

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: P309735

Luminaire Tested: **24FCZ2-70HE-UNV-L82765-HRP-CA125-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: P309735
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-3000K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.125" ACRYLIC 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: 4601.0 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

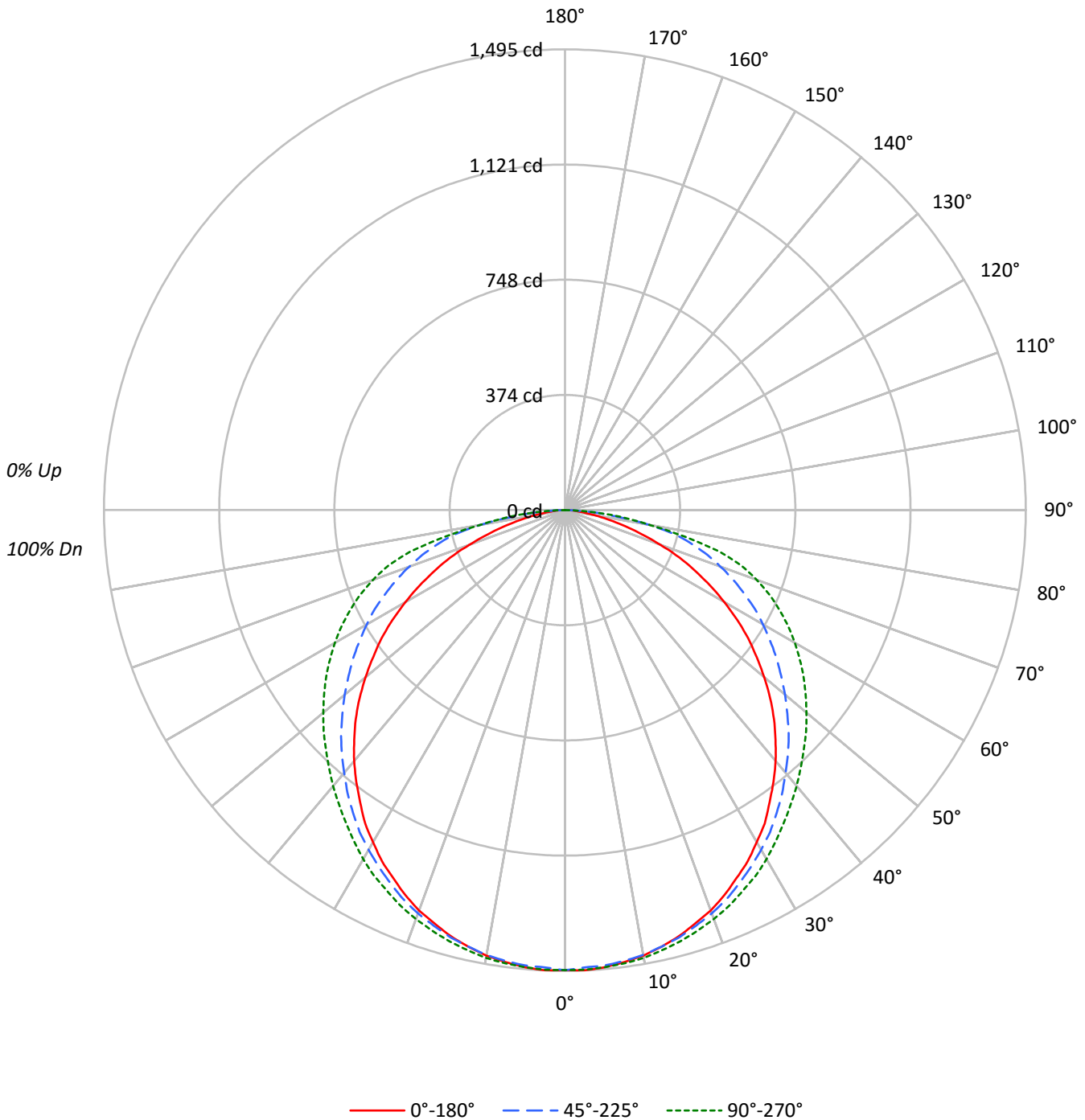
Input Watts (W): 57.3
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2009	2009	2009
5°	2011	2003	2011
10°	2005	2003	2016
15°	1994	1999	2018
20°	1980	1994	2022
25°	1956	1985	2025
30°	1933	1978	2032
35°	1901	1968	2034
40°	1868	1955	2054
45°	1825	1954	2085
50°	1766	1951	2141
55°	1704	1966	2219
60°	1607	1996	2317
65°	1484	2042	2447
70°	1296	2114	2607
75°	1052	2223	2693
80°	776	2179	2179
85°	594	1606	1814



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	141.4	3.1
10°-20°	406.1	8.8
20°-30°	618.2	13.4
30°-40°	750.7	16.3
40°-50°	793.1	17.2
50°-60°	748.4	16.3
60°-70°	622.2	13.5
70°-80°	409.4	8.9
80°-90°	111.6	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°	1165.7	25.3
0°-40°	1916.4	41.7
0°-60°	3457.8	75.2
0°-90°	4601.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4601.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1493	1493	1493	1493	1493	
5°	1489	1489	1483	1489	1489	141
15°	1431	1433	1435	1448	1448	404
25°	1318	1325	1337	1360	1364	608
35°	1158	1171	1198	1229	1238	725
45°	959	978	1027	1077	1096	739
55°	726	757	838	917	946	647
65°	466	520	641	736	769	461
75°	202	295	428	507	518	218
85°	38	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°	1492.8	1492.8	1492.8	1492.8	1492.8
2.5°	1494.7	1492.8	1485.1	1492.8	1492.8
5°	1488.9	1488.9	1483.2	1488.9	1488.9
7.5°	1479.3	1479.3	1475.5	1483.2	1483.2
10°	1467.8	1467.8	1465.8	1475.5	1475.5
12.5°	1450.4	1452.3	1450.4	1462.0	1462.0
15°	1431.2	1433.1	1435.0	1448.5	1448.5
17.5°	1406.1	1410.0	1413.8	1429.2	1431.2
20°	1383.0	1384.9	1392.6	1410.0	1411.9
22.5°	1352.2	1358.0	1367.6	1384.9	1390.7
25°	1317.5	1325.2	1336.8	1359.9	1363.7
27.5°	1284.8	1290.5	1306.0	1331.0	1338.7
30°	1244.3	1254.0	1273.2	1298.3	1307.9
32.5°	1205.8	1215.4	1238.5	1265.5	1273.2
35°	1157.6	1171.1	1198.1	1228.9	1238.5
37.5°	1111.4	1124.9	1157.6	1192.3	1203.9
40°	1063.3	1078.7	1113.3	1153.8	1169.2
42.5°	1011.3	1032.4	1071.0	1115.3	1132.6
45°	959.2	978.5	1026.7	1076.7	1096.0
47.5°	903.4	926.5	978.5	1038.2	1061.3
50°	843.7	872.6	932.3	997.8	1022.8
52.5°	784.0	816.7	884.1	957.3	984.3
55°	726.2	757.0	837.9	916.9	945.8
57.5°	662.6	701.1	789.7	874.5	903.4
60°	597.1	639.5	741.6	830.2	861.0
62.5°	531.6	579.8	695.4	784.0	816.7
65°	466.1	520.1	641.4	735.8	768.6
67.5°	402.6	462.3	591.3	685.7	718.5
70°	329.4	404.5	537.4	629.9	662.6
72.5°	262.0	348.6	485.4	572.1	601.0
75°	202.3	294.7	427.6	506.6	518.1
77.5°	148.3	240.8	367.9	394.9	396.8
80°	100.2	192.6	281.2	277.4	281.2
82.5°	65.5	144.5	177.2	198.4	200.3
85°	38.5	84.8	104.0	115.6	117.5
87.5°	19.3	28.9	36.6	38.5	42.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)