

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: 168p246

Luminaire Tested: **83DP-2T8-ST4D-2EB-SI-S58**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: 168p246
Test Lab: METALUX RESEARCH LABS
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: 83DP-2T8-ST4D-2EB-SI-S58
Description: NEORAY GEO DIRECT PENDANT MOUNT LUMINAIRE, 2 32T8, WITH
ACRYLIC PRISMATIC LENS
Light Source: TWO - F032/735 - 2850 LUMENS - 32 WATTS
Ballast/Driver: B232IUNVHP-B

Summary

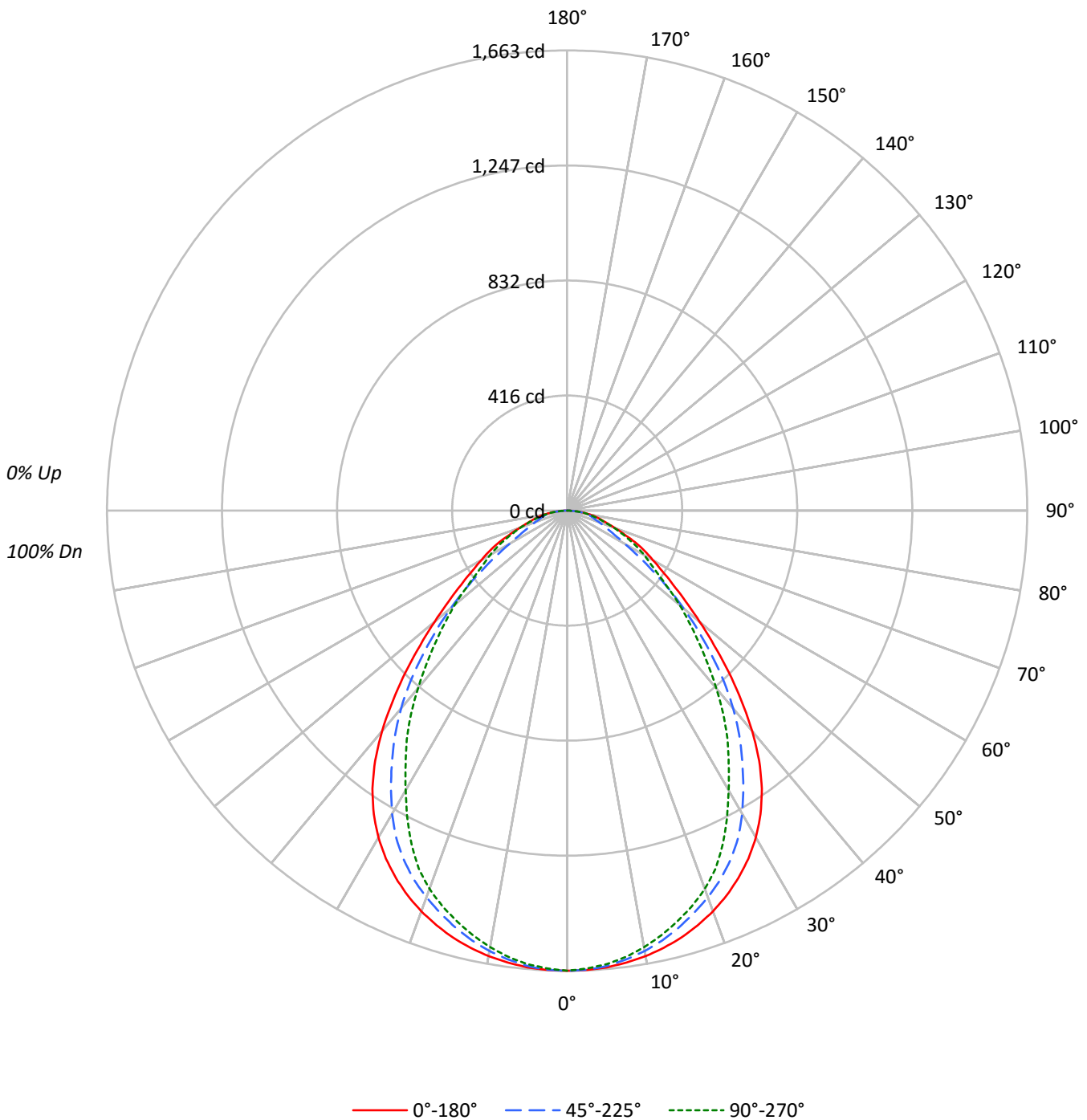
Lumens per Lamp: 2850 (2 lamps)
Luminaire Lumens: 3235.4 lumens
Efficiency: 56.8%
Efficacy: 59.9 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.08 / 1.19
Luminous Opening: Rectangular (W 0.42' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 54
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					10	0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0	
RCR																						
0	68	68	68	68	66	66	66	66	63	63	63	60	60	60	58	58	58	57				57
1	63	60	58	57	61	59	57	56	57	55	54	55	53	52	53	52	51	50				50
2	58	54	51	48	57	53	50	47	51	48	46	49	47	45	47	46	44	43				43
3	54	48	44	41	52	48	44	41	46	43	40	44	42	39	43	41	39	38				38
4	50	44	39	36	48	43	39	36	42	38	35	40	37	35	39	37	34	33				33
5	46	40	35	32	45	39	35	32	38	34	31	37	33	31	36	33	31	30				30
6	43	36	32	28	42	36	31	28	35	31	28	34	30	28	33	30	27	26				26
7	40	33	29	25	39	33	28	25	32	28	25	31	28	25	30	27	25	24				24
8	37	30	26	23	37	30	26	23	29	26	23	29	25	23	28	25	23	22				22
9	35	28	24	21	34	28	24	21	27	23	21	27	23	21	26	23	21	20				20
10	33	26	22	19	32	26	22	19	25	22	19	25	21	19	24	21	19	18				18

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	10740	10740	10740
5°	10742	10710	10665
10°	10722	10598	10506
15°	10678	10430	10277
20°	10591	10220	10000
25°	10440	9941	9485
30°	10172	9434	8703
35°	9674	8696	7971
40°	8776	7874	7073
45°	7535	6750	6138
50°	6280	5526	5325
55°	5270	4222	4526
60°	4624	3113	4146
65°	4141	2521	3759
70°	3437	2323	3342
75°	3169	2371	3019
80°	3161	2715	2901
85°	2742	2816	2594



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ZONAL LUMENS:

Zone	Lumens	% Fixture	% Lamp
0°-10°	156.6	4.8	2.7
10°-20°	440.6	13.6	7.7
20°-30°	640.0	19.8	11.2
30°-40°	693.9	21.4	12.2
40°-50°	576.7	17.8	10.1
50°-60°	365.4	11.3	6.4
60°-70°	203.2	6.3	3.6
70°-80°	118.0	3.6	2.1
80°-90°	41.1	1.3	0.7
90°-100°	0.0	0.0	0.0
100°-110°	0.0	0.0	0.0
110°-120°	0.0	0.0	0.0
120°-130°	0.0	0.0	0.0
130°-140°	0.0	0.0	0.0
140°-150°	0.0	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°	1237.2	38.2	21.7
0°-40°	1931.0	59.7	33.9
0°-60°	2873.2	88.8	50.4
0°-90°	3235.4	100.0	56.8
90°-120°	0.0	0.0	0.0
90°-150°	0.0	0.0	0.0
90°-180°	0.0	0.0	0.0
0°-180°	3235.4	100.0	56.8

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1663	1663	1663	1663	1663	
5°	1657	1655	1652	1652	1645	157
15°	1597	1583	1560	1546	1537	450
25°	1465	1436	1395	1353	1331	674
35°	1227	1200	1103	1040	1011	761
45°	825	803	739	701	672	637
55°	468	413	375	388	402	425
65°	271	186	165	193	246	267
75°	127	110	95	117	121	137
85°	37	41	38	37	35	43
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1663	1663	1663	1663	1663
2.5°	1662	1661	1661	1662	1656
5°	1657	1655	1652	1652	1645
7.5°	1647	1644	1636	1633	1627
10°	1635	1629	1616	1608	1602
12.5°	1618	1608	1591	1579	1572
15°	1597	1583	1560	1546	1537
17.5°	1571	1553	1525	1508	1499
20°	1541	1519	1487	1466	1455
22.5°	1506	1480	1445	1416	1401
25°	1465	1436	1395	1353	1331
27.5°	1418	1388	1337	1277	1251
30°	1364	1335	1265	1195	1167
32.5°	1301	1273	1185	1115	1086
35°	1227	1200	1103	1040	1011
37.5°	1140	1113	1021	964	926
40°	1041	1015	934	878	839
42.5°	933	908	839	790	752
45°	825	803	739	701	672
47.5°	720	700	642	613	598
50°	625	600	550	531	530
52.5°	540	504	459	458	460
55°	468	413	375	388	402
57.5°	407	332	301	324	357
60°	358	269	241	271	321
62.5°	316	221	197	227	285
65°	271	186	165	193	246
67.5°	222	160	142	168	210
70°	182	139	123	147	177
72.5°	151	123	107	131	146
75°	127	110	95	117	121
77.5°	107	96	84	99	98
80°	85	80	73	79	78
82.5°	61	60	57	59	58
85°	37	41	38	37	35
87.5°	19	18	14	13	12
90°	0	0	0	0	0

(END OF REPORT)