

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: P309750

Luminaire Tested: **24FCZ2-70HE-UNV-L82765-HRP-CP125-W2A-U-5700K**

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: P309750
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-CP125-W2A-U-5700K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.125"
POLYCARB SHEET
Light Source: (336) 5700K 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: 4981.0 lumens
Efficiency: N/A
Efficacy: 84.0 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

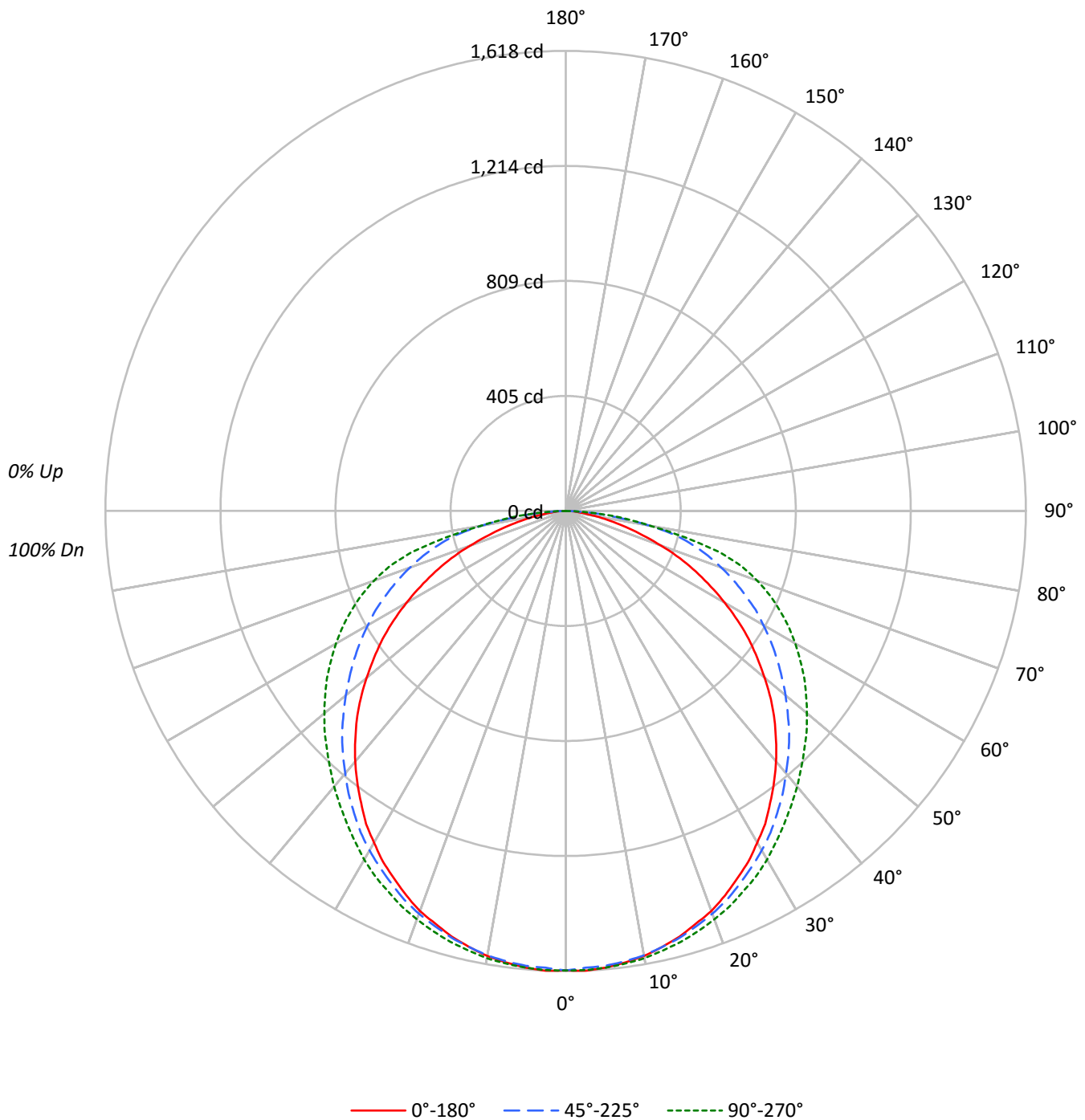
Input Watts (W): 59.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2174	2174	2174
5°	2177	2169	2177
10°	2171	2168	2182
15°	2158	2164	2184
20°	2144	2159	2189
25°	2117	2148	2192
30°	2093	2142	2200
35°	2059	2130	2202
40°	2022	2117	2223
45°	1976	2115	2258
50°	1912	2113	2318
55°	1844	2128	2402
60°	1739	2160	2508
65°	1606	2211	2649
70°	1403	2289	2822
75°	1138	2406	2916
80°	840	2359	2359
85°	644	1738	1964



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	153.1	3.1
10°-20°	439.6	8.8
20°-30°	669.3	13.4
30°-40°	812.7	16.3
40°-50°	858.6	17.2
50°-60°	810.2	16.3
60°-70°	673.6	13.5
70°-80°	443.2	8.9
80°-90°	120.8	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°	1262.0	25.3
0°-40°	2074.7	41.7
0°-60°	3743.4	75.2
0°-90°	4981.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4981.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1616	1616	1616	1616	1616	
5°	1612	1612	1606	1612	1612	153
15°	1549	1551	1554	1568	1568	437
25°	1426	1435	1447	1472	1476	658
35°	1253	1268	1297	1330	1341	785
45°	1038	1059	1112	1166	1186	800
55°	786	820	907	993	1024	700
65°	505	563	694	797	832	499
75°	219	319	463	548	561	236
85°	42	92	113	125	127	51
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1616.1	1616.1	1616.1	1616.1	1616.1
2.5°	1618.2	1616.1	1607.7	1616.1	1616.1
5°	1611.9	1611.9	1605.7	1611.9	1611.9
7.5°	1601.5	1601.5	1597.3	1605.7	1605.7
10°	1589.0	1589.0	1586.9	1597.3	1597.3
12.5°	1570.2	1572.3	1570.2	1582.7	1582.7
15°	1549.4	1551.4	1553.5	1568.1	1568.1
17.5°	1522.3	1526.4	1530.6	1547.3	1549.4
20°	1497.2	1499.3	1507.7	1526.4	1528.5
22.5°	1463.9	1470.1	1480.5	1499.3	1505.6
25°	1426.3	1434.7	1447.2	1472.2	1476.4
27.5°	1390.9	1397.1	1413.8	1440.9	1449.3
30°	1347.1	1357.5	1378.4	1405.5	1415.9
32.5°	1305.4	1315.8	1340.8	1370.0	1378.4
35°	1253.3	1267.8	1297.0	1330.4	1340.8
37.5°	1203.2	1217.8	1253.3	1290.8	1303.3
40°	1151.1	1167.8	1205.3	1249.1	1265.8
42.5°	1094.8	1117.7	1159.4	1207.4	1226.1
45°	1038.5	1059.3	1111.5	1165.7	1186.5
47.5°	978.0	1003.0	1059.3	1124.0	1149.0
50°	913.4	944.6	1009.3	1080.2	1107.3
52.5°	848.7	884.2	957.1	1036.4	1065.6
55°	786.1	819.5	907.1	992.6	1023.9
57.5°	717.3	759.0	855.0	946.7	978.0
60°	646.4	692.3	802.8	898.8	932.1
62.5°	575.5	627.7	752.8	848.7	884.2
65°	504.6	563.0	694.4	796.6	832.0
67.5°	435.8	500.5	640.2	742.4	777.8
70°	356.6	437.9	581.8	681.9	717.3
72.5°	283.6	377.4	525.5	619.3	650.6
75°	219.0	319.0	462.9	548.4	560.9
77.5°	160.6	260.7	398.3	427.5	429.6
80°	108.4	208.5	304.5	300.3	304.5
82.5°	70.9	156.4	191.8	214.8	216.9
85°	41.7	91.8	112.6	125.1	127.2
87.5°	20.9	31.3	39.6	41.7	45.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)