	1187.0	1193.6	1206.8	1224.5	1226.7
32.5°	1153.9	1160.5	1175.9	1193.6	1198.0
35°	1112.0	1120.8	1138.4	1160.5	1164.9
37.5°	1074.4	1081.1	1103.1	1127.4	1134.0
40°	1028.1	1041.4	1063.4	1092.1	1103.1
42.5°	981.8	995.0	1021.5	1059.0	1072.2
45°	933.2	948.7	981.8	1023.7	1041.4
47.5°	884.7	902.4	939.9	988.4	1008.3
50°	829.6	851.6	897.9	953.1	975.2
52.5°	776.6	803.1	853.8	915.6	944.3
55°	721.4	747.9	814.1	878.1	909.0
57.5°	659.7	695.0	767.8	840.6	873.7
60°	602.3	635.4	723.7	803.1	836.2
62.5°	540.5	584.7	679.5	763.4	796.5
65°	476.6	525.1	633.2	717.0	750.1
67.5°	419.2	472.1	586.9	670.7	703.8
70°	350.8	417.0	536.1	620.0	653.1
72.5°	286.8	359.6	483.2	564.8	595.7
75°	225.0	306.7	428.0	500.8	516.3
77.5°	167.7	253.7	370.7	401.5	390.5
80°	119.1	203.0	289.0	273.6	280.2
82.5°	77.2	154.4	178.7	203.0	209.6
85°	44.1	90.5	110.3	119.1	123.6
87.5°	19.9	33.1	44.1	44.1	41.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)