

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: P310450

Luminaire Tested: **24FCZ2-75HE-UNV-L82765-RDP-CA08-W2A-U-5000K**

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: P310450
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-CA08-W2A-U-5000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.08" ACRYLIC SHEET
Light Source: (336) 5000K 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: 4773.0 lumens
Efficiency: N/A
Efficacy: 74.2 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

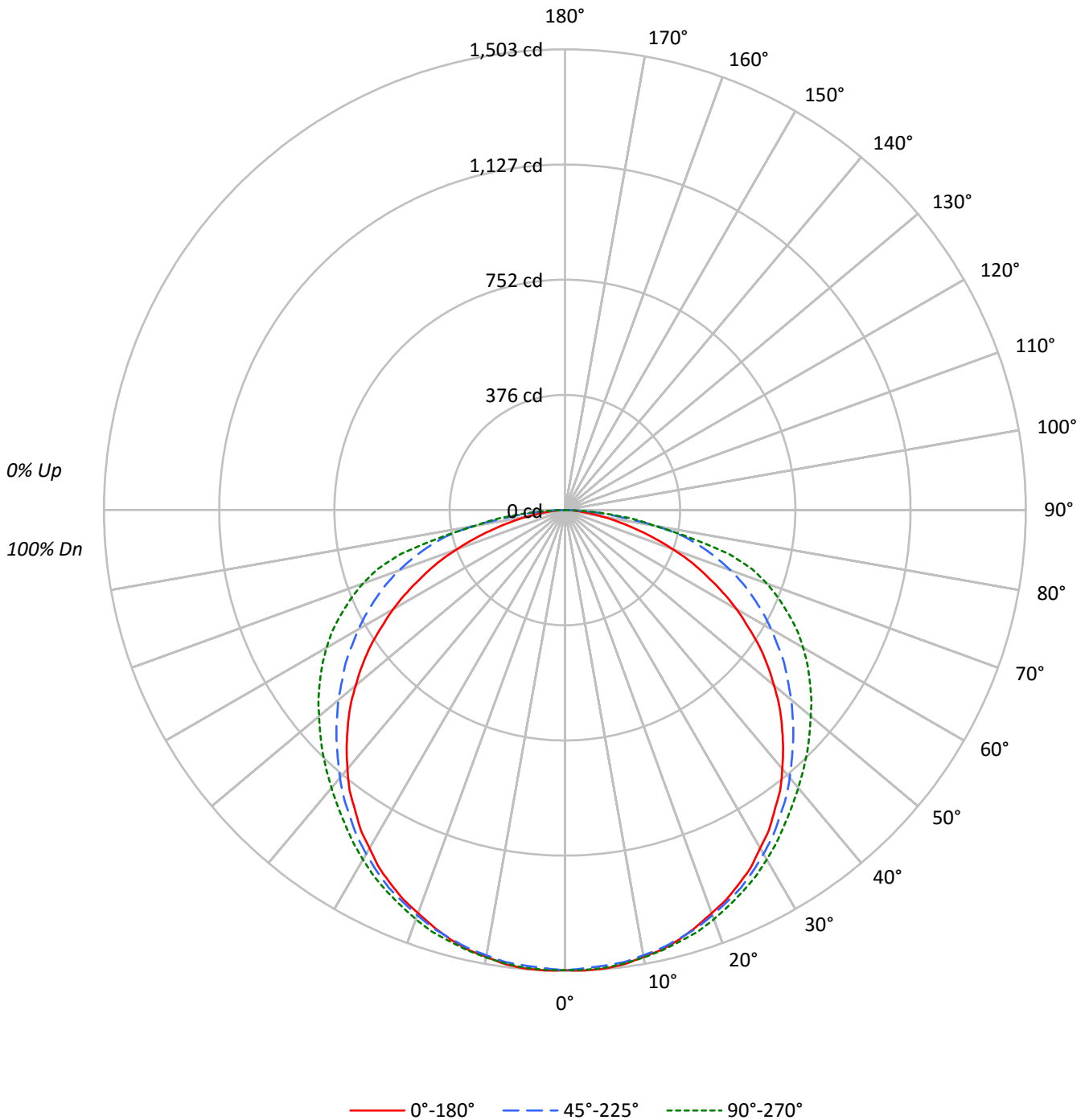
Input Watts (W): 64.3
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	2020	2020	2020
5°	2027	2014	2024
10°	2022	2015	2025
15°	2018	2015	2028
20°	2003	2014	2034
25°	1996	2017	2038
30°	1979	2012	2045
35°	1960	2007	2053
40°	1938	2004	2079
45°	1905	2005	2126
50°	1863	2017	2190
55°	1816	2049	2288
60°	1739	2090	2415
65°	1628	2163	2563
70°	1481	2263	2757
75°	1255	2388	2880
80°	990	2403	2330
85°	730	1828	2047



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	142.4	3.0
10°-20°	409.8	8.6
20°-30°	626.6	13.1
30°-40°	766.0	16.0
40°-50°	816.4	17.1
50°-60°	780.6	16.4
60°-70°	661.3	13.9
70°-80°	444.5	9.3
80°-90°	125.4	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°	1178.8	24.7
0°-40°	1944.8	40.7
0°-60°	3541.9	74.2
0°-90°	4773.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4773.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1501	1501	1501	1501	1501	
5°	1501	1499	1492	1499	1499	143
15°	1449	1449	1446	1458	1456	409
25°	1345	1350	1359	1371	1373	620
35°	1193	1203	1222	1245	1250	747
45°	1001	1018	1054	1098	1117	772
55°	774	803	874	942	975	690
65°	511	564	680	769	805	508
75°	242	329	459	537	554	259
85°	47	97	118	128	133	59
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1501.0	1501.0	1501.0	1501.0	1501.0
2.5°	1503.3	1503.3	1496.2	1501.0	1501.0
5°	1501.0	1498.6	1491.5	1498.6	1498.6
7.5°	1493.9	1491.5	1486.8	1493.9	1491.5
10°	1479.7	1479.7	1474.9	1482.0	1482.0
12.5°	1467.8	1465.5	1463.1	1472.6	1470.2
15°	1448.9	1448.9	1446.5	1458.4	1456.0
17.5°	1425.2	1427.6	1429.9	1439.4	1441.8
20°	1399.2	1403.9	1406.3	1420.5	1420.5
22.5°	1375.5	1377.9	1382.6	1396.8	1396.8
25°	1344.7	1349.5	1358.9	1370.8	1373.1
27.5°	1313.9	1316.3	1328.1	1344.7	1347.1
30°	1273.7	1280.8	1295.0	1313.9	1316.3
32.5°	1238.2	1245.3	1261.9	1280.8	1285.5
35°	1193.2	1202.7	1221.6	1245.3	1250.0
37.5°	1153.0	1160.1	1183.7	1209.8	1216.9
40°	1103.2	1117.4	1141.1	1171.9	1183.7
42.5°	1053.5	1067.7	1096.1	1136.4	1150.6
45°	1001.4	1018.0	1053.5	1098.5	1117.4
47.5°	949.4	968.3	1008.5	1060.6	1081.9
50°	890.2	913.8	963.6	1022.7	1046.4
52.5°	833.3	861.8	916.2	982.5	1013.3
55°	774.2	802.6	873.6	942.3	975.4
57.5°	707.9	745.8	823.9	902.0	937.5
60°	646.3	681.8	776.5	861.8	897.3
62.5°	580.0	627.4	729.2	819.1	854.7
65°	511.4	563.5	679.5	769.4	804.9
67.5°	449.8	506.6	629.7	719.7	755.2
70°	376.4	447.5	575.3	665.3	700.8
72.5°	307.8	385.9	518.5	606.1	639.2
75°	241.5	329.1	459.3	537.4	554.0
77.5°	179.9	272.3	397.7	430.9	419.0
80°	127.8	217.8	310.1	293.6	300.7
82.5°	82.9	165.7	191.8	217.8	224.9
85°	47.3	97.1	118.4	127.8	132.6
87.5°	21.3	35.5	47.3	47.3	45.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)