

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: P310457

Luminaire Tested: **24FCZ2-75HE-UNV-L82765-RDP-CA125-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: P310457
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: 24FCZ2-75HE-UNV-L82765-RDP-CA125-W2A-U-4000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.125" ACRYLIC 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: 4610.0 lumens
Efficiency: N/A
Efficacy: 72.6 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

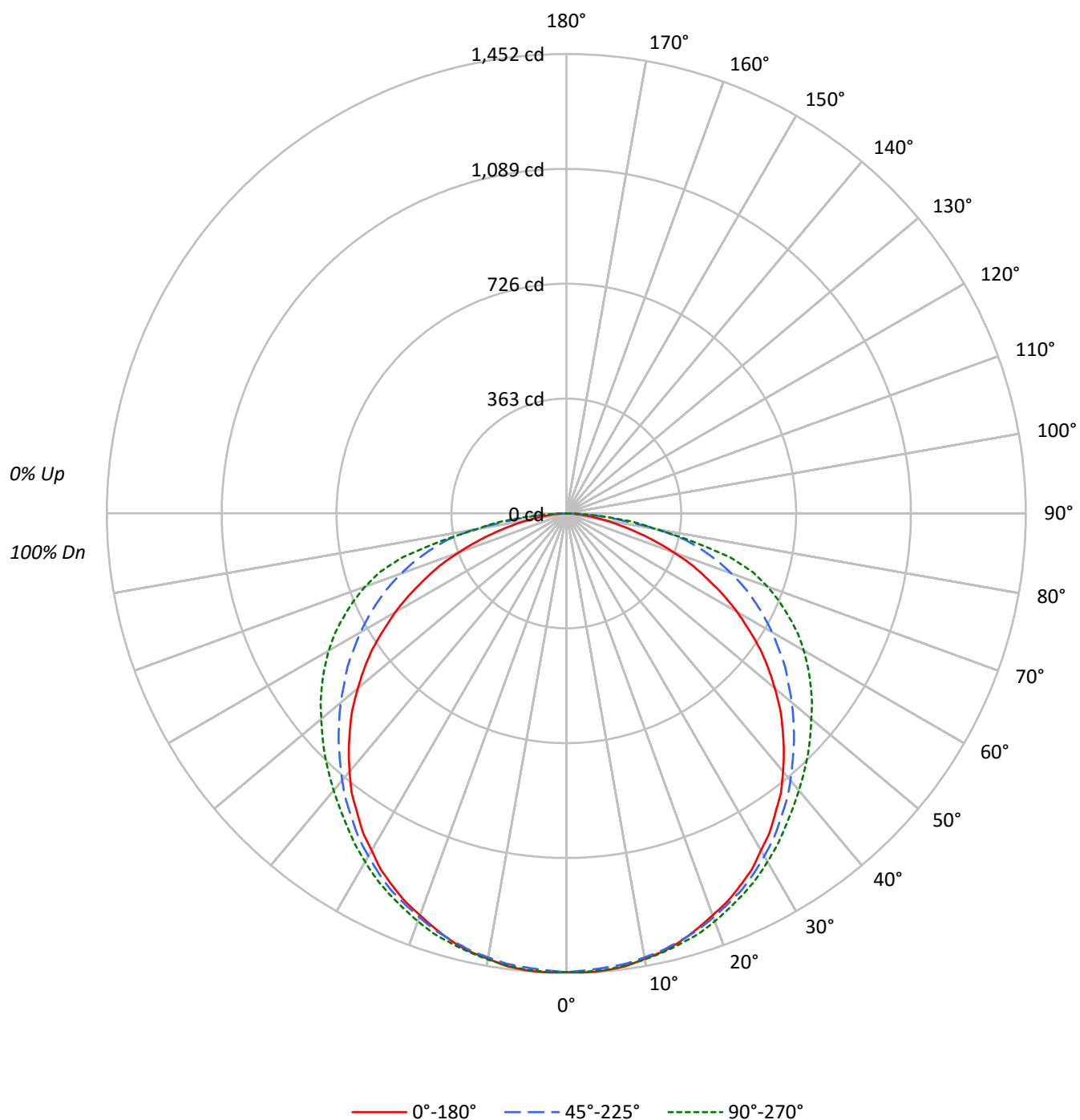
Input Watts (W): 63.5
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	100	96	92	96	93	89		92	89	87		82
2	97	89	81	75	95	87	80	74	83	77	72		80	75	71		67
3	88	77	68	62	86	76	67	61	72	66	60		70	64	59		56
4	81	68	59	52	78	67	58	51	64	57	51		62	55	50		47
5	74	60	51	44	72	59	51	44	57	49	43		55	48	43		40
6	68	54	45	38	66	53	45	38	51	44	38		50	43	37		35
7	63	49	40	34	61	48	40	34	47	39	33		45	38	33		31
8	59	45	36	30	57	44	36	30	43	35	30		41	34	29		27
9	55	41	33	27	53	40	32	27	39	32	27		38	31	26		24
10	51	38	30	24	50	37	29	24	36	29	24		35	29	24		22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1951	1951	1951
5°	1958	1946	1955
10°	1953	1946	1956
15°	1949	1946	1959
20°	1935	1945	1964
25°	1928	1949	1969
30°	1911	1943	1975
35°	1893	1938	1983
40°	1872	1936	2008
45°	1840	1936	2054
50°	1800	1948	2116
55°	1754	1979	2210
60°	1680	2018	2332
65°	1572	2089	2475
70°	1430	2186	2662
75°	1212	2306	2782
80°	957	2321	2250
85°	706	1765	1978



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	137.5	3.0
10°-20°	395.8	8.6
20°-30°	605.2	13.1
30°-40°	739.9	16.0
40°-50°	788.6	17.1
50°-60°	754.0	16.4
60°-70°	638.7	13.9
70°-80°	429.3	9.3
80°-90°	121.1	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°	1138.5	24.7
0°-40°	1878.4	40.7
0°-60°	3420.9	74.2
0°-90°	4610.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4610.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1450	1450	1450	1450	1450	
5°	1450	1447	1441	1447	1447	138
15°	1399	1399	1397	1409	1406	395
25°	1299	1303	1312	1324	1326	599
35°	1152	1162	1180	1203	1207	722
45°	967	983	1018	1061	1079	746
55°	748	775	844	910	942	666
65°	494	544	656	743	777	490
75°	233	318	444	519	535	250
85°	46	94	114	124	128	57
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1449.7	1449.7	1449.7	1449.7	1449.7
2.5°	1452.0	1452.0	1445.1	1449.7	1449.7
5°	1449.7	1447.4	1440.6	1447.4	1447.4
7.5°	1442.9	1440.6	1436.0	1442.9	1440.6
10°	1429.1	1429.1	1424.6	1431.4	1431.4
12.5°	1417.7	1415.4	1413.1	1422.3	1420.0
15°	1399.4	1399.4	1397.1	1408.6	1406.3
17.5°	1376.5	1378.8	1381.1	1390.3	1392.5
20°	1351.4	1356.0	1358.2	1372.0	1372.0
22.5°	1328.5	1330.8	1335.4	1349.1	1349.1
25°	1298.8	1303.4	1312.5	1323.9	1326.2
27.5°	1269.1	1271.4	1282.8	1298.8	1301.1
30°	1230.2	1237.1	1250.8	1269.1	1271.4
32.5°	1195.9	1202.8	1218.8	1237.1	1241.6
35°	1152.5	1161.6	1179.9	1202.8	1207.3
37.5°	1113.6	1120.4	1143.3	1168.5	1175.3
40°	1065.6	1079.3	1102.1	1131.9	1143.3
42.5°	1017.5	1031.3	1058.7	1097.6	1111.3
45°	967.2	983.2	1017.5	1061.0	1079.3
47.5°	916.9	935.2	974.1	1024.4	1045.0
50°	859.8	882.6	930.7	987.8	1010.7
52.5°	804.9	832.3	884.9	948.9	978.7
55°	747.7	775.2	843.8	910.1	942.1
57.5°	683.7	720.3	795.7	871.2	905.5
60°	624.2	658.5	750.0	832.3	866.6
62.5°	560.2	606.0	704.3	791.2	825.5
65°	493.9	544.2	656.3	743.1	777.4
67.5°	434.5	489.3	608.2	695.1	729.4
70°	363.6	432.2	555.6	642.5	676.8
72.5°	297.3	372.7	500.8	585.4	617.4
75°	233.2	317.8	443.6	519.1	535.1
77.5°	173.8	263.0	384.2	416.2	404.7
80°	123.5	210.4	299.5	283.5	290.4
82.5°	80.0	160.1	185.2	210.4	217.2
85°	45.7	93.8	114.3	123.5	128.1
87.5°	20.6	34.3	45.7	45.7	43.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)