

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: P309725

Luminaire Tested: **24FCZ2-70HE-UNV-L82765-HRP-CA08-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: P309725
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: 24FCZ2-70HE-UNV-L82765-HRP-CA08-W2A-U-2700K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.08" ACRYLIC 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: 4487.0 lumens
Efficiency: N/A
Efficacy: 77.8 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

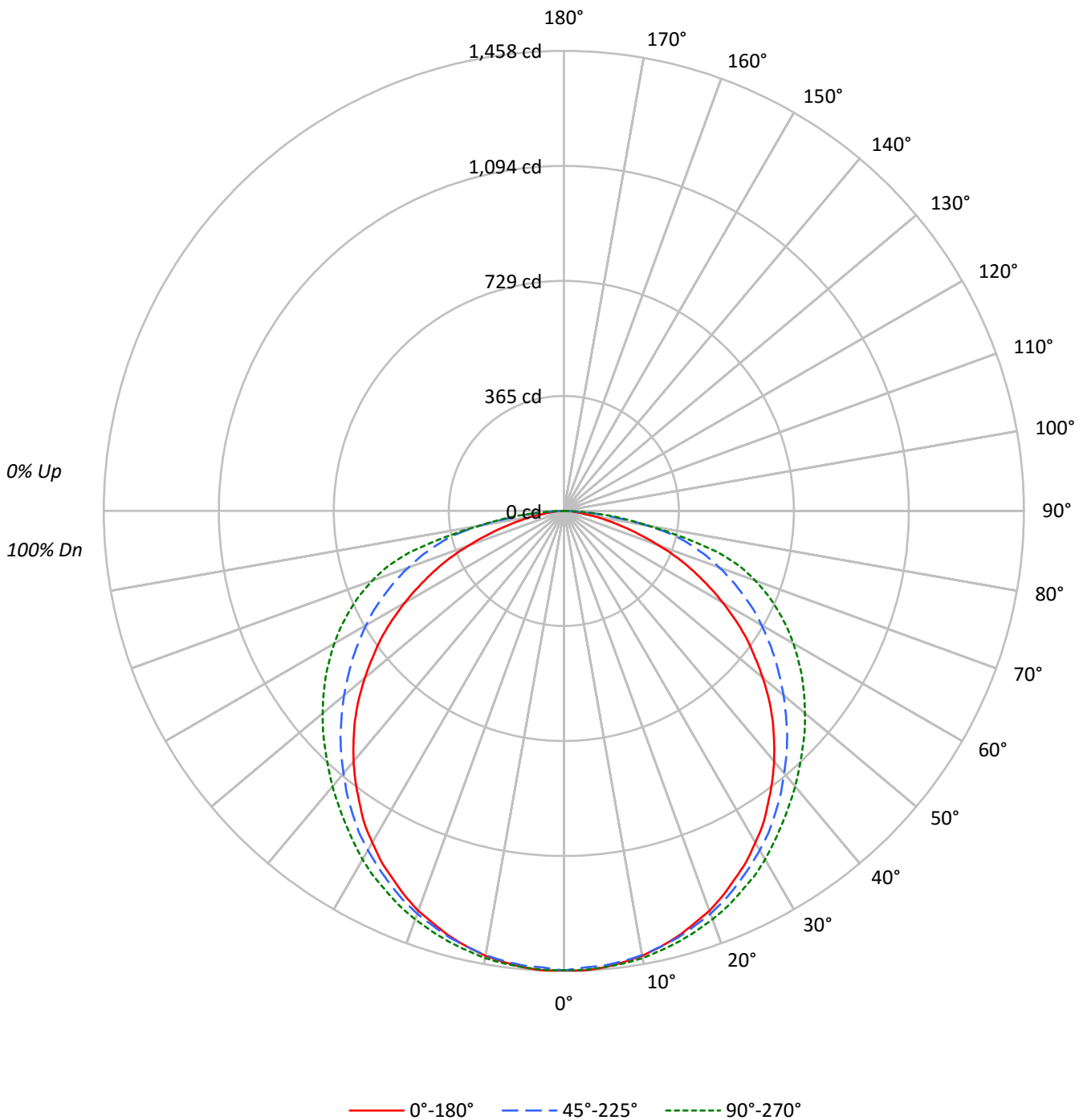
Input Watts (W): 57.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P309725

CATALOG NUMBER: 24FCZ2-70HE-UNV-L82765-HRP-CA08-W2A-U-2700K

Luminous Intensity Polar Plot





TEST NUMBER: P309725

CATALOG NUMBER: 24FCZ2-70HE-UNV-L82765-HRP-CA08-W2A-U-2700K

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	101	96	93	96	93	90	92	90	87	89	86	84	82
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67
3	89	78	69	62	86	76	68	62	73	66	61	70	64	59	68	63	58	56
4	81	68	59	52	79	67	59	52	65	57	51	62	56	50	60	54	50	48
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36
7	63	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31
8	59	45	36	30	57	44	36	30	43	36	30	42	35	30	41	34	30	28
9	55	41	33	27	54	41	33	27	40	32	27	39	32	27	38	31	27	25
10	52	38	30	25	50	38	30	25	37	30	25	36	29	24	35	29	24	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1959	1959	1959
5°	1961	1954	1961
10°	1956	1953	1966
15°	1944	1949	1968
20°	1931	1945	1972
25°	1908	1935	1974
30°	1885	1929	1982
35°	1854	1919	1984
40°	1821	1907	2003
45°	1780	1905	2034
50°	1722	1903	2088
55°	1661	1917	2164
60°	1567	1946	2260
65°	1447	1991	2386
70°	1264	2062	2542
75°	1025	2168	2627
80°	757	2125	2125
85°	580	1565	1769



TEST NUMBER: P309725

CATALOG NUMBER: 24FCZ2-70HE-UNV-L82765-HRP-CA08-W2A-U-2700K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	137.9	3.1
10°-20°	396.0	8.8
20°-30°	602.9	13.4
30°-40°	732.1	16.3
40°-50°	773.4	17.2
50°-60°	729.8	16.3
60°-70°	606.8	13.5
70°-80°	399.2	8.9
80°-90°	108.8	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°	1136.8	25.3
0°-40°	1868.9	41.7
0°-60°	3372.2	75.2
0°-90°	4487.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4487.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1456	1456	1456	1456	1456	
5°	1452	1452	1446	1452	1452	138
15°	1396	1398	1400	1413	1413	394
25°	1285	1292	1304	1326	1330	593
35°	1129	1142	1168	1198	1208	707
45°	936	954	1001	1050	1069	720
55°	708	738	817	894	922	631
65°	455	507	626	718	750	449
75°	197	287	417	494	505	213
85°	38	83	101	113	115	46
90°	0	0	0	0	0	



TEST NUMBER: P309725

CATALOG NUMBER: 24FCZ2-70HE-UNV-L82765-HRP-CA08-W2A-U-2700K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1455.8	1455.8	1455.8	1455.8	1455.8
2.5°	1457.7	1455.8	1448.3	1455.8	1455.8
5°	1452.1	1452.1	1446.4	1452.1	1452.1
7.5°	1442.7	1442.7	1438.9	1446.4	1446.4
10°	1431.4	1431.4	1429.5	1438.9	1438.9
12.5°	1414.5	1416.4	1414.5	1425.8	1425.8
15°	1395.7	1397.6	1399.5	1412.6	1412.6
17.5°	1371.3	1375.0	1378.8	1393.8	1395.7
20°	1348.7	1350.6	1358.1	1375.0	1376.9
22.5°	1318.7	1324.3	1333.7	1350.6	1356.3
25°	1284.9	1292.4	1303.7	1326.2	1330.0
27.5°	1252.9	1258.6	1273.6	1298.0	1305.5
30°	1213.5	1222.9	1241.7	1266.1	1275.5
32.5°	1175.9	1185.3	1207.9	1234.2	1241.7
35°	1129.0	1142.1	1168.4	1198.5	1207.9
37.5°	1083.9	1097.0	1129.0	1162.8	1174.0
40°	1036.9	1051.9	1085.8	1125.2	1140.2
42.5°	986.2	1006.9	1044.4	1087.6	1104.5
45°	935.5	954.3	1001.2	1050.1	1068.8
47.5°	881.0	903.5	954.3	1012.5	1035.0
50°	822.8	850.9	909.2	973.0	997.5
52.5°	764.5	796.5	862.2	933.6	959.9
55°	708.2	738.2	817.1	894.1	922.3
57.5°	646.2	683.8	770.2	852.8	881.0
60°	582.3	623.7	723.2	809.6	839.7
62.5°	518.5	565.4	678.1	764.5	796.5
65°	454.6	507.2	625.5	717.6	749.5
67.5°	392.6	450.8	576.7	668.7	700.7
70°	321.2	394.5	524.1	614.3	646.2
72.5°	255.5	340.0	473.4	557.9	586.1
75°	197.2	287.4	417.0	494.0	505.3
77.5°	144.6	234.8	358.8	385.1	387.0
80°	97.7	187.8	274.3	270.5	274.3
82.5°	63.9	140.9	172.8	193.5	195.4
85°	37.6	82.7	101.4	112.7	114.6
87.5°	18.8	28.2	35.7	37.6	41.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)