

Scaled data based on original data using

LM-41-14 Approved Method for Photometric Testing Of Indoor Fluorescent Luminaires

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: NEO-RAY

Report Number: 168P146

Luminaire Tested: **154/16390/2T5**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: 168P146
Test Lab:
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: 154/16390/2T5
Description: Neo-Ray Fenestra Product Family 1 X 4 with
drop basket.
Light Source: Two - F54T5/830/HO - 4400 Lumens ea. - 54 Watts ea.
Ballast/Driver: Sylvania QT 2X54/120 PHO Electronic L.O.B.F. = Unknown

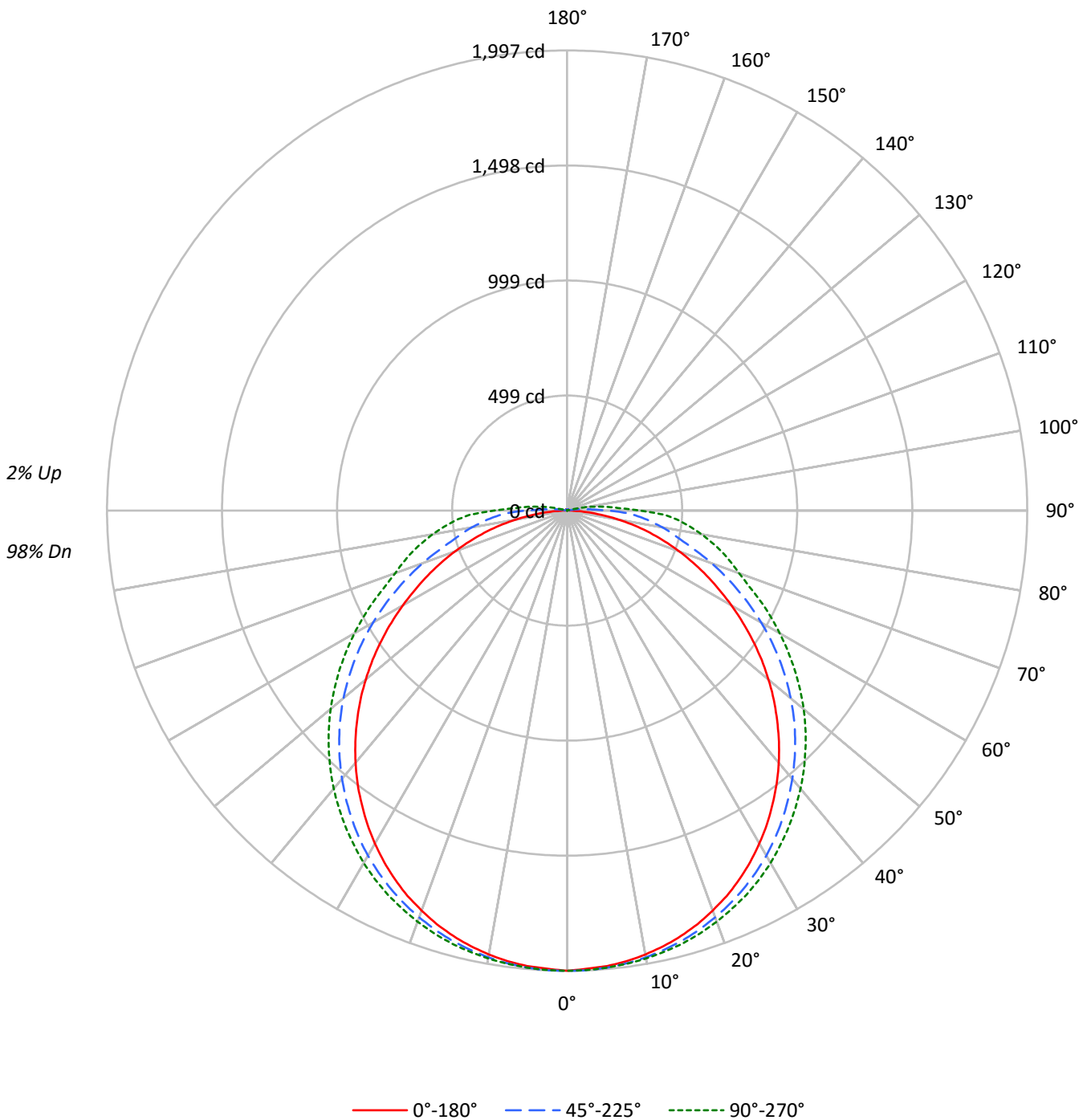
Summary

Lumens per Lamp: 4400 (2 lamps)
Luminaire Lumens: 6452.5 lumens
Efficiency: 73.3%
Efficacy: 53.8 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.31 / 1.41
Luminous Opening: Rectangular w/ Sides (W: 0.9' x L: 3.83' x H: 0.17')
CIE Type: Direct

Input Watts (W): 120
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: 168P146
CATALOG NUMBER: 154/16390/2T5

Luminous Intensity Polar Plot





TEST NUMBER: 168P146

CATALOG NUMBER: 154/16390/2T5

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	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	50	30	10	50	30	10	0														
RCR																																						
0	87	87	87	87	85	85	85	85	81	81	81	77	77	77	74	74	74	74	74	74	74	74	74	72														
1	78	74	71	67	76	72	69	66	69	66	64	66	64	62	63	61	59	58	58	58	58	58	58	58														
2	71	64	59	54	69	63	58	53	60	55	52	57	53	50	55	52	49	47	47	47	47	47	47	47														
3	64	56	50	44	62	55	49	44	52	47	43	50	46	42	48	44	41	39	39	39	39	39	39	39														
4	59	49	43	37	57	48	42	37	46	41	36	44	40	36	43	38	35	33	33	33	33	33	33	33														
5	54	44	37	32	52	43	37	32	41	36	31	40	35	31	38	34	30	29	29	29	29	29	29	29														
6	50	40	33	28	48	39	32	28	37	32	27	36	31	27	35	30	27	25	25	25	25	25	25	25														
7	46	36	29	25	45	35	29	24	34	28	24	33	28	24	32	27	24	22	22	22	22	22	22	22														
8	43	33	26	22	42	32	26	22	31	25	21	30	25	21	29	24	21	20	20	20	20	20	20	20														
9	40	30	24	20	39	29	24	19	28	23	19	28	23	19	27	22	19	18	18	18	18	18	18	18														
10	37	28	22	18	36	27	21	18	26	21	17	26	21	17	25	20	17	16	16	16	16	16	16	16														

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6236	6236	6236
5°	6195	6152	6140
10°	6154	6067	6058
15°	6105	5981	5982
20°	6040	5887	5902
25°	5965	5794	5827
30°	5864	5692	5742
35°	5749	5574	5643
40°	5616	5443	5545
45°	5450	5303	5434
50°	5265	5144	5314
55°	5038	4953	5171
60°	4773	4726	5016
65°	4500	4465	4864
70°	4215	4191	4767
75°	3850	3898	4932
80°	3290	3902	5140
85°	2258	3949	5512



TEST NUMBER: 168P146

CATALOG NUMBER: 154/16390/2T5

ZONAL LUMENS:

Zone	Lumens	% Fixture	% Lamp
0°-10°	189.2	2.9	2.2
10°-20°	544.9	8.4	6.2
20°-30°	833.3	12.9	9.5
30°-40°	1016.1	15.7	11.5
40°-50°	1071.4	16.6	12.2
50°-60°	992.6	15.4	11.3
60°-70°	800.6	12.4	9.1
70°-80°	561.4	8.7	6.4
80°-90°	327.0	5.1	3.7
90°-100°	95.2	1.5	1.1
100°-110°	10.1	0.2	0.1
110°-120°	2.3	0.0	0.0
120°-130°	2.9	0.0	0.0
130°-140°	3.5	0.1	0.0
140°-150°	2.2	0.0	0.0
150°-160°	0.0	0.0	0.0
160°-170°	0.0	0.0	0.0
170°-180°	0.0	0.0	0.0
0°-30°	1567.4	24.3	17.8
0°-40°	2583.5	40.0	29.4
0°-60°	4647.4	72.0	52.8
0°-90°	6336.4	98.2	72.0
90°-120°	107.6	1.7	1.2
90°-150°	116.2	1.8	1.3
90°-180°	116.0	1.8	1.3
0°-180°	6452.5	100.0	73.3

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1997	1997	1997	1997	1997	
5°	1984	1987	1991	1992	1991	189
15°	1911	1918	1932	1942	1944	539
25°	1767	1782	1811	1835	1840	814
35°	1555	1583	1631	1667	1676	973
45°	1289	1332	1399	1448	1463	994
55°	984	1039	1124	1184	1206	880
65°	667	722	818	896	925	662
75°	372	410	522	649	697	393
85°	95	168	318	441	486	106
90°	7	64	175	278	318	8
95°	5	11	72	149	181	4
105°	4	4	3	3	11	4
115°	4	4	2	1	0	4
125°	5	5	3	2	1	4
135°	6	6	5	3	2	5
145°	7	7	6	4	3	3
155°	0	0	0	0	0	0
165°	0	0	0	0	0	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0



TEST NUMBER: 168P146

CATALOG NUMBER: 154/16390/2T5

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1997	1997	1997	1997	1997
2.5°	1990	1993	1997	1997	1996
5°	1984	1987	1991	1992	1991
7.5°	1973	1977	1982	1985	1984
10°	1956	1962	1969	1973	1974
12.5°	1936	1942	1952	1960	1960
15°	1911	1918	1932	1942	1944
17.5°	1882	1892	1907	1920	1923
20°	1847	1859	1878	1895	1898
22.5°	1810	1822	1847	1866	1870
25°	1767	1782	1811	1835	1840
27.5°	1720	1737	1772	1798	1805
30°	1668	1689	1729	1758	1766
32.5°	1614	1638	1682	1713	1722
35°	1555	1583	1631	1667	1676
37.5°	1494	1524	1577	1616	1627
40°	1429	1463	1520	1563	1576
42.5°	1361	1399	1461	1507	1521
45°	1289	1332	1399	1448	1463
47.5°	1217	1263	1335	1386	1403
50°	1141	1190	1267	1321	1340
52.5°	1064	1116	1196	1254	1274
55°	984	1039	1124	1184	1206
57.5°	904	960	1049	1112	1136
60°	823	882	973	1040	1066
62.5°	744	803	896	967	995
65°	667	722	818	896	925
67.5°	592	642	742	823	852
70°	518	564	667	751	793
72.5°	444	486	592	698	745
75°	372	410	522	649	697
77.5°	300	337	470	599	644
80°	229	268	420	546	592
82.5°	160	211	368	494	539
85°	95	168	318	441	486
87.5°	41	124	263	379	422
90°	7	64	175	278	318
92.5°	5	27	108	195	229
95°	5	11	72	149	181
97.5°	5	6	40	104	132
100°	4	5	14	62	87
102.5°	4	4	4	25	43
105°	4	4	3	3	11
107.5°	4	4	2	1	0
110°	4	4	2	1	0



TEST NUMBER: 168P146

CATALOG NUMBER: 154/16390/2T5

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	4	4	2	1	0
115°	4	4	2	1	0
117.5°	4	4	3	1	0
120°	4	4	3	1	0
122.5°	5	4	3	2	1
125°	5	5	3	2	1
127.5°	5	5	4	2	1
130°	6	5	4	2	2
132.5°	6	6	4	3	2
135°	6	6	5	3	2
137.5°	7	6	5	3	3
140°	7	7	5	4	3
142.5°	7	7	6	4	3
145°	7	7	6	4	3
147.5°	0	0	0	0	0
150°	0	0	0	0	0
152.5°	0	0	0	0	0
155°	0	0	0	0	0
157.5°	0	0	0	0	0
160°	0	0	0	0	0
162.5°	0	0	0	0	0
165°	0	0	0	0	0
167.5°	0	0	0	0	0
170°	0	0	0	0	0
172.5°	0	0	0	0	0
175°	0	0	0	0	0
177.5°	0	0	0	0	0
180°	0	0	0	0	0

(END OF REPORT)