

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: P311412

Luminaire Tested: **24FCZ2-40-UNV-L82765-S-CP125-W2A-U-4500K**

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: P311412
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-1)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 24FCZ2-40-UNV-L82765-S-CP125-W2A-U-4500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.125" POLYCARB SHEET
Light Source: (168) 4500K 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: 3860.0 lumens
Efficiency: N/A
Efficacy: 115.9 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

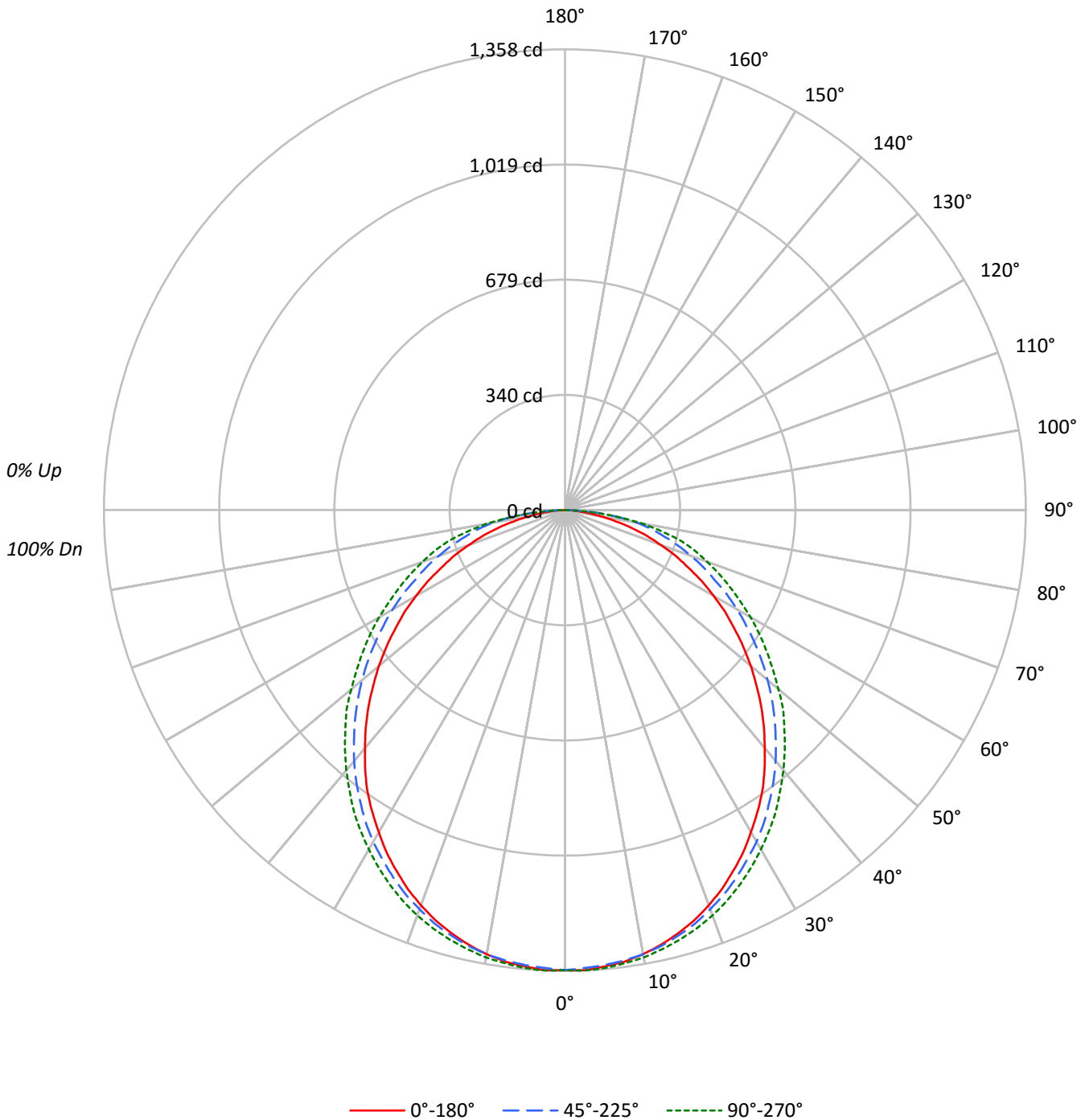
Input Watts (W): 33.3
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	99	95	106	101	97	93	97	93	90	93	90	88	89	87	85	83
2	98	90	83	77	96	88	81	76	84	79	74	81	76	72	78	74	71	69
3	89	79	70	64	87	77	69	63	74	67	62	71	66	61	69	64	60	58
4	82	70	61	54	80	68	60	54	66	59	53	63	57	52	61	56	51	49
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	42
6	70	56	47	40	68	55	47	40	53	46	40	52	45	40	50	44	39	37
7	64	51	42	36	63	50	42	36	48	41	35	47	40	35	46	39	35	33
8	60	46	38	32	58	46	37	32	44	37	32	43	36	31	42	36	31	29
9	56	43	34	29	55	42	34	29	41	34	28	40	33	28	39	33	28	26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1824	1824	1824
5°	1823	1818	1830
10°	1816	1816	1829
15°	1798	1807	1826
20°	1775	1792	1820
25°	1742	1775	1809
30°	1703	1754	1794
35°	1666	1726	1780
40°	1609	1697	1759
45°	1556	1663	1740
50°	1496	1632	1720
55°	1430	1602	1703
60°	1363	1577	1699
65°	1276	1550	1710
70°	1182	1558	1756
75°	1058	1587	1855
80°	855	1681	1815
85°	644	1476	1439



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	128.4	3.3
10°-20°	366.8	9.5
20°-30°	551.4	14.3
30°-40°	656.8	17.0
40°-50°	672.2	17.4
50°-60°	605.2	15.7
60°-70°	475.3	12.3
70°-80°	308.5	8.0
80°-90°	95.4	2.5
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°	1046.6	27.1
0°-40°	1703.4	44.1
0°-60°	2980.9	77.2
0°-90°	3860.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3860.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1356	1356	1356	1356	1356	
5°	1350	1352	1346	1354	1355	128
15°	1291	1295	1297	1308	1311	364
25°	1173	1183	1195	1215	1219	541
35°	1014	1026	1051	1076	1084	633
45°	818	837	874	907	915	631
55°	609	636	683	718	726	546
65°	401	432	487	527	537	399
75°	204	243	305	347	357	215
85°	42	77	96	93	93	50
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1356.0	1356.0	1356.0	1356.0	1356.0
2.5°	1357.3	1357.3	1351.1	1357.3	1358.5
5°	1349.9	1352.4	1346.2	1353.6	1354.8
7.5°	1342.6	1342.6	1338.9	1346.2	1347.5
10°	1329.1	1330.3	1329.1	1337.7	1338.9
12.5°	1311.9	1314.4	1315.6	1324.2	1325.4
15°	1291.1	1294.7	1297.2	1308.2	1310.7
17.5°	1267.8	1271.4	1277.6	1289.8	1292.3
20°	1239.6	1244.5	1251.8	1267.8	1271.4
22.5°	1208.9	1213.8	1226.1	1240.8	1246.9
25°	1173.4	1183.2	1195.4	1215.0	1218.7
27.5°	1137.8	1146.4	1162.3	1183.2	1188.1
30°	1096.1	1109.6	1129.2	1150.1	1155.0
32.5°	1055.7	1069.1	1092.4	1114.5	1120.6
35°	1014.0	1026.2	1050.7	1076.5	1083.9
37.5°	966.2	982.1	1009.1	1034.8	1042.2
40°	915.9	935.5	966.2	993.1	1001.7
42.5°	868.1	888.9	919.6	949.0	958.8
45°	817.8	837.4	874.2	907.3	914.7
47.5°	766.3	788.4	827.6	860.7	873.0
50°	714.8	738.1	779.8	814.1	821.5
52.5°	663.3	687.8	732.0	768.8	772.4
55°	609.4	636.3	682.9	718.5	725.8
57.5°	560.3	583.6	633.9	670.7	679.2
60°	506.4	532.1	586.1	620.4	631.4
62.5°	454.9	481.8	538.2	572.6	582.4
65°	400.9	431.6	486.8	527.2	537.0
67.5°	354.3	383.8	442.6	481.8	491.7
70°	300.4	333.5	396.0	436.5	446.3
72.5°	253.8	288.1	350.7	389.9	404.6
75°	203.5	242.8	305.3	347.0	356.8
77.5°	154.5	199.9	263.6	295.5	295.5
80°	110.3	158.2	217.0	231.7	234.2
82.5°	72.3	118.9	160.6	159.4	159.4
85°	41.7	77.2	95.6	93.2	93.2
87.5°	15.9	31.9	34.3	34.3	33.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)