

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: P930699

Luminaire Tested: DFN2DS-PN4F0-070DS935-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930699
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P333812)
Test Lab: INNOVATION CENTER
Issue Date: 11/20/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: DFN2DS-PN4F0-070DS935-FLL
Description: 4 foot, Pentagon Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

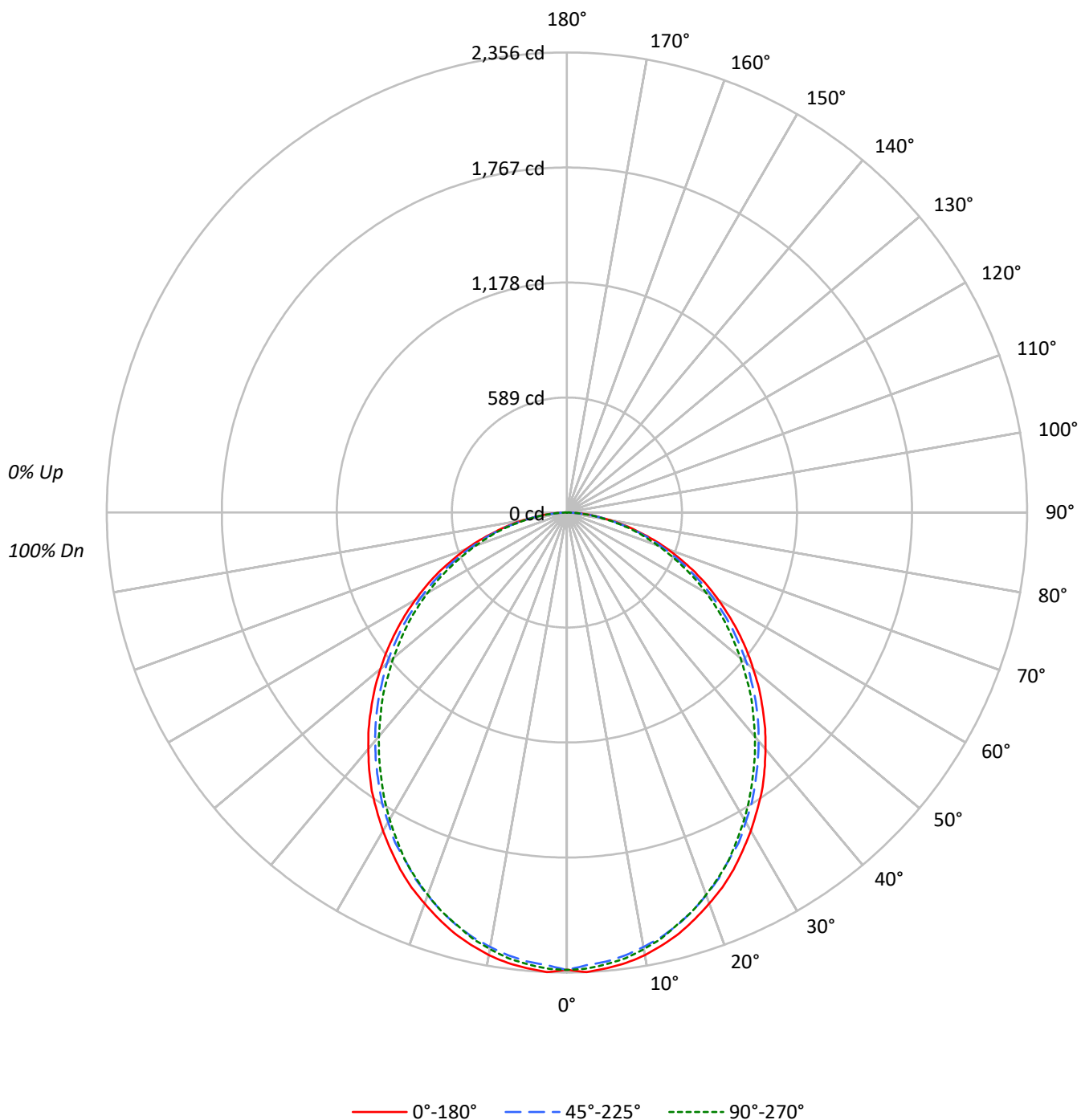
Lumens per Lamp: N/A
Luminaire Lumens: 5959.8 lumens
Efficiency: N/A
Efficacy: 83.5 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 3.94' x L: 3.74' x H: 0')
CIE Type: Direct

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: P930699

CATALOG NUMBER: DFN2DS-PN4F0-070DS935-FLL

Luminous Intensity Polar Plot



TEST NUMBER: P930699

CATALOG NUMBER: DFN2DS-PN4F0-070DS935-FLL

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	109	104	100	96	106	102	98	95	98	95	92		94	91	89		90
2	99	91	85	79	97	89	83	78	86	81	76		83	78	74		80
3	91	80	72	66	88	79	71	65	76	69	64		73	68	63		71
4	83	71	63	56	81	70	62	56	68	61	55		65	59	54		63
5	77	64	55	49	75	63	55	48	61	53	48		59	52	47		57
6	71	58	49	43	69	57	48	42	55	48	42		53	47	42		52
7	66	52	44	38	64	52	43	38	50	43	37		49	42	37		47
8	61	48	40	34	60	47	39	34	46	39	33		45	38	33		44
9	57	44	36	30	56	43	36	30	42	35	30		41	35	30		40
10	54	41	33	28	53	40	33	28	39	32	27		38	32	27		37

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1710	1710	1710
5°	1716	1692	1702
10°	1706	1675	1683
15°	1685	1653	1651
20°	1655	1620	1619
25°	1625	1580	1580
30°	1587	1544	1530
35°	1552	1499	1477
40°	1507	1455	1427
45°	1463	1411	1376
50°	1414	1366	1317
55°	1365	1313	1264
60°	1309	1250	1204
65°	1249	1187	1132
70°	1173	1110	1058
75°	1067	1022	998
80°	947	918	871
85°	773	737	661

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 1463 cd/sqm

TEST NUMBER: P930699

CATALOG NUMBER: DFN2DS-PN4F0-070DS935-FLL

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	220.5	3.7
10°-20°	620.3	10.4
20°-30°	911.6	15.3
30°-40°	1058.8	17.8
40°-50°	1057.5	17.7
50°-60°	922.1	15.5
60°-70°	681.6	11.4
70°-80°	385.7	6.5
80°-90°	101.8	1.7
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°	1752.4	29.4
0°-40°	2811.2	47.2
0°-60°	4790.7	80.4
0°-90°	5959.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5959.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2342	2342	2342	2342	2342	
5°	2342	2334	2309	2327	2322	222
15°	2230	2216	2187	2196	2185	628
25°	2018	2000	1962	1966	1962	929
35°	1741	1719	1683	1669	1658	1087
45°	1417	1401	1367	1342	1333	1093
55°	1072	1059	1032	1005	993	959
65°	723	710	687	667	656	715
75°	378	374	362	349	354	404
85°	92	90	88	81	79	108
90°	0	0	0	0	0	

TEST NUMBER: P930699

CATALOG NUMBER: DFN2DS-PN4F0-070DS935-FLL

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2342.4	2342.4	2342.4	2342.4	2342.4
2.5°	2356.1	2344.8	2319.9	2342.4	2338.1
5°	2342.4	2333.6	2308.8	2326.6	2322.3
7.5°	2326.6	2313.2	2288.4	2306.6	2302.0
10°	2302.0	2286.2	2259.2	2277.2	2270.5
12.5°	2268.1	2254.7	2227.7	2238.9	2234.4
15°	2229.9	2216.5	2187.1	2196.2	2184.9
17.5°	2182.5	2169.2	2139.8	2151.0	2139.8
20°	2130.6	2117.3	2085.8	2092.5	2083.6
22.5°	2079.0	2058.8	2029.3	2029.3	2024.8
25°	2018.2	2000.2	1962.0	1966.3	1962.0
27.5°	1950.5	1934.7	1905.6	1898.9	1887.6
30°	1883.1	1864.9	1831.3	1824.6	1815.5
32.5°	1810.9	1797.6	1761.5	1747.9	1738.7
35°	1741.2	1718.7	1682.6	1669.0	1657.7
37.5°	1662.3	1642.0	1605.9	1590.1	1578.9
40°	1581.3	1563.1	1527.0	1507.0	1497.9
42.5°	1502.4	1484.3	1448.4	1425.7	1412.3
45°	1416.8	1401.1	1367.1	1342.5	1333.4
47.5°	1333.4	1317.7	1281.6	1256.7	1243.4
50°	1245.5	1234.3	1202.7	1171.2	1160.0
52.5°	1160.0	1144.2	1115.1	1090.2	1074.4
55°	1072.2	1058.7	1031.7	1004.7	993.4
57.5°	984.4	973.1	943.7	916.7	907.6
60°	896.4	887.5	856.0	831.2	824.5
62.5°	810.8	795.1	772.6	750.2	741.1
65°	723.2	709.5	687.1	666.8	655.5
67.5°	633.0	621.6	601.5	585.7	576.6
70°	549.6	540.6	520.2	504.5	495.6
72.5°	464.1	455.0	443.8	428.0	421.3
75°	378.3	374.0	362.5	349.2	353.7
77.5°	301.9	292.7	288.2	281.5	274.9
80°	225.3	223.0	218.4	211.7	207.2
82.5°	153.2	153.2	151.0	142.0	142.0
85°	92.3	90.1	88.0	81.0	78.9
87.5°	40.6	36.1	31.6	24.9	22.4
90°	0.0	0.0	0.0	0.0	0.0

TEST NUMBER: P930699

CATALOG NUMBER: DFN2DS-PN4F0-070DS935-FLL

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	13.15	14.76	13.51	15.07	15.39	12.70	14.31	13.07	14.63	14.94
	3H	14.90	16.35	15.27	16.68	17.04	14.41	15.86	14.78	16.19	16.55
	4H	15.54	16.91	15.94	17.26	17.64	15.05	16.42	15.45	16.76	17.14
	6H	16.01	17.28	16.42	17.65	18.04	15.51	16.78	15.92	17.14	17.53
	8H	16.15	17.37	16.58	17.75	18.15	15.65	16.86	16.08	17.25	17.65
	12H	16.25	17.41	16.67	17.79	18.22	15.73	16.89	16.16	17.27	17.70
4H	2H	13.71	15.08	14.11	15.42	15.80	13.35	14.72	13.75	15.07	15.45
	3H	15.68	16.83	16.09	17.23	17.63	15.28	16.42	15.68	16.82	17.22
	4H	16.46	17.49	16.89	17.91	18.34	16.03	17.07	16.47	17.48	17.92
	6H	17.06	17.96	17.51	18.40	18.86	16.62	17.53	17.08	17.97	18.42
	8H	17.24	18.09	17.70	18.53	19.00	16.81	17.65	17.27	18.10	18.56
	12H	17.38	18.14	17.86	18.61	19.08	16.92	17.68	17.40	18.16	18.63
8H	4H	16.73	17.58	17.19	18.02	18.49	16.36	17.20	16.82	17.65	18.11
	6H	17.45	18.15	17.94	18.64	19.11	17.06	17.77	17.56	18.26	18.73
	8H	17.71	18.34	18.22	18.84	19.33	17.31	17.94	17.82	18.45	18.94
	12H	17.91	18.46	18.41	18.95	19.51	17.49	18.05	18.00	18.54	19.10
12H	4H	16.76	17.52	17.24	17.99	18.46	16.39	17.15	16.87	17.63	18.10
	6H	17.49	18.12	18.00	18.63	19.12	17.12	17.75	17.63	18.26	18.75
	8H	17.81	18.36	18.31	18.85	19.41	17.43	17.99	17.93	18.48	19.04