

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: P313766

Luminaire Tested: **24FCZ2-75HE-UNV-L83050-RDP-CA08-W2A-U-3500K**

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: P313766
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-L83050-RDP-CA08-W2A-U-3500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.08" ACRYLIC SHEET
Light Source: (336) 3500K 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: 4635.0 lumens
Efficiency: N/A
Efficacy: 73.8 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

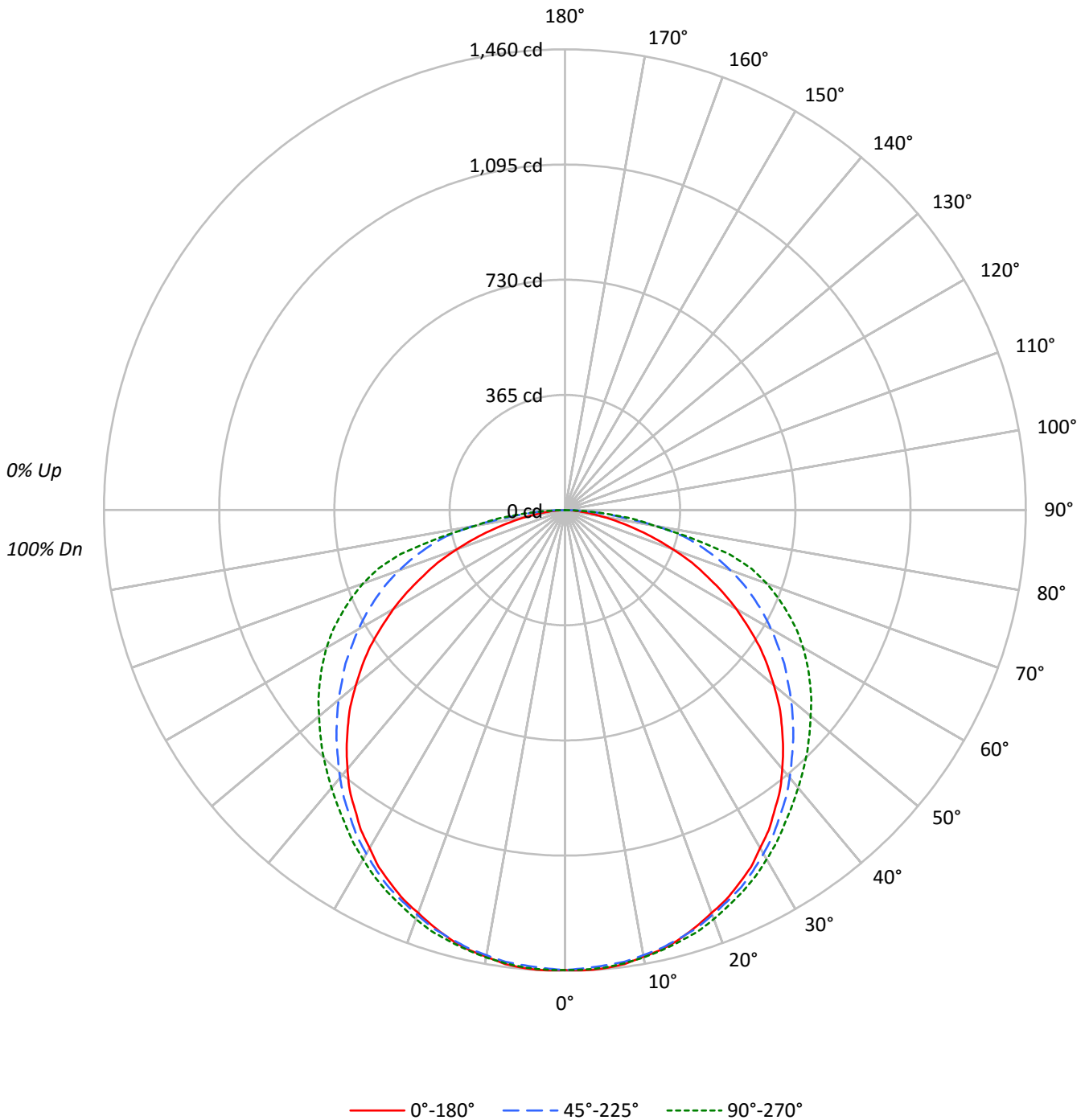
Input Watts (W): 62.8
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	100	96	92	96	93	89	92	89	87	88	86	84	82
2	97	89	81	75	95	87	80	74	83	77	72	80	75	71	77	73	69	67
3	88	77	68	62	86	76	67	61	72	66	60	70	64	59	67	62	58	56
4	81	68	59	52	78	67	58	51	64	57	51	62	55	50	59	54	49	47
5	74	60	51	44	72	59	51	44	57	49	43	55	48	43	53	47	42	40
6	68	54	45	38	66	53	45	38	51	44	38	50	43	37	48	42	37	35
7	63	49	40	34	61	48	40	34	47	39	33	45	38	33	44	38	33	31
8	59	45	36	30	57	44	36	30	43	35	30	41	34	29	40	34	29	27
9	55	41	33	27	53	40	32	27	39	32	27	38	31	26	37	31	26	24
10	51	38	30	24	50	37	29	24	36	29	24	35	29	24	34	28	24	22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1961	1961	1961
5°	1969	1956	1966
10°	1963	1957	1966
15°	1960	1957	1969
20°	1945	1955	1975
25°	1939	1959	1980
30°	1922	1954	1986
35°	1903	1949	1994
40°	1882	1946	2019
45°	1850	1947	2065
50°	1809	1959	2127
55°	1764	1990	2222
60°	1689	2029	2345
65°	1581	2101	2489
70°	1438	2198	2677
75°	1219	2319	2797
80°	962	2334	2263
85°	710	1775	1987



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	138.3	3.0
10°-20°	397.9	8.6
20°-30°	608.5	13.1
30°-40°	743.9	16.0
40°-50°	792.8	17.1
50°-60°	758.1	16.4
60°-70°	642.2	13.9
70°-80°	431.6	9.3
80°-90°	121.7	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°	1144.7	24.7
0°-40°	1888.6	40.7
0°-60°	3439.5	74.2
0°-90°	4635.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4635.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1458	1458	1458	1458	1458	
5°	1458	1455	1448	1455	1455	138
15°	1407	1407	1405	1416	1414	397
25°	1306	1310	1320	1331	1333	602
35°	1159	1168	1186	1209	1214	726
45°	972	989	1023	1067	1085	750
55°	752	779	848	915	947	670
65°	497	547	660	747	782	493
75°	234	320	446	522	538	251
85°	46	94	115	124	129	57
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1457.6	1457.6	1457.6	1457.6	1457.6
2.5°	1459.9	1459.9	1453.0	1457.6	1457.6
5°	1457.6	1455.3	1448.4	1455.3	1455.3
7.5°	1450.7	1448.4	1443.8	1450.7	1448.4
10°	1436.9	1436.9	1432.3	1439.2	1439.2
12.5°	1425.4	1423.1	1420.8	1430.0	1427.7
15°	1407.0	1407.0	1404.7	1416.2	1413.9
17.5°	1384.0	1386.3	1388.6	1397.8	1400.1
20°	1358.7	1363.3	1365.6	1379.4	1379.4
22.5°	1335.7	1338.0	1342.6	1356.4	1356.4
25°	1305.8	1310.4	1319.6	1331.1	1333.4
27.5°	1276.0	1278.3	1289.7	1305.8	1308.1
30°	1236.9	1243.8	1257.6	1276.0	1278.3
32.5°	1202.4	1209.3	1225.4	1243.8	1248.4
35°	1158.7	1167.9	1186.3	1209.3	1213.9
37.5°	1119.6	1126.5	1149.5	1174.8	1181.7
40°	1071.3	1085.1	1108.1	1138.0	1149.5
42.5°	1023.1	1036.9	1064.4	1103.5	1117.3
45°	972.5	988.6	1023.1	1066.7	1085.1
47.5°	921.9	940.3	979.4	1030.0	1050.6
50°	864.4	887.4	935.7	993.2	1016.2
52.5°	809.3	836.8	889.7	954.1	984.0
55°	751.8	779.4	848.3	915.0	947.2
57.5°	687.4	724.2	800.1	875.9	910.4
60°	627.6	662.1	754.1	836.8	871.3
62.5°	563.3	609.2	708.1	795.5	829.9
65°	496.6	547.2	659.8	747.2	781.7
67.5°	436.8	492.0	611.5	698.9	733.4
70°	365.5	434.5	558.7	646.0	680.5
72.5°	298.9	374.7	503.5	588.5	620.7
75°	234.5	319.6	446.0	521.9	538.0
77.5°	174.7	264.4	386.2	418.4	406.9
80°	124.1	211.5	301.2	285.1	292.0
82.5°	80.5	160.9	186.2	211.5	218.4
85°	46.0	94.3	115.0	124.1	128.7
87.5°	20.7	34.5	46.0	46.0	43.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)