

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: P313375

Luminaire Tested: **24FCZ2-70HE-UNV-L83050-HRP-CP125-W2A-U-3000K**

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: P313375
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-20)
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-HRP-CP125-W2A-U-3000K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.125" POLYCARB SHEET
Light Source: (336) 3000K 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: 4624.0 lumens
Efficiency: N/A
Efficacy: 80.3 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.3 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

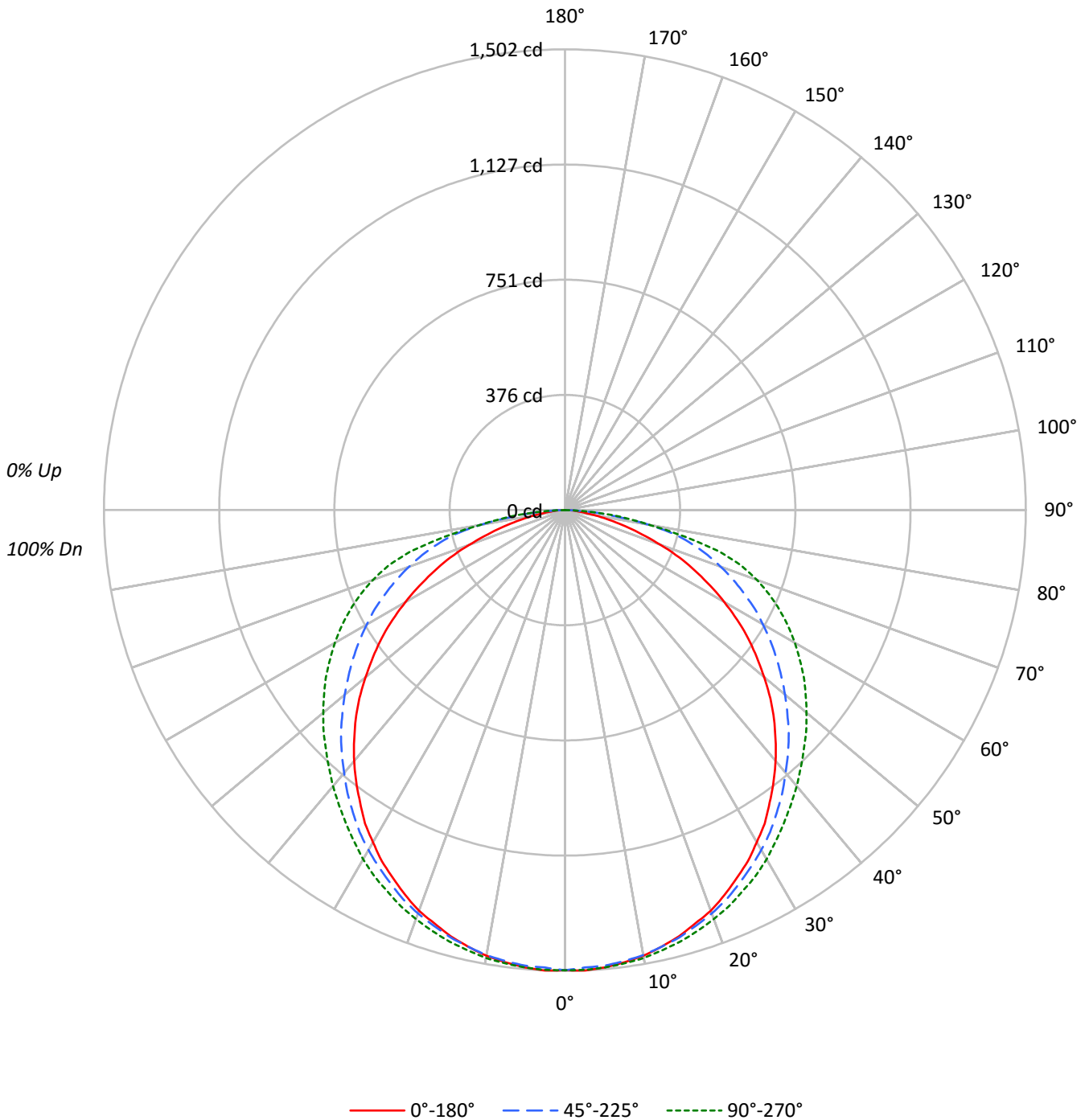
Input Watts (W): 57.6
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	101	96	93	96	93	90	92	90	87	89	86	84	82
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67
3	89	78	69	62	86	76	68	62	73	66	61	70	64	59	68	63	58	56
4	81	68	59	52	79	67	59	52	65	57	51	62	56	50	60	54	50	48
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36
7	63	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31
8	59	45	36	30	57	44	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	24	35	29	24	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2019	2019	2019
5°	2021	2013	2021
10°	2015	2013	2026
15°	2003	2009	2028
20°	1990	2004	2032
25°	1966	1995	2035
30°	1943	1988	2042
35°	1911	1978	2044
40°	1877	1965	2064
45°	1834	1963	2096
50°	1775	1961	2152
55°	1712	1975	2230
60°	1615	2006	2329
65°	1492	2052	2459
70°	1302	2125	2620
75°	1057	2234	2707
80°	780	2190	2190
85°	597	1613	1823



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	142.1	3.1
10°-20°	408.1	8.8
20°-30°	621.3	13.4
30°-40°	754.4	16.3
40°-50°	797.0	17.2
50°-60°	752.1	16.3
60°-70°	625.3	13.5
70°-80°	411.4	8.9
80°-90°	112.1	2.4
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°	1171.6	25.3
0°-40°	1926.0	41.7
0°-60°	3475.1	75.2
0°-90°	4624.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4624.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1500	1500	1500	1500	1500	
5°	1496	1496	1491	1496	1496	142
15°	1438	1440	1442	1456	1456	406
25°	1324	1332	1344	1367	1371	611
35°	1163	1177	1204	1235	1245	728
45°	964	983	1032	1082	1102	742
55°	730	761	842	922	950	650
65°	468	523	645	740	772	463
75°	203	296	430	509	521	219
85°	39	85	104	116	118	47
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1500.3	1500.3	1500.3	1500.3	1500.3
2.5°	1502.2	1500.3	1492.5	1500.3	1500.3
5°	1496.4	1496.4	1490.6	1496.4	1496.4
7.5°	1486.7	1486.7	1482.8	1490.6	1490.6
10°	1475.1	1475.1	1473.2	1482.8	1482.8
12.5°	1457.7	1459.6	1457.7	1469.3	1469.3
15°	1438.3	1440.2	1442.2	1455.7	1455.7
17.5°	1413.1	1417.0	1420.9	1436.4	1438.3
20°	1389.9	1391.9	1399.6	1417.0	1419.0
22.5°	1358.9	1364.8	1374.4	1391.9	1397.7
25°	1324.1	1331.8	1343.5	1366.7	1370.6
27.5°	1291.2	1297.0	1312.5	1337.7	1345.4
30°	1250.5	1260.2	1279.6	1304.7	1314.4
32.5°	1211.8	1221.5	1244.7	1271.8	1279.6
35°	1163.4	1177.0	1204.1	1235.1	1244.7
37.5°	1117.0	1130.5	1163.4	1198.3	1209.9
40°	1068.6	1084.1	1118.9	1159.6	1175.0
42.5°	1016.3	1037.6	1076.3	1120.8	1138.3
45°	964.0	983.4	1031.8	1082.1	1101.5
47.5°	907.9	931.1	983.4	1043.4	1066.6
50°	847.9	876.9	936.9	1002.8	1027.9
52.5°	787.9	820.8	888.5	962.1	989.2
55°	729.8	760.8	842.1	921.5	950.5
57.5°	665.9	704.6	793.7	878.9	907.9
60°	600.1	642.7	745.3	834.3	865.3
62.5°	534.3	582.7	698.8	787.9	820.8
65°	468.5	522.7	644.6	739.5	772.4
67.5°	404.6	464.6	594.3	689.2	722.1
70°	331.0	406.5	540.1	633.0	665.9
72.5°	263.3	350.4	487.8	574.9	604.0
75°	203.3	296.2	429.8	509.1	520.7
77.5°	149.1	242.0	369.7	396.8	398.8
80°	100.7	193.6	282.6	278.8	282.6
82.5°	65.8	145.2	178.1	199.4	201.3
85°	38.7	85.2	104.5	116.1	118.1
87.5°	19.4	29.0	36.8	38.7	42.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)