

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: P310967

Luminaire Tested: **24FCZ2-55HE-UNV-L82765-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: P310967
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-15)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 24FCZ2-55HE-UNV-L82765-CP187-W2A-U-2700K
Description: 2'X4' TROFFER LED MODULE, RIBBED 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: 4357.0 lumens
Efficiency: N/A
Efficacy: 101.1 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.29 / 1.38
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

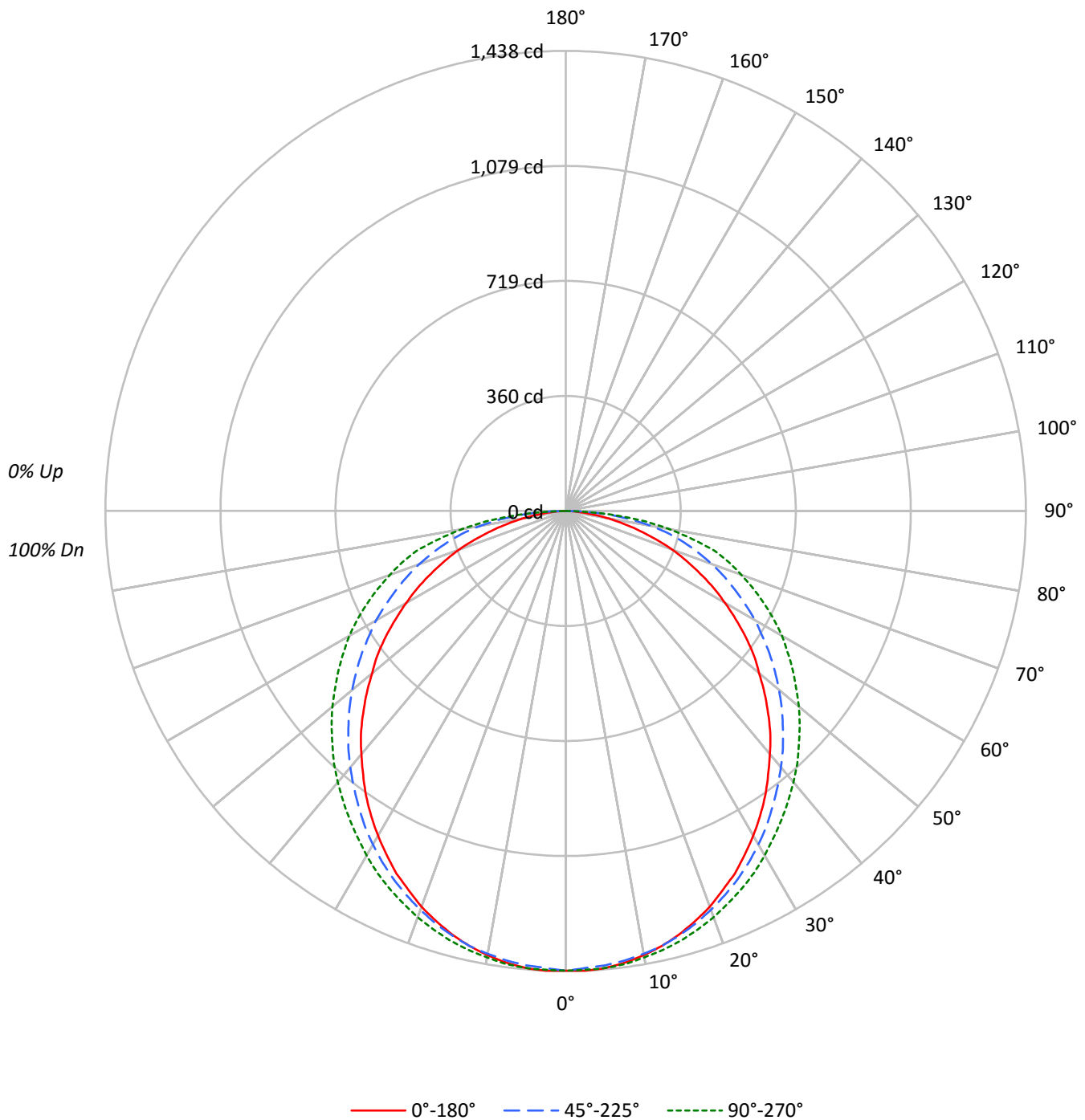
Input Watts (W): 43.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	100	96	92	96	92	89		92	89	87		82
2	98	89	81	75	95	87	80	74	83	78	73		80	75	71		67
3	89	77	69	62	86	76	68	61	73	66	60		70	64	59		56
4	81	68	59	52	79	67	58	52	64	57	51		62	56	50		47
5	74	61	52	45	72	60	51	44	58	50	44		56	49	43		41
6	69	55	46	39	67	54	45	39	52	44	38		50	43	38		36
7	64	50	41	34	62	49	40	34	47	39	34		46	39	34		31
8	59	45	37	31	57	45	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	25		23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1933	1933	1933
5°	1937	1925	1937
10°	1926	1920	1936
15°	1909	1913	1937
20°	1886	1900	1935
25°	1856	1886	1934
30°	1821	1871	1931
35°	1786	1852	1933
40°	1744	1838	1945
45°	1703	1827	1961
50°	1652	1822	1991
55°	1611	1824	2031
60°	1548	1840	2101
65°	1477	1859	2177
70°	1399	1917	2297
75°	1248	1999	2510
80°	1064	2117	2565
85°	758	2098	2455



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	136.0	3.1
10°-20°	388.8	8.9
20°-30°	587.3	13.5
30°-40°	707.8	16.2
40°-50°	743.1	17.1
50°-60°	695.2	16.0
60°-70°	574.1	13.2
70°-80°	391.2	9.0
80°-90°	133.4	3.1
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°	1112.1	25.5
0°-40°	1819.9	41.8
0°-60°	3258.3	74.8
0°-90°	4357.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4357.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1437	1437	1437	1437	1437	
5°	1434	1433	1425	1434	1434	136
15°	1370	1372	1373	1388	1391	386
25°	1250	1256	1271	1295	1302	575
35°	1087	1099	1128	1165	1177	679
45°	895	914	960	1012	1031	690
55°	687	714	778	841	866	613
65°	464	503	584	658	684	460
75°	240	295	384	457	483	256
85°	49	97	136	153	159	62
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1436.9	1436.9	1436.9	1436.9	1436.9
2.5°	1438.3	1436.9	1429.7	1436.9	1435.5
5°	1434.0	1432.6	1425.3	1434.0	1434.0
7.5°	1423.9	1423.9	1416.7	1426.8	1428.2
10°	1409.4	1409.4	1405.1	1416.7	1416.7
12.5°	1392.1	1392.1	1392.1	1403.7	1405.1
15°	1370.4	1371.8	1373.3	1387.8	1390.6
17.5°	1344.4	1347.3	1351.6	1369.0	1371.8
20°	1316.9	1319.8	1327.0	1347.3	1351.6
22.5°	1282.2	1289.5	1299.6	1322.7	1327.0
25°	1250.4	1256.2	1270.7	1295.2	1302.5
27.5°	1211.4	1220.1	1238.9	1264.9	1275.0
30°	1172.4	1181.0	1204.2	1234.5	1243.2
32.5°	1130.4	1143.4	1168.0	1199.8	1209.9
35°	1087.1	1098.6	1127.5	1165.1	1176.7
37.5°	1039.4	1055.3	1087.1	1127.5	1142.0
40°	993.1	1010.5	1046.6	1090.0	1107.3
42.5°	946.9	964.2	1004.7	1053.8	1071.2
45°	894.8	913.6	959.9	1011.9	1030.7
47.5°	842.8	865.9	916.5	971.4	991.7
50°	789.3	815.3	870.2	928.1	951.2
52.5°	741.6	766.2	824.0	886.1	907.8
55°	686.6	714.1	777.7	841.3	865.9
57.5°	630.3	660.6	728.6	798.0	822.5
60°	575.3	608.6	683.8	753.1	780.6
62.5°	521.9	555.1	633.2	705.4	732.9
65°	464.0	503.1	584.0	657.7	683.8
67.5°	409.1	451.0	536.3	608.6	634.6
70°	355.6	396.1	487.2	558.0	584.0
72.5°	297.8	344.0	435.1	508.8	536.3
75°	240.0	294.9	384.5	456.8	482.8
77.5°	186.5	242.9	332.5	391.8	404.8
80°	137.3	195.2	273.2	315.1	331.0
82.5°	88.2	146.0	208.2	238.5	251.5
85°	49.1	96.9	135.9	153.2	159.0
87.5°	20.2	41.9	54.9	62.2	62.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)