

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: P313732

Luminaire Tested: **24FCZ2-65HE-UNV-L83050-RDP-CP187-W2A-U-4000K**

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: P313732
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: 24FCZ2-65HE-UNV-L83050-RDP-CP187-W2A-U-4000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.187" POLYCARB SHEET
Light Source: (336) 4000K 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: 3949.0 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

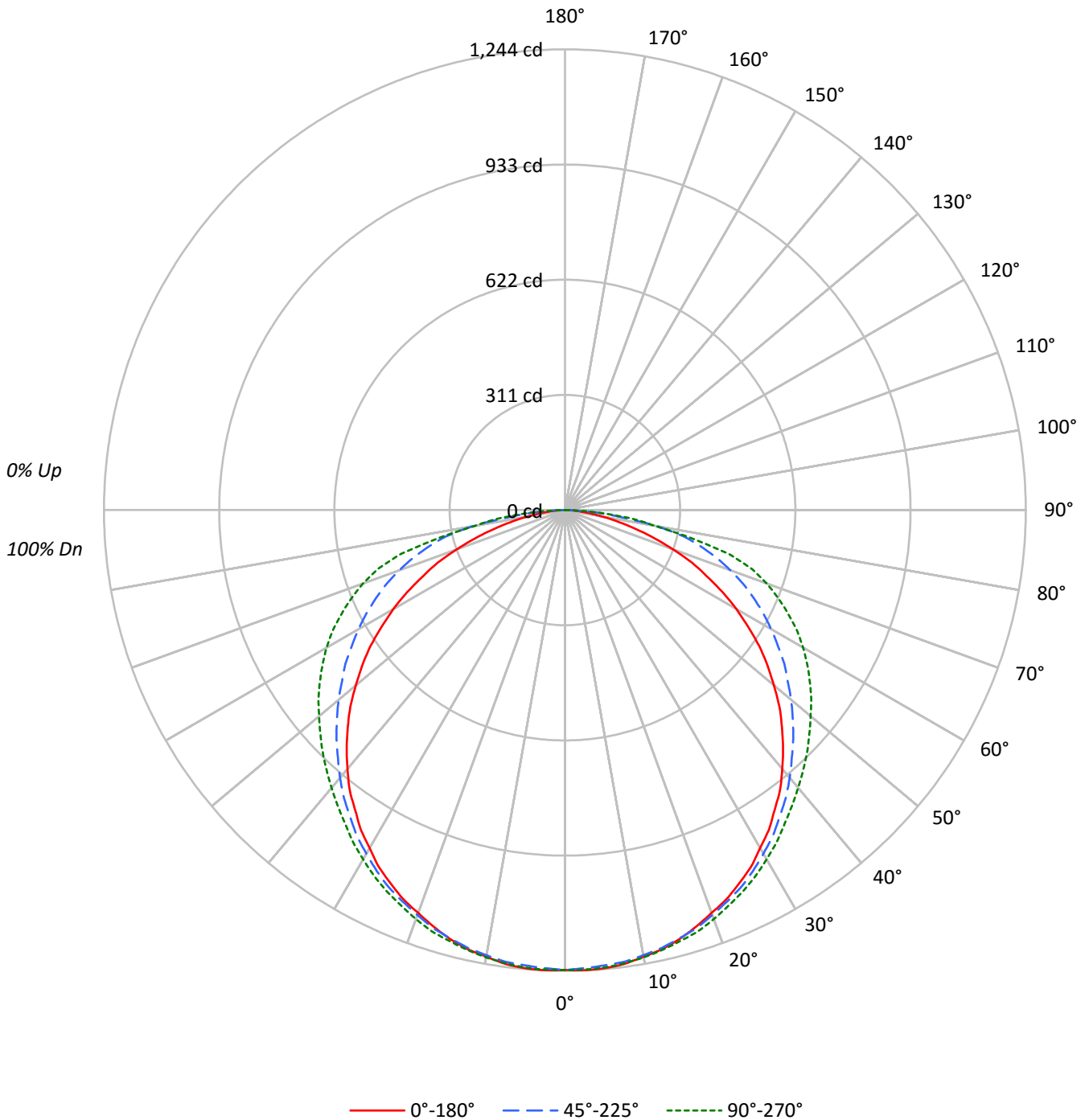
Input Watts (W): 53.8
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1671	1671	1671
5°	1677	1667	1675
10°	1673	1667	1675
15°	1670	1667	1678
20°	1657	1666	1683
25°	1652	1669	1687
30°	1637	1665	1692
35°	1622	1660	1699
40°	1603	1658	1720
45°	1577	1658	1759
50°	1542	1669	1812
55°	1502	1696	1893
60°	1439	1729	1998
65°	1347	1790	2120
70°	1225	1873	2281
75°	1039	1975	2383
80°	820	1988	1928
85°	605	1511	1694



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	117.8	3.0
10°-20°	339.0	8.6
20°-30°	518.5	13.1
30°-40°	633.8	16.0
40°-50°	675.5	17.1
50°-60°	645.9	16.4
60°-70°	547.1	13.9
70°-80°	367.7	9.3
80°-90°	103.7	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°	975.3	24.7
0°-40°	1609.1	40.7
0°-60°	2930.4	74.2
0°-90°	3949.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3949.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1242	1242	1242	1242	1242	
5°	1242	1240	1234	1240	1240	118
15°	1199	1199	1197	1207	1205	338
25°	1113	1116	1124	1134	1136	513
35°	987	995	1011	1030	1034	618
45°	829	842	872	909	924	639
55°	640	664	723	780	807	570
65°	423	466	562	637	666	420
75°	200	272	380	445	458	214
85°	39	80	98	106	110	48
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1241.8	1241.8	1241.8	1241.8	1241.8
2.5°	1243.8	1243.8	1237.9	1241.8	1241.8
5°	1241.8	1239.9	1234.0	1239.9	1239.9
7.5°	1236.0	1234.0	1230.1	1236.0	1234.0
10°	1224.2	1224.2	1220.3	1226.2	1226.2
12.5°	1214.4	1212.5	1210.5	1218.3	1216.4
15°	1198.8	1198.8	1196.8	1206.6	1204.6
17.5°	1179.2	1181.1	1183.1	1190.9	1192.9
20°	1157.6	1161.5	1163.5	1175.3	1175.3
22.5°	1138.0	1140.0	1143.9	1155.7	1155.7
25°	1112.6	1116.5	1124.3	1134.1	1136.1
27.5°	1087.1	1089.1	1098.9	1112.6	1114.5
30°	1053.8	1059.7	1071.4	1087.1	1089.1
32.5°	1024.4	1030.3	1044.0	1059.7	1063.6
35°	987.2	995.0	1010.7	1030.3	1034.2
37.5°	953.9	959.8	979.4	1000.9	1006.8
40°	912.8	924.5	944.1	969.6	979.4
42.5°	871.6	883.4	906.9	940.2	952.0
45°	828.6	842.3	871.6	908.9	924.5
47.5°	785.5	801.1	834.4	877.5	895.1
50°	736.5	756.1	797.2	846.2	865.8
52.5°	689.5	713.0	758.0	812.9	838.3
55°	640.5	664.0	722.8	779.6	807.0
57.5°	585.7	617.0	681.6	746.3	775.7
60°	534.7	564.1	642.5	713.0	742.4
62.5°	479.9	519.1	603.3	677.7	707.1
65°	423.1	466.2	562.2	636.6	666.0
67.5°	372.2	419.2	521.0	595.5	624.8
70°	311.4	370.2	476.0	550.4	579.8
72.5°	254.6	319.3	429.0	501.4	528.9
75°	199.8	272.3	380.0	444.6	458.3
77.5°	148.9	225.3	329.1	356.5	346.7
80°	105.8	180.2	256.6	242.9	248.8
82.5°	68.6	137.1	158.7	180.2	186.1
85°	39.2	80.3	97.9	105.8	109.7
87.5°	17.6	29.4	39.2	39.2	37.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)