

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: P310417

Luminaire Tested: **24FCZ2-70HE-UNV-L82765-RDP-CA125-W2A-U-6500K**

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: P310417
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: 24FCZ2-70HE-UNV-L82765-RDP-CA125-W2A-U-6500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.125" ACRYLIC SHEET
Light Source: (336) 6500K 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: 4516.0 lumens
Efficiency: N/A
Efficacy: 74.9 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

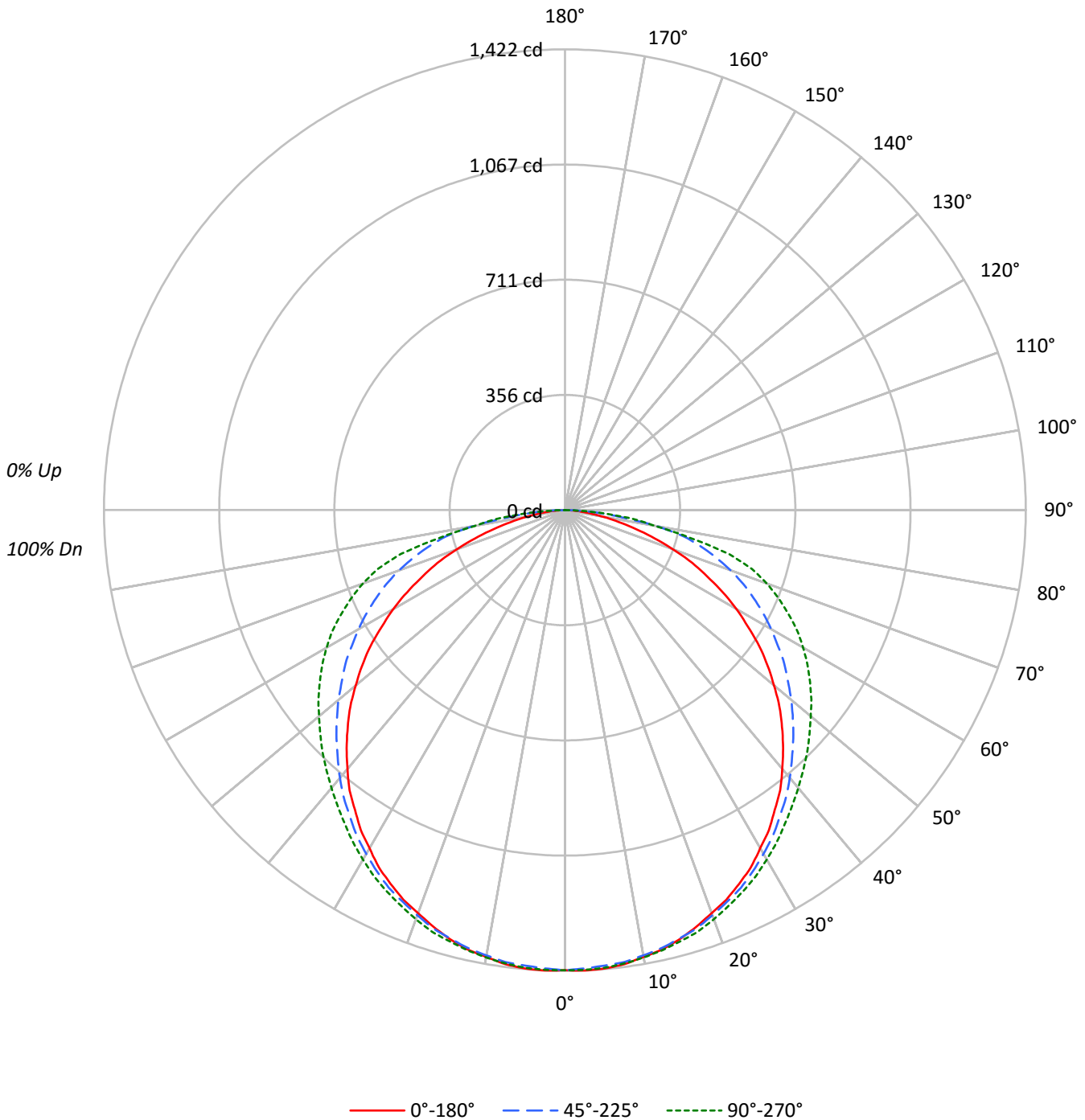
Input Watts (W): 60.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				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°	1911	1911	1911
5°	1918	1906	1915
10°	1913	1907	1916
15°	1910	1906	1919
20°	1895	1905	1924
25°	1889	1909	1929
30°	1872	1904	1935
35°	1854	1898	1943
40°	1833	1896	1967
45°	1803	1897	2012
50°	1763	1908	2072
55°	1718	1939	2165
60°	1646	1977	2285
65°	1540	2047	2425
70°	1401	2141	2608
75°	1188	2259	2725
80°	938	2273	2204
85°	692	1729	1936



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	134.7	3.0
10°-20°	387.7	8.6
20°-30°	592.9	13.1
30°-40°	724.8	16.0
40°-50°	772.5	17.1
50°-60°	738.6	16.4
60°-70°	625.7	13.9
70°-80°	420.5	9.3
80°-90°	118.6	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°	1115.3	24.7
0°-40°	1840.1	40.7
0°-60°	3351.2	74.2
0°-90°	4516.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4516.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1420	1420	1420	1420	1420	
5°	1420	1418	1411	1418	1418	135
15°	1371	1371	1369	1380	1378	387
25°	1272	1277	1286	1297	1299	586
35°	1129	1138	1156	1178	1183	707
45°	948	963	997	1039	1057	731
55°	732	759	827	892	923	652
65°	484	533	643	728	762	480
75°	228	311	435	508	524	245
85°	45	92	112	121	125	55
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1420.2	1420.2	1420.2	1420.2	1420.2
2.5°	1422.4	1422.4	1415.7	1420.2	1420.2
5°	1420.2	1417.9	1411.2	1417.9	1417.9
7.5°	1413.4	1411.2	1406.7	1413.4	1411.2
10°	1400.0	1400.0	1395.5	1402.2	1402.2
12.5°	1388.8	1386.6	1384.3	1393.3	1391.0
15°	1370.9	1370.9	1368.6	1379.8	1377.6
17.5°	1348.5	1350.7	1353.0	1361.9	1364.2
20°	1323.8	1328.3	1330.6	1344.0	1344.0
22.5°	1301.4	1303.7	1308.2	1321.6	1321.6
25°	1272.3	1276.8	1285.8	1297.0	1299.2
27.5°	1243.2	1245.4	1256.6	1272.3	1274.6
30°	1205.1	1211.8	1225.3	1243.2	1245.4
32.5°	1171.5	1178.2	1193.9	1211.8	1216.3
35°	1129.0	1137.9	1155.8	1178.2	1182.7
37.5°	1090.9	1097.6	1120.0	1144.6	1151.4
40°	1043.8	1057.3	1079.7	1108.8	1120.0
42.5°	996.8	1010.2	1037.1	1075.2	1088.6
45°	947.5	963.2	996.8	1039.4	1057.3
47.5°	898.2	916.2	954.2	1003.5	1023.7
50°	842.2	864.6	911.7	967.7	990.1
52.5°	788.5	815.4	866.9	929.6	958.7
55°	732.5	759.4	826.6	891.5	922.9
57.5°	669.8	705.6	779.5	853.4	887.0
60°	611.5	645.1	734.7	815.4	849.0
62.5°	548.8	593.6	689.9	775.0	808.6
65°	483.8	533.1	642.9	728.0	761.6
67.5°	425.6	479.4	595.8	681.0	714.6
70°	356.2	423.4	544.3	629.4	663.0
72.5°	291.2	365.1	490.6	573.4	604.8
75°	228.5	311.4	434.6	508.5	524.2
77.5°	170.2	257.6	376.3	407.7	396.5
80°	121.0	206.1	293.4	277.8	284.5
82.5°	78.4	156.8	181.4	206.1	212.8
85°	44.8	91.8	112.0	121.0	125.4
87.5°	20.2	33.6	44.8	44.8	42.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)