

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: P313751

Luminaire Tested: **24FCZ2-70HE-UNV-L83050-RDP-CP125-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: P313751
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-L83050-RDP-CP125-W2A-U-3500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.125" POLYCARB 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: 4236.0 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

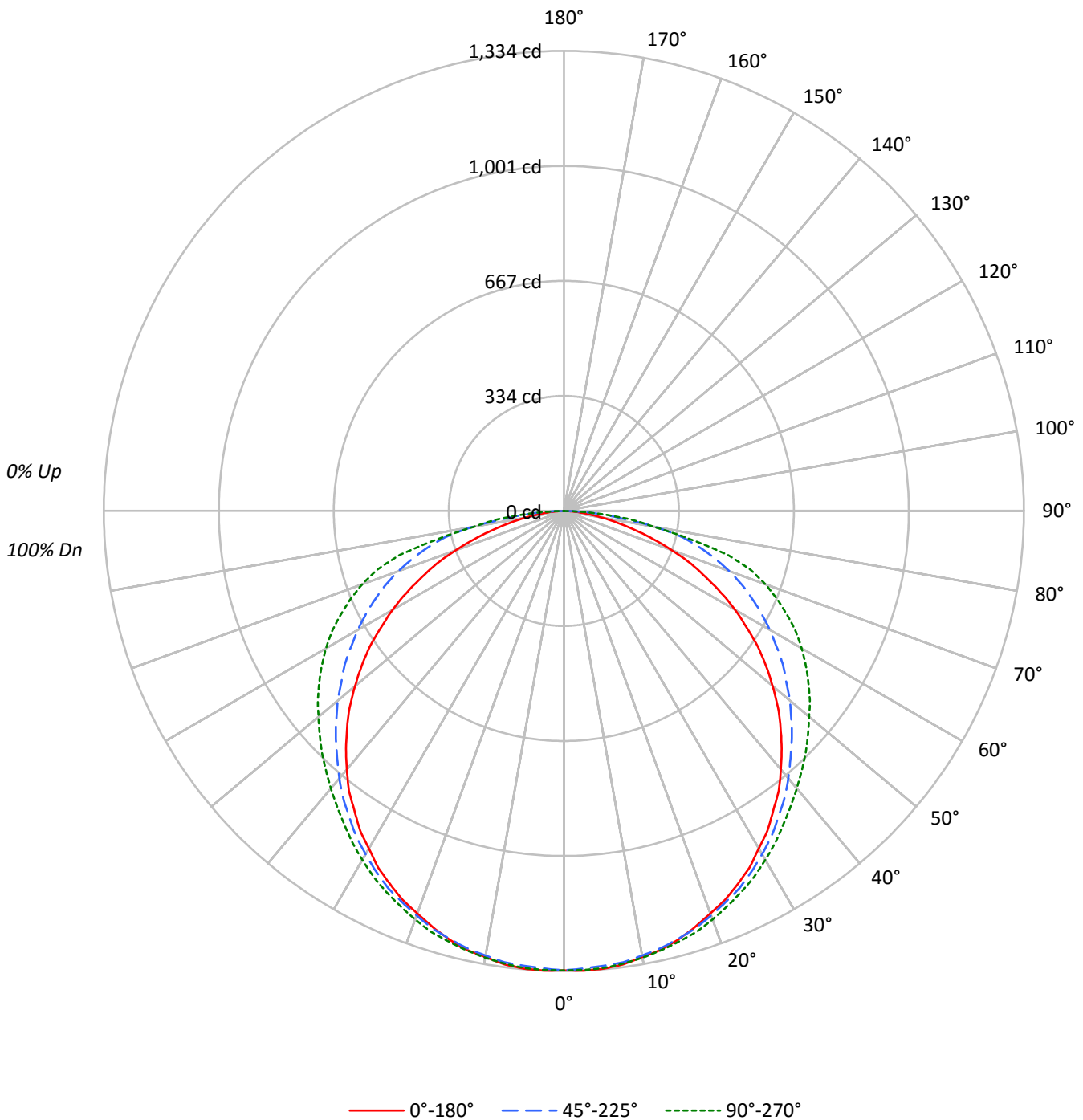
Input Watts (W): 57.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1792	1792	1792
5°	1799	1788	1796
10°	1794	1788	1797
15°	1791	1788	1800
20°	1778	1787	1805
25°	1772	1790	1809
30°	1756	1786	1815
35°	1739	1781	1822
40°	1720	1779	1845
45°	1691	1779	1887
50°	1654	1790	1944
55°	1612	1819	2031
60°	1544	1855	2143
65°	1445	1920	2274
70°	1314	2009	2447
75°	1114	2119	2556
80°	879	2132	2067
85°	648	1623	1817



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	126.4	3.0
10°-20°	363.7	8.6
20°-30°	556.1	13.1
30°-40°	679.9	16.0
40°-50°	724.6	17.1
50°-60°	692.8	16.4
60°-70°	586.9	13.9
70°-80°	394.4	9.3
80°-90°	111.3	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°	1046.2	24.7
0°-40°	1726.0	40.7
0°-60°	3143.4	74.2
0°-90°	4236.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4236.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1332	1332	1332	1332	1332	
5°	1332	1330	1324	1330	1330	127
15°	1286	1286	1284	1294	1292	363
25°	1193	1198	1206	1216	1219	550
35°	1059	1067	1084	1105	1109	663
45°	889	904	935	975	992	686
55°	687	712	775	836	866	612
65°	454	500	603	683	714	451
75°	214	292	408	477	492	229
85°	42	86	105	114	118	52
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1332.1	1332.1	1332.1	1332.1	1332.1
2.5°	1334.2	1334.2	1327.9	1332.1	1332.1
5°	1332.1	1330.0	1323.7	1330.0	1330.0
7.5°	1325.8	1323.7	1319.5	1325.8	1323.7
10°	1313.2	1313.2	1309.0	1315.3	1315.3
12.5°	1302.7	1300.6	1298.5	1306.9	1304.8
15°	1285.9	1285.9	1283.8	1294.3	1292.2
17.5°	1264.9	1267.0	1269.1	1277.5	1279.6
20°	1241.8	1246.0	1248.1	1260.7	1260.7
22.5°	1220.7	1222.8	1227.0	1239.7	1239.7
25°	1193.4	1197.6	1206.0	1216.5	1218.6
27.5°	1166.1	1168.2	1178.7	1193.4	1195.5
30°	1130.4	1136.7	1149.3	1166.1	1168.2
32.5°	1098.9	1105.2	1119.9	1136.7	1140.9
35°	1059.0	1067.4	1084.2	1105.2	1109.4
37.5°	1023.2	1029.5	1050.6	1073.7	1080.0
40°	979.1	991.7	1012.7	1040.0	1050.6
42.5°	935.0	947.6	972.8	1008.5	1021.1
45°	888.8	903.5	935.0	974.9	991.7
47.5°	842.5	859.4	895.1	941.3	960.2
50°	790.0	811.0	855.2	907.7	928.7
52.5°	739.6	764.8	813.1	872.0	899.3
55°	687.1	712.3	775.3	836.2	865.7
57.5°	628.2	661.8	731.2	800.5	832.0
60°	573.6	605.1	689.2	764.8	796.3
62.5°	514.8	556.8	647.1	727.0	758.5
65°	453.8	500.1	603.0	682.9	714.4
67.5°	399.2	449.6	558.9	638.7	670.3
70°	334.1	397.1	510.6	590.4	621.9
72.5°	273.1	342.5	460.1	537.9	567.3
75°	214.3	292.1	407.6	477.0	491.7
77.5°	159.7	241.6	353.0	382.4	371.9
80°	113.5	193.3	275.2	260.5	266.8
82.5°	73.5	147.1	170.2	193.3	199.6
85°	42.0	86.1	105.1	113.5	117.7
87.5°	18.9	31.5	42.0	42.0	39.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)