

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: P309707

Luminaire Tested: **24FCZ2-65HE-UNV-L82765-HRP-CP187-W2A-U-2700K**

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: P309707
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-20)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 24FCZ2-65HE-UNV-L82765-HRP-CP187-W2A-U-2700K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.187"
POLYCARB SHEET
Light Source: (336) 2700K 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: 3892.0 lumens
Efficiency: N/A
Efficacy: 74.0 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.3 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

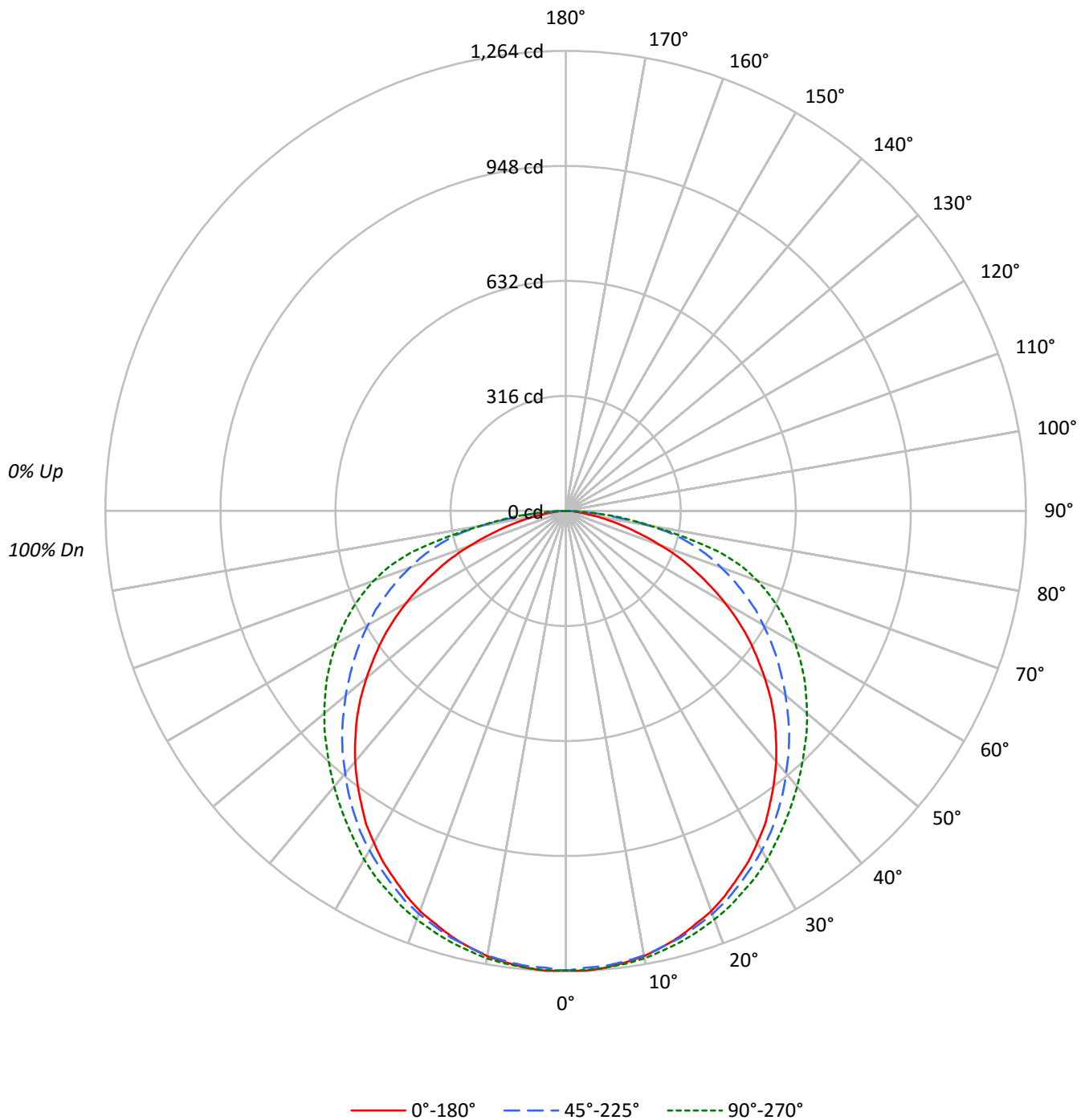
Input Watts (W): 52.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				0
RW	70	50	30	10	70	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		100
1	108	103	98	94	105	101	96	93	96	93	90		92	90	87		82
2	98	89	82	76	95	87	80	75	83	78	73		80	75	71		67
3	89	78	69	62	86	76	68	62	73	66	61		70	64	59		56
4	81	68	59	52	79	67	59	52	65	57	51		62	56	50		48
5	74	61	52	45	72	60	51	45	58	50	44		56	49	44		41
6	69	55	46	39	67	54	45	39	52	44	38		50	43	38		36
7	63	50	41	34	62	49	40	34	47	39	34		46	39	34		31
8	59	45	36	30	57	44	36	30	43	36	30		42	35	30		28
9	55	41	33	27	54	41	33	27	40	32	27		39	32	27		25
10	52	38	30	25	50	38	30	25	37	30	25		36	29	24		23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1699	1699	1699
5°	1701	1694	1701
10°	1696	1694	1705
15°	1686	1691	1707
20°	1675	1687	1710
25°	1655	1679	1713
30°	1635	1673	1719
35°	1609	1665	1721
40°	1580	1654	1737
45°	1544	1653	1764
50°	1494	1651	1811
55°	1441	1663	1877
60°	1359	1688	1960
65°	1255	1727	2070
70°	1096	1788	2205
75°	889	1880	2279
80°	656	1843	1843
85°	503	1359	1535



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	119.6	3.1
10°-20°	343.5	8.8
20°-30°	523.0	13.4
30°-40°	635.0	16.3
40°-50°	670.9	17.2
50°-60°	633.0	16.3
60°-70°	526.3	13.5
70°-80°	346.3	8.9
80°-90°	94.4	2.4
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°	986.1	25.3
0°-40°	1621.1	41.7
0°-60°	2925.0	75.2
0°-90°	3892.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3892.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1263	1263	1263	1263	1263	
5°	1260	1260	1255	1260	1260	120
15°	1211	1212	1214	1225	1225	341
25°	1114	1121	1131	1150	1154	514
35°	979	991	1014	1040	1048	613
45°	811	828	868	911	927	625
55°	614	640	709	776	800	547
65°	394	440	543	622	650	390
75°	171	249	362	428	438	184
85°	33	72	88	98	99	40
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1262.8	1262.8	1262.8	1262.8	1262.8
2.5°	1264.4	1262.8	1256.2	1262.8	1262.8
5°	1259.5	1259.5	1254.6	1259.5	1259.5
7.5°	1251.4	1251.4	1248.1	1254.6	1254.6
10°	1241.6	1241.6	1240.0	1248.1	1248.1
12.5°	1226.9	1228.5	1226.9	1236.7	1236.7
15°	1210.6	1212.3	1213.9	1225.3	1225.3
17.5°	1189.4	1192.7	1196.0	1209.0	1210.6
20°	1169.9	1171.5	1178.0	1192.7	1194.3
22.5°	1143.8	1148.7	1156.9	1171.5	1176.4
25°	1114.5	1121.0	1130.8	1150.3	1153.6
27.5°	1086.8	1091.7	1104.7	1125.9	1132.4
30°	1052.6	1060.7	1077.0	1098.2	1106.3
32.5°	1020.0	1028.1	1047.7	1070.5	1077.0
35°	979.3	990.7	1013.5	1039.5	1047.7
37.5°	940.1	951.6	979.3	1008.6	1018.4
40°	899.4	912.4	941.8	976.0	989.0
42.5°	855.4	873.3	905.9	943.4	958.1
45°	811.4	827.7	868.5	910.8	927.1
47.5°	764.2	783.7	827.7	878.2	897.8
50°	713.7	738.1	788.6	844.0	865.2
52.5°	663.2	690.9	747.9	809.8	832.6
55°	614.3	640.3	708.8	775.6	800.0
57.5°	560.5	593.1	668.0	739.7	764.2
60°	505.1	541.0	627.3	702.3	728.3
62.5°	449.7	490.4	588.2	663.2	690.9
65°	394.3	439.9	542.6	622.4	650.1
67.5°	340.5	391.0	500.2	580.1	607.8
70°	278.6	342.2	454.6	532.8	560.5
72.5°	221.6	294.9	410.6	483.9	508.4
75°	171.1	249.3	361.7	428.5	438.3
77.5°	125.5	203.7	311.2	334.0	335.7
80°	84.7	162.9	237.9	234.6	237.9
82.5°	55.4	122.2	149.9	167.8	169.5
85°	32.6	71.7	88.0	97.8	99.4
87.5°	16.3	24.4	31.0	32.6	35.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)