

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: P310426

Luminaire Tested: **24FCZ2-70HE-UNV-L82765-RDP-CP125-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: P310426
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-CP125-W2A-U-6500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.125" POLYCARB 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: 4428.0 lumens
Efficiency: N/A
Efficacy: 73.4 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

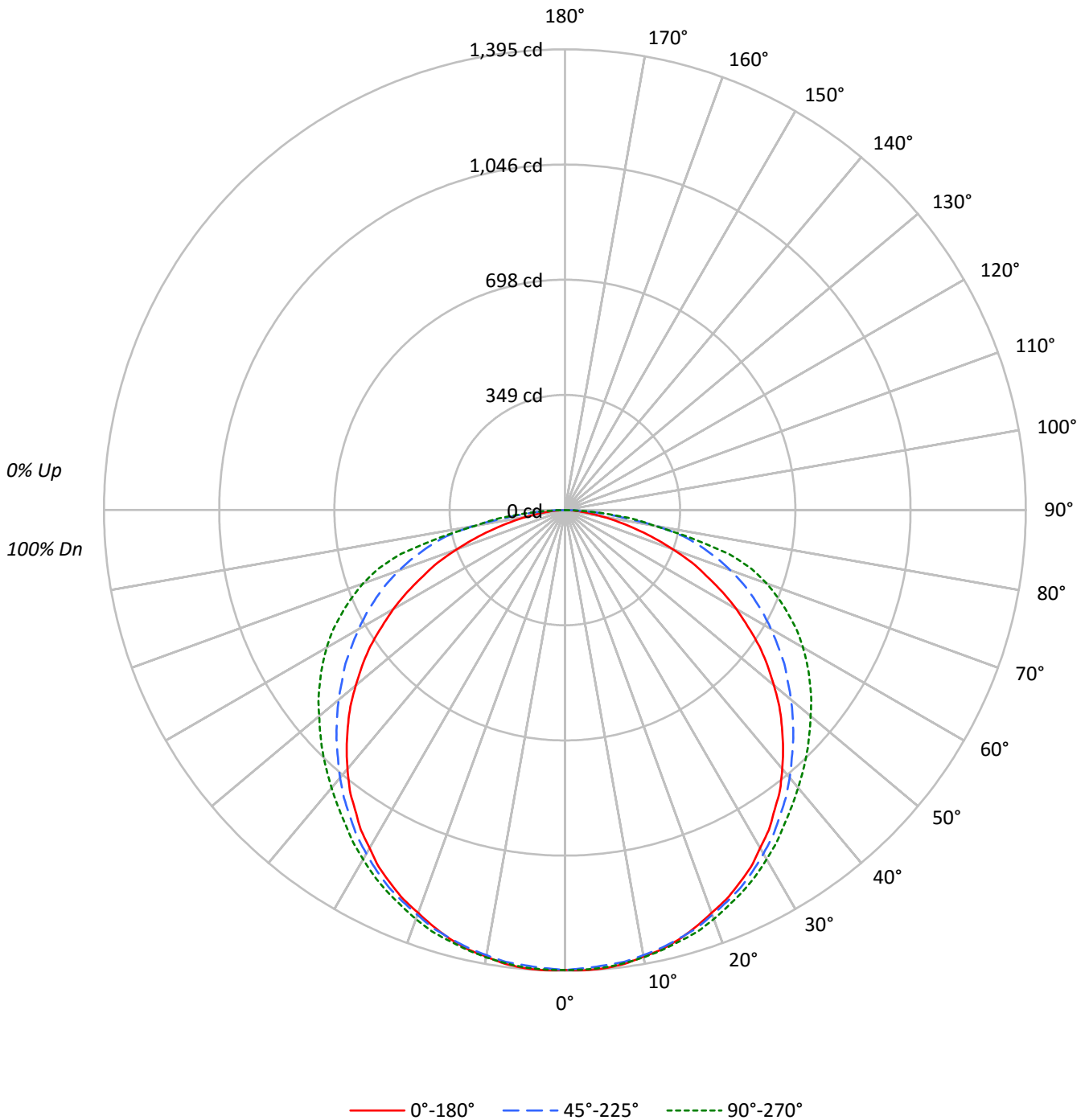
Input Watts (W): 60.3
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1874	1874	1874
5°	1881	1869	1878
10°	1875	1869	1878
15°	1872	1869	1881
20°	1859	1868	1887
25°	1852	1872	1891
30°	1836	1867	1897
35°	1818	1861	1905
40°	1798	1859	1929
45°	1768	1860	1973
50°	1729	1871	2032
55°	1685	1901	2123
60°	1614	1939	2240
65°	1510	2007	2378
70°	1374	2100	2557
75°	1164	2215	2672
80°	919	2229	2161
85°	678	1695	1899



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	132.1	3.0
10°-20°	380.2	8.6
20°-30°	581.3	13.1
30°-40°	710.7	16.0
40°-50°	757.4	17.1
50°-60°	724.2	16.4
60°-70°	613.5	13.9
70°-80°	412.3	9.3
80°-90°	116.3	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°	1093.6	24.7
0°-40°	1804.2	40.7
0°-60°	3285.9	74.2
0°-90°	4428.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4428.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1392	1392	1392	1392	1392	
5°	1392	1390	1384	1390	1390	132
15°	1344	1344	1342	1353	1351	379
25°	1248	1252	1261	1272	1274	575
35°	1107	1116	1133	1155	1160	693
45°	929	944	977	1019	1037	717
55°	718	745	810	874	905	640
65°	474	523	630	714	747	471
75°	224	305	426	499	514	240
85°	44	90	110	119	123	54
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1392.5	1392.5	1392.5	1392.5	1392.5
2.5°	1394.7	1394.7	1388.1	1392.5	1392.5
5°	1392.5	1390.3	1383.7	1390.3	1390.3
7.5°	1385.9	1383.7	1379.3	1385.9	1383.7
10°	1372.7	1372.7	1368.3	1374.9	1374.9
12.5°	1361.7	1359.5	1357.3	1366.1	1363.9
15°	1344.2	1344.2	1342.0	1352.9	1350.7
17.5°	1322.2	1324.4	1326.6	1335.4	1337.6
20°	1298.0	1302.4	1304.6	1317.8	1317.8
22.5°	1276.1	1278.3	1282.7	1295.8	1295.8
25°	1247.5	1251.9	1260.7	1271.7	1273.9
27.5°	1219.0	1221.2	1232.1	1247.5	1249.7
30°	1181.6	1188.2	1201.4	1219.0	1221.2
32.5°	1148.7	1155.3	1170.6	1188.2	1192.6
35°	1107.0	1115.7	1133.3	1155.3	1159.7
37.5°	1069.6	1076.2	1098.2	1122.3	1128.9
40°	1023.5	1036.7	1058.6	1087.2	1098.2
42.5°	977.4	990.5	1016.9	1054.2	1067.4
45°	929.1	944.4	977.4	1019.1	1036.7
47.5°	880.7	898.3	935.6	984.0	1003.7
50°	825.8	847.8	893.9	948.8	970.8
52.5°	773.1	799.5	850.0	911.5	940.0
55°	718.2	744.6	810.4	874.1	904.9
57.5°	656.7	691.8	764.3	836.8	869.8
60°	599.6	632.5	720.4	799.5	832.4
62.5°	538.1	582.0	676.5	759.9	792.9
65°	474.4	522.7	630.3	713.8	746.8
67.5°	417.3	470.0	584.2	667.7	700.6
70°	349.2	415.1	533.7	617.2	650.1
72.5°	285.5	358.0	481.0	562.3	593.0
75°	224.0	305.3	426.1	498.6	513.9
77.5°	166.9	252.6	369.0	399.7	388.8
80°	118.6	202.1	287.7	272.3	278.9
82.5°	76.9	153.7	177.9	202.1	208.7
85°	43.9	90.0	109.8	118.6	123.0
87.5°	19.8	32.9	43.9	43.9	41.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)