

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: P309691

Luminaire Tested: **24FCZ2-65HE-UNV-L82765-HRP-CA125-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: P309691
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-CA125-W2A-U-3500K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.125" ACRYLIC 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: 4412.0 lumens
Efficiency: N/A
Efficacy: 83.6 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

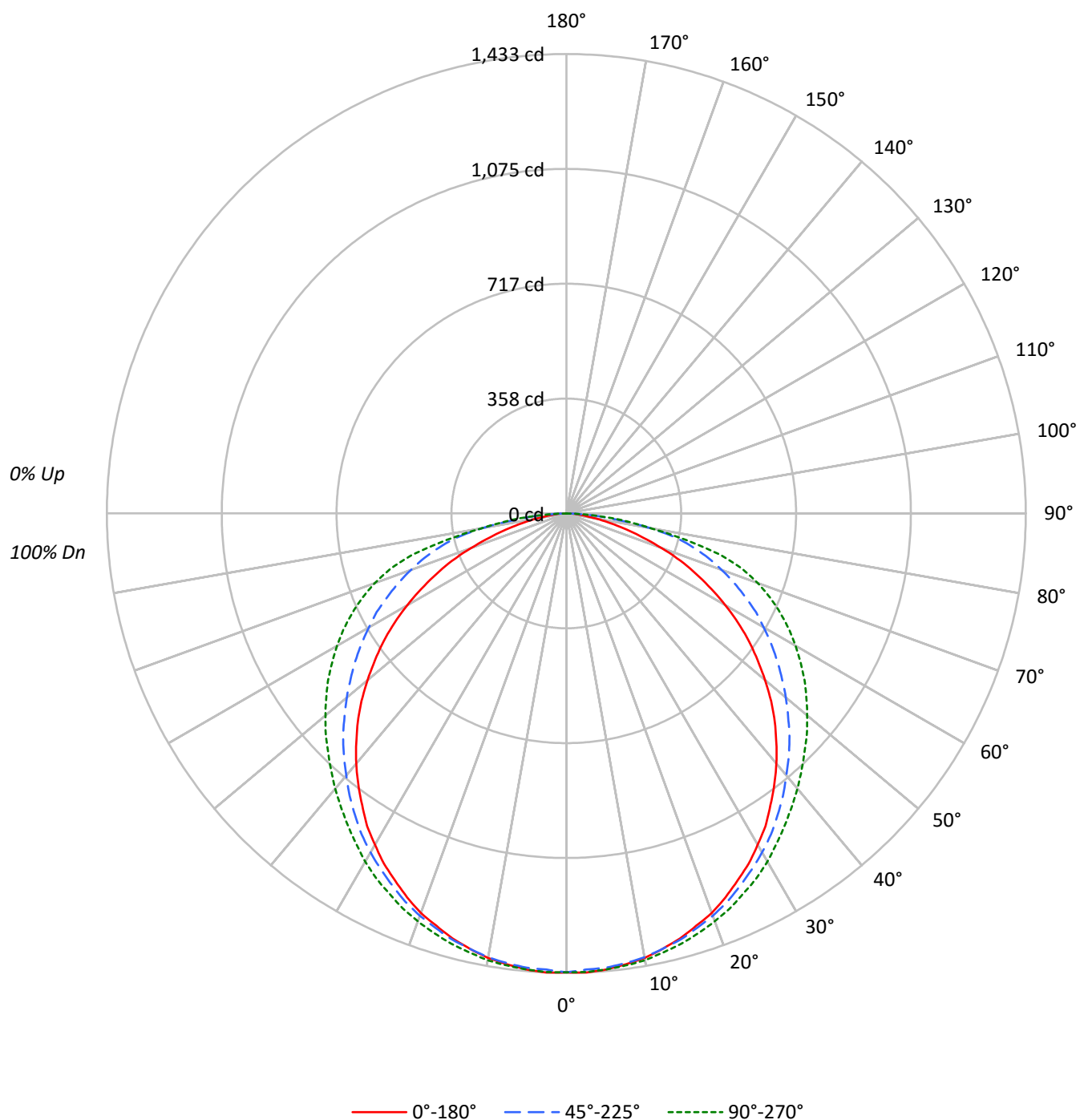
Input Watts (W): 52.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1926	1926	1926
5°	1928	1921	1928
10°	1923	1920	1933
15°	1912	1917	1935
20°	1899	1912	1939
25°	1876	1903	1941
30°	1854	1897	1949
35°	1823	1887	1951
40°	1791	1875	1969
45°	1750	1873	2000
50°	1693	1871	2053
55°	1633	1885	2127
60°	1541	1914	2222
65°	1423	1958	2346
70°	1242	2027	2500
75°	1008	2131	2583
80°	744	2090	2090
85°	570	1539	1740



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	135.6	3.1
10°-20°	389.4	8.8
20°-30°	592.8	13.4
30°-40°	719.8	16.3
40°-50°	760.5	17.2
50°-60°	717.6	16.3
60°-70°	596.7	13.5
70°-80°	392.5	8.9
80°-90°	107.0	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°	1117.8	25.3
0°-40°	1837.7	41.7
0°-60°	3315.8	75.2
0°-90°	4412.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4412.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1432	1432	1432	1432	1432	
5°	1428	1428	1422	1428	1428	136
15°	1372	1374	1376	1389	1389	387
25°	1263	1271	1282	1304	1308	583
35°	1110	1123	1149	1178	1188	695
45°	920	938	984	1032	1051	708
55°	696	726	804	879	907	620
65°	447	499	615	706	737	442
75°	194	283	410	486	497	209
85°	37	81	100	111	113	45
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1431.5	1431.5	1431.5	1431.5	1431.5
2.5°	1433.3	1431.5	1424.1	1431.5	1431.5
5°	1427.8	1427.8	1422.2	1427.8	1427.8
7.5°	1418.5	1418.5	1414.9	1422.2	1422.2
10°	1407.5	1407.5	1405.6	1414.9	1414.9
12.5°	1390.8	1392.7	1390.8	1401.9	1401.9
15°	1372.4	1374.2	1376.1	1389.0	1389.0
17.5°	1348.4	1352.1	1355.7	1370.5	1372.4
20°	1326.2	1328.0	1335.4	1352.1	1353.9
22.5°	1296.6	1302.2	1311.4	1328.0	1333.6
25°	1263.4	1270.8	1281.9	1304.0	1307.7
27.5°	1232.0	1237.5	1252.3	1276.3	1283.7
30°	1193.2	1202.4	1220.9	1244.9	1254.2
32.5°	1156.3	1165.5	1187.7	1213.5	1220.9
35°	1110.1	1123.0	1148.9	1178.4	1187.7
37.5°	1065.8	1078.7	1110.1	1143.3	1154.4
40°	1019.6	1034.4	1067.6	1106.4	1121.2
42.5°	969.7	990.0	1027.0	1069.5	1086.1
45°	919.8	938.3	984.5	1032.5	1051.0
47.5°	866.3	888.4	938.3	995.6	1017.7
50°	809.0	836.7	894.0	956.8	980.8
52.5°	751.8	783.2	847.8	918.0	943.9
55°	696.3	725.9	803.5	879.2	906.9
57.5°	635.4	672.3	757.3	838.6	866.3
60°	572.6	613.2	711.1	796.1	825.6
62.5°	509.8	556.0	666.8	751.8	783.2
65°	447.0	498.7	615.1	705.6	737.0
67.5°	386.0	443.3	567.0	657.6	689.0
70°	315.8	387.9	515.3	604.0	635.4
72.5°	251.2	334.3	465.5	548.6	576.3
75°	193.9	282.6	410.0	485.8	496.9
77.5°	142.2	230.9	352.8	378.6	380.5
80°	96.0	184.7	269.7	266.0	269.7
82.5°	62.8	138.5	169.9	190.2	192.1
85°	36.9	81.3	99.7	110.8	112.7
87.5°	18.5	27.7	35.1	36.9	40.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)