

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: P309742

Luminaire Tested: **24FCZ2-70HE-UNV-L82765-HRP-CA125-W2A-U-6500K**

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: P309742
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-L82765-HRP-CA125-W2A-U-6500K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.125" ACRYLIC SHEET
Light Source: (336) 6500K 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: 5093.0 lumens
Efficiency: N/A
Efficacy: 84.5 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

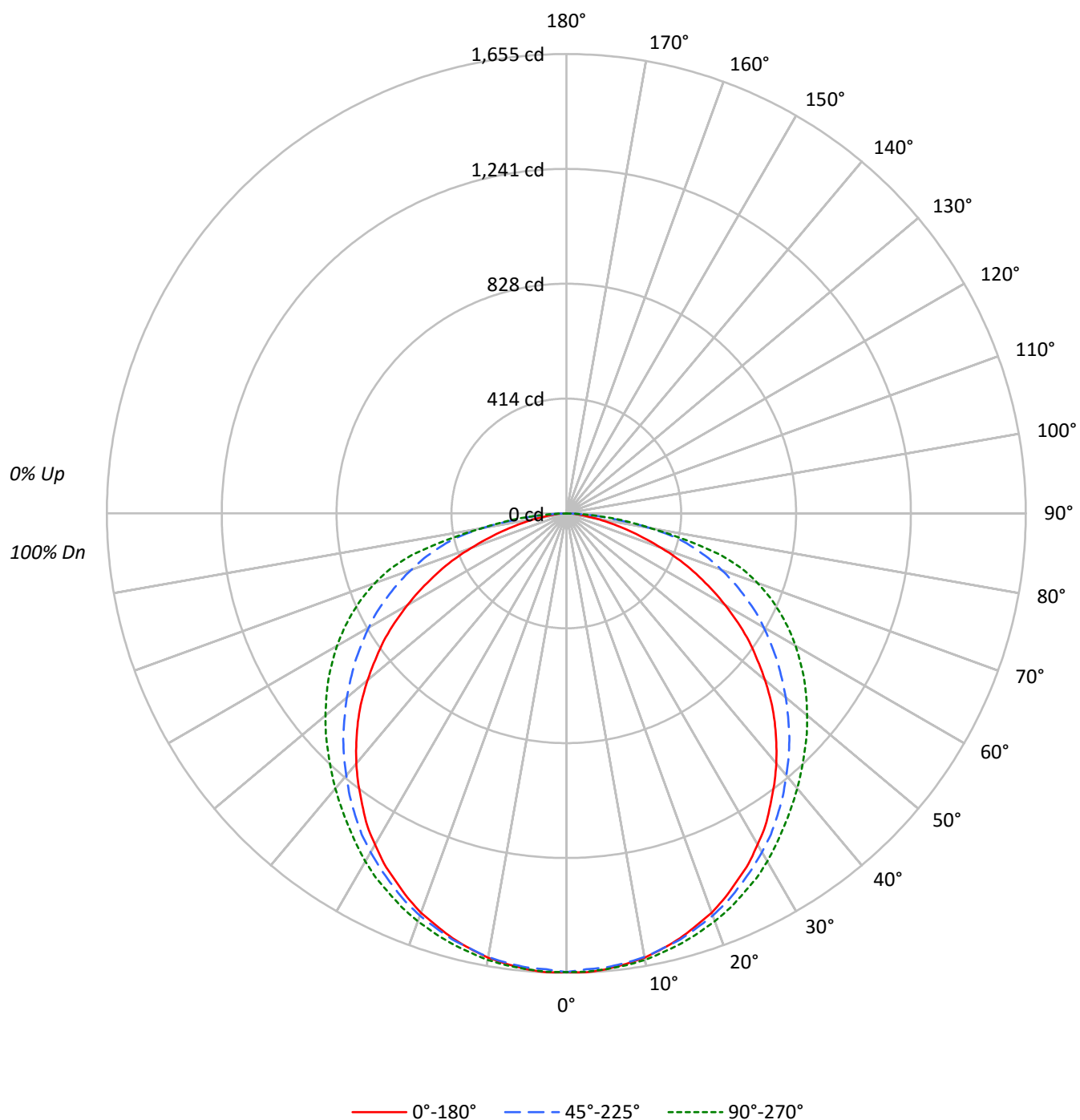
Input Watts (W): 60.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				0
RW	70	50	30	10	70	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		100
1	108	103	98	94	105	101	96	93	96	93	90		92	90	87		82
2	98	89	82	76	95	87	80	75	83	78	73		80	75	71		67
3	89	78	69	62	86	76	68	62	73	66	61		70	64	59		56
4	81	68	59	52	79	67	59	52	65	57	51		62	56	50		48
5	74	61	52	45	72	60	51	45	58	50	44		56	49	44		41
6	69	55	46	39	67	54	45	39	52	44	38		50	43	38		36
7	63	50	41	34	62	49	40	34	47	39	34		46	39	34		31
8	59	45	36	30	57	44	36	30	43	36	30		42	35	30		28
9	55	41	33	27	54	41	33	27	40	32	27		39	32	27		25
10	52	38	30	25	50	38	30	25	37	30	25		36	29	24		23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2223	2223	2223
5°	2226	2217	2226
10°	2220	2217	2231
15°	2207	2213	2233
20°	2192	2207	2238
25°	2165	2197	2241
30°	2140	2190	2249
35°	2105	2178	2252
40°	2067	2165	2273
45°	2020	2162	2308
50°	1955	2160	2370
55°	1886	2176	2456
60°	1779	2209	2565
65°	1643	2260	2708
70°	1434	2340	2886
75°	1164	2460	2982
80°	859	2412	2412
85°	658	1777	2008



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	156.5	3.1
10°-20°	449.5	8.8
20°-30°	684.3	13.4
30°-40°	830.9	16.3
40°-50°	877.9	17.2
50°-60°	828.4	16.3
60°-70°	688.8	13.5
70°-80°	453.1	8.9
80°-90°	123.5	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°	1290.4	25.3
0°-40°	2121.3	41.7
0°-60°	3827.6	75.2
0°-90°	5093.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5093.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1652	1652	1652	1652	1652	
5°	1648	1648	1642	1648	1648	157
15°	1584	1586	1588	1603	1603	447
25°	1458	1467	1480	1505	1510	673
35°	1281	1296	1326	1360	1371	802
45°	1062	1083	1136	1192	1213	818
55°	804	838	928	1015	1047	716
65°	516	576	710	814	851	510
75°	224	326	473	561	574	241
85°	43	94	115	128	130	52
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1652.4	1652.4	1652.4	1652.4	1652.4
2.5°	1654.6	1652.4	1643.9	1652.4	1652.4
5°	1648.2	1648.2	1641.8	1648.2	1648.2
7.5°	1637.5	1637.5	1633.2	1641.8	1641.8
10°	1624.7	1624.7	1622.6	1633.2	1633.2
12.5°	1605.5	1607.7	1605.5	1618.3	1618.3
15°	1584.2	1586.3	1588.5	1603.4	1603.4
17.5°	1556.5	1560.7	1565.0	1582.1	1584.2
20°	1530.9	1533.0	1541.6	1560.7	1562.9
22.5°	1496.8	1503.2	1513.8	1533.0	1539.4
25°	1458.4	1466.9	1479.7	1505.3	1509.6
27.5°	1422.2	1428.6	1445.6	1473.3	1481.9
30°	1377.4	1388.0	1409.4	1437.1	1447.7
32.5°	1334.7	1345.4	1371.0	1400.8	1409.4
35°	1281.4	1296.4	1326.2	1360.3	1371.0
37.5°	1230.3	1245.2	1281.4	1319.8	1332.6
40°	1177.0	1194.0	1232.4	1277.2	1294.2
42.5°	1119.4	1142.8	1185.5	1234.5	1253.7
45°	1061.8	1083.1	1136.4	1191.9	1213.2
47.5°	1000.0	1025.6	1083.1	1149.2	1174.8
50°	933.9	965.9	1032.0	1104.5	1132.2
52.5°	867.8	904.0	978.7	1059.7	1089.5
55°	803.8	837.9	927.5	1014.9	1046.9
57.5°	733.5	776.1	874.2	968.0	1000.0
60°	661.0	707.9	820.9	919.0	953.1
62.5°	588.5	641.8	769.7	867.8	904.0
65°	516.0	575.7	710.0	814.5	850.7
67.5°	445.6	511.7	654.6	759.1	795.3
70°	364.6	447.8	594.9	697.2	733.5
72.5°	290.0	385.9	537.3	633.3	665.2
75°	223.9	326.2	473.3	560.8	573.6
77.5°	164.2	266.5	407.2	437.1	439.2
80°	110.9	213.2	311.3	307.0	311.3
82.5°	72.5	159.9	196.2	219.6	221.7
85°	42.6	93.8	115.1	127.9	130.1
87.5°	21.3	32.0	40.5	42.6	46.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)