

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P930702

Luminaire Tested: DFN2DS-PN4F0-070DS940-RLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930702
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P333882)
Test Lab: INNOVATION CENTER
Issue Date: 11/20/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: DFN2DS-PN4F0-070DS940-RLL
Description: 4 foot, Pentagon Define Geo, with Direct 1in Regressed Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

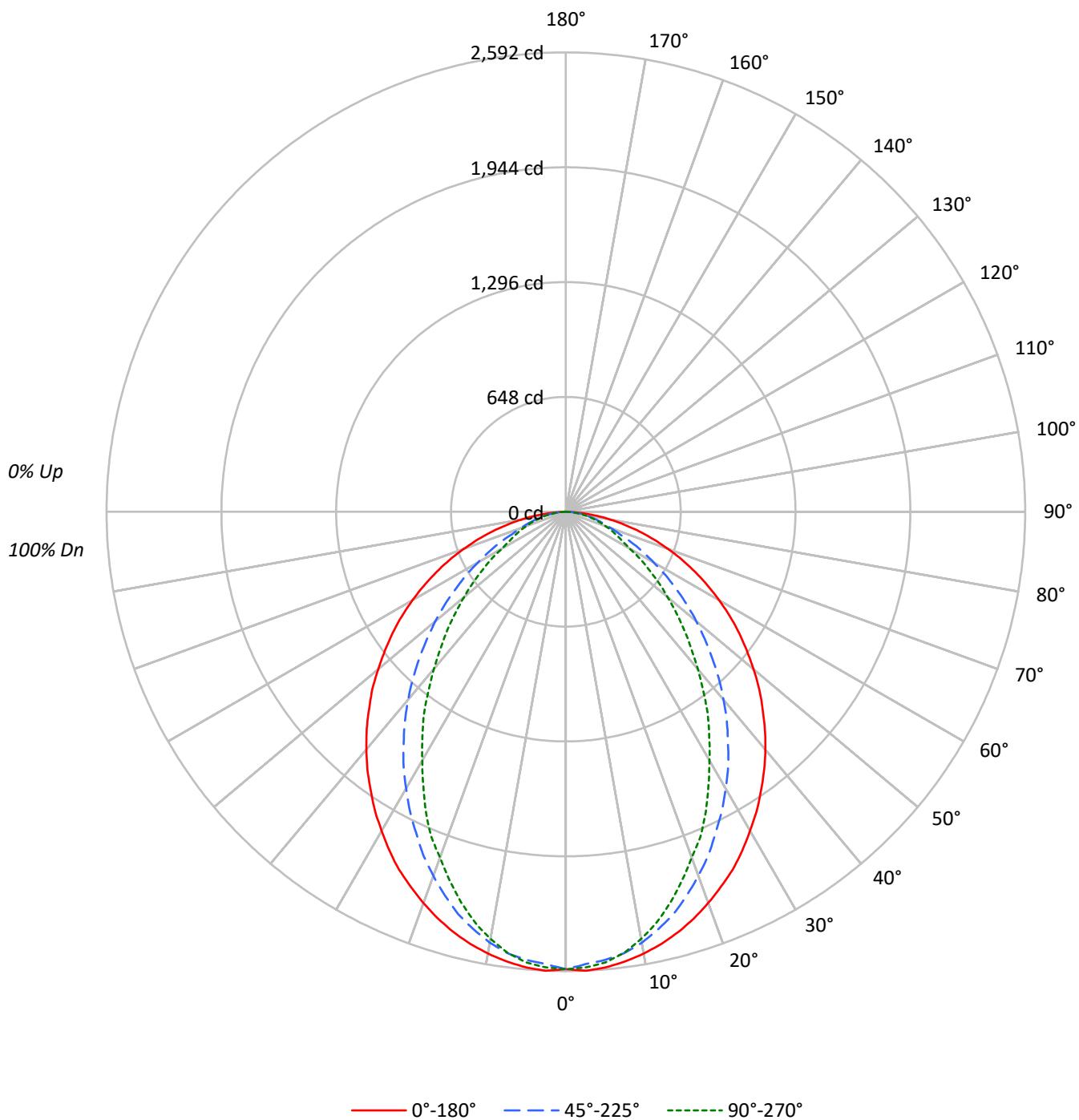
Lumens per Lamp: N/A
Luminaire Lumens: 5307.4 lumens
Efficiency: N/A
Efficacy: 74.3 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 3.94' x L: 3.74' x H: 0')
CIE Type: Direct

Input Watts (W): 71.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9789
Total Harmonic Distortion (THDi): 0.074
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

TEST NUMBER: P930702

CATALOG NUMBER: DFN2DS-PN4F0-070DS940-RLL

Luminous Intensity Polar Plot



TEST NUMBER: P930702

CATALOG NUMBER: DFN2DS-PN4F0-070DS940-RLL

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20
RC	80				70				50				30				10
RW	70	50	30	10	70	50	30	10	50	30	10		50	30	10		50
RCR																	
0	119	119	119	119	116	116	116	116	111	111	111		106	106	106		102
1	110	106	102	98	107	103	100	97	99	96	94		95	93	91		92
2	101	94	87	82	98	92	86	81	88	83	79		85	81	78		82
3	93	83	76	70	90	82	75	69	79	73	68		76	71	67		74
4	86	75	66	60	83	73	66	60	71	64	59		69	63	58		66
5	79	67	59	53	77	66	58	52	64	57	52		62	56	51		60
6	74	61	53	47	72	60	52	46	58	51	46		57	50	46		55
7	68	56	47	42	67	55	47	42	53	46	41		52	46	41		51
8	64	51	43	38	62	51	43	37	49	42	37		48	42	37		47
9	60	47	39	34	59	47	39	34	46	39	34		44	38	34		44
10	56	44	36	31	55	43	36	31	42	36	31		41	35	31		41

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1884	1884	1884
5°	1891	1860	1870
10°	1876	1830	1814
15°	1855	1775	1724
20°	1825	1698	1613
25°	1794	1610	1505
30°	1752	1520	1366
35°	1711	1422	1244
40°	1669	1320	1104
45°	1620	1206	976
50°	1570	1090	851
55°	1519	966	731
60°	1459	835	607
65°	1392	702	553
70°	1311	578	508
75°	1212	527	474
80°	1070	471	432
85°	841	371	371

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 1620 cd/sqm

TEST NUMBER: P930702

CATALOG NUMBER: DFN2DS-PN4F0-070DS940-RLL

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	241.9	4.6
10°-20°	664.0	12.5
20°-30°	932.2	17.6
30°-40°	1016.1	19.1
40°-50°	933.9	17.6
50°-60°	733.5	13.8
60°-70°	477.4	9.0
70°-80°	245.7	4.6
80°-90°	62.7	1.2
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°	1838.0	34.6
0°-40°	2854.1	53.8
0°-60°	4521.5	85.2
0°-90°	5307.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5307.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2581	2581	2581	2581	2581	
5°	2581	2569	2538	2560	2553	245
15°	2454	2429	2349	2305	2282	692
25°	2228	2153	1999	1903	1868	1025
35°	1920	1801	1595	1448	1396	1202
45°	1570	1413	1168	1002	946	1212
55°	1193	1011	759	619	575	1066
65°	806	616	406	327	320	799
75°	430	266	187	170	168	454
85°	100	51	44	44	44	120
90°	0	0	0	0	0	

TEST NUMBER: P930702

CATALOG NUMBER: DFN2DS-PN4F0-070DS940-RLL

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2580.6	2580.6	2580.6	2580.6	2580.6
2.5°	2592.2	2580.6	2554.9	2578.4	2573.7
5°	2580.6	2569.0	2538.5	2559.6	2552.6
7.5°	2559.6	2545.7	2513.0	2522.1	2510.5
10°	2531.6	2515.3	2468.6	2461.5	2447.6
12.5°	2496.6	2475.6	2412.4	2398.5	2372.7
15°	2454.5	2428.7	2349.4	2305.1	2281.8
17.5°	2405.5	2368.1	2270.0	2218.6	2181.2
20°	2349.4	2302.6	2185.9	2127.7	2076.1
22.5°	2288.8	2235.0	2099.4	2020.1	1985.2
25°	2228.0	2153.2	1999.1	1903.4	1868.3
27.5°	2155.7	2076.1	1905.7	1796.0	1742.2
30°	2078.6	1989.7	1802.8	1683.9	1620.8
32.5°	2003.8	1896.3	1705.0	1564.7	1506.2
35°	1919.8	1800.6	1595.3	1448.1	1396.5
37.5°	1838.1	1709.4	1492.4	1331.0	1272.9
40°	1751.5	1611.6	1384.8	1219.1	1158.4
42.5°	1662.9	1513.5	1277.5	1104.6	1046.4
45°	1569.5	1412.8	1167.8	1001.8	945.8
47.5°	1480.7	1315.0	1062.7	896.7	845.4
50°	1382.6	1216.9	959.9	798.6	749.8
52.5°	1286.7	1111.5	861.8	707.6	663.3
55°	1193.3	1011.2	758.9	619.0	574.6
57.5°	1097.7	910.8	668.0	537.2	499.8
60°	999.6	812.7	572.1	453.2	415.8
62.5°	903.9	717.1	490.3	378.4	359.7
65°	805.7	616.5	406.4	327.1	319.9
67.5°	712.4	523.1	327.1	287.1	280.3
70°	614.2	432.1	270.8	247.5	238.1
72.5°	520.8	347.9	226.5	207.9	203.2
75°	429.7	266.1	186.8	170.5	168.2
77.5°	338.7	189.0	147.2	137.7	133.1
80°	254.5	135.5	112.0	102.8	102.8
82.5°	177.4	91.2	77.1	72.3	72.3
85°	100.4	51.3	44.3	44.3	44.3
87.5°	37.4	18.6	18.6	16.3	16.3
90°	0.0	0.0	0.0	0.0	0.0

TEST NUMBER: P930702

CATALOG NUMBER: DFN2DS-PN4F0-070DS940-RLL

CIE UGR TABLE:

Reflectances:											
Ceiling		0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3
Wall		0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3
Reference plane		0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Room dimensions		Viewed crosswise					Viewed endwise				
X=2H	Y=2H	13.43	14.96	13.80	15.27	15.58	9.40	10.92	9.76	11.23	11.55
	3H	15.20	16.57	15.58	16.89	17.25	10.66	12.03	11.04	12.35	12.72
	4H	15.87	17.15	16.27	17.50	17.87	11.16	12.44	11.56	12.79	13.17
	6H	16.36	17.54	16.77	17.90	18.30	11.54	12.73	11.96	13.09	13.48
	8H	16.52	17.65	16.95	18.04	18.44	11.67	12.79	12.09	13.18	13.58
	12H	16.62	17.70	17.05	18.08	18.51	11.75	12.83	12.18	13.21	13.64
4H	2H	13.54	14.82	13.94	15.17	15.55	10.09	11.37	10.49	11.72	12.10
	3H	15.47	16.53	15.88	16.93	17.34	11.53	12.60	11.94	13.00	13.40
	4H	16.22	17.18	16.65	17.59	18.03	12.13	13.09	12.57	13.51	13.94
	6H	16.81	17.65	17.27	18.09	18.55	12.62	13.45	13.08	13.90	14.36
	8H	17.03	17.81	17.49	18.25	18.72	12.78	13.56	13.25	14.00	14.47
	12H	17.18	17.88	17.66	18.35	18.83	12.90	13.59	13.38	14.07	14.54
8H	4H	16.25	17.02	16.71	17.47	17.93	12.49	13.26	12.95	13.71	14.18
	6H	16.88	17.53	17.38	18.02	18.49	13.07	13.72	13.57	14.21	14.68
	8H	17.13	17.71	17.65	18.22	18.71	13.29	13.87	13.81	14.38	14.87
	12H	17.34	17.85	17.85	18.34	18.90	13.47	13.98	13.98	14.48	15.04
12H	4H	16.23	16.92	16.71	17.40	17.87	12.53	13.23	13.01	13.70	14.17
	6H	16.86	17.44	17.38	17.95	18.44	13.14	13.71	13.65	14.22	14.71
	8H	17.15	17.66	17.66	18.15	18.72	13.41	13.92	13.92	14.41	14.98

END OF REPORT

FIELD PERFORMANCE MAY DIFFER FROM LABORATORY PERFORMANCE

7 of 7