

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: P929904

Luminaire Tested: DFN2DS-4P3F0-050DS927-RLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P929904
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-4P3F0-050DS927-RLL
Description: 3 foot, 90deg - 4way Define Geo, with Direct 1in Regressed Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

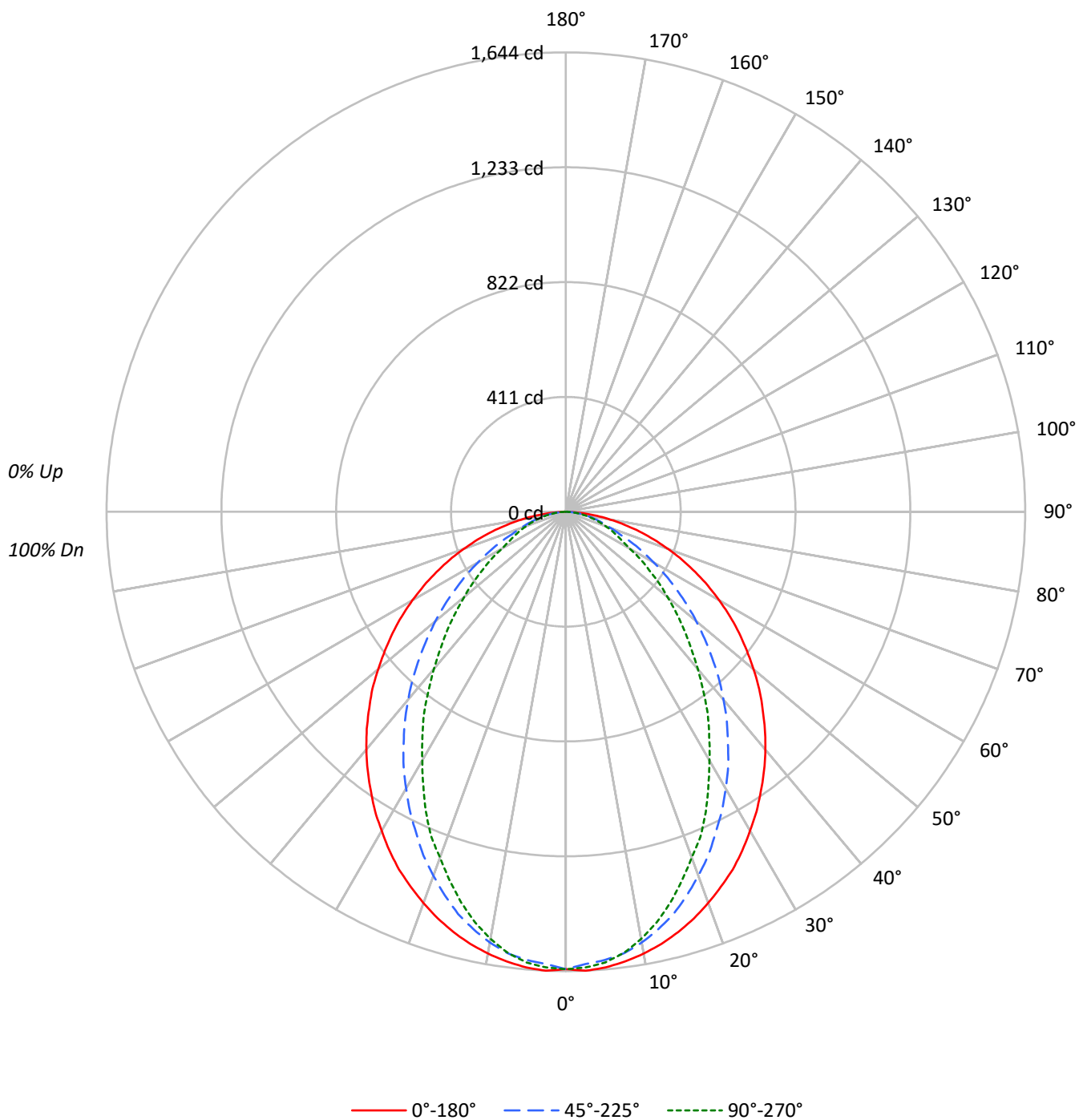
Lumens per Lamp: N/A
Luminaire Lumens: 3366.0 lumens
Efficiency: N/A
Efficacy: 65.0 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 3.07' x L: 3.07' x H: 0')
CIE Type: Direct

Input Watts (W): 51.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9971
Total Harmonic Distortion (THDi): 0.049
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

TEST NUMBER: P929904

CATALOG NUMBER: DFN2DS-4P3F0-050DS927-RLL

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
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°	1865	1865	1865
5°	1872	1842	1852
10°	1858	1812	1796
15°	1837	1758	1707
20°	1807	1681	1597
25°	1777	1594	1490
30°	1735	1505	1353
35°	1694	1407	1232
40°	1653	1306	1093
45°	1604	1194	967
50°	1555	1079	843
55°	1504	956	724
60°	1445	827	601
65°	1378	695	547
70°	1298	572	503
75°	1200	522	470
80°	1059	466	428
85°	833	367	367

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 1604 cd/sqm

TEST NUMBER: P929904

CATALOG NUMBER: DFN2DS-4P3F0-050DS927-RLL

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	153.4	4.6
10°-20°	421.1	12.5
20°-30°	591.2	17.6
30°-40°	644.4	19.1
40°-50°	592.3	17.6
50°-60°	465.2	13.8
60°-70°	302.8	9.0
70°-80°	155.9	4.6
80°-90°	39.8	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°	1165.7	34.6
0°-40°	1810.1	53.8
0°-60°	2867.6	85.2
0°-90°	3366.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3366.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1637	1637	1637	1637	1637	
5°	1637	1629	1610	1623	1619	155
15°	1557	1540	1490	1462	1447	439
25°	1413	1366	1268	1207	1185	650
35°	1218	1142	1012	918	886	762
45°	995	896	741	635	600	769
55°	757	641	481	392	364	676
65°	511	391	258	207	203	507
75°	272	169	118	108	107	288
85°	64	33	28	28	28	76
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1636.7	1636.7	1636.7	1636.7	1636.7
2.5°	1644.0	1636.7	1620.4	1635.2	1632.2
5°	1636.7	1629.3	1610.0	1623.3	1618.9
7.5°	1623.3	1614.5	1593.7	1599.6	1592.2
10°	1605.5	1595.2	1565.6	1561.1	1552.2
12.5°	1583.4	1570.1	1530.0	1521.2	1504.8
15°	1556.7	1540.4	1490.1	1462.0	1447.1
17.5°	1525.6	1501.9	1439.6	1407.1	1383.3
20°	1490.1	1460.4	1386.3	1349.4	1316.7
22.5°	1451.6	1417.4	1331.5	1281.2	1259.0
25°	1413.0	1365.6	1267.8	1207.2	1184.8
27.5°	1367.2	1316.7	1208.6	1139.0	1104.9
30°	1318.3	1261.9	1143.4	1067.9	1027.9
32.5°	1270.8	1202.7	1081.3	992.4	955.3
35°	1217.5	1142.0	1011.7	918.3	885.7
37.5°	1165.7	1084.2	946.5	844.2	807.3
40°	1110.9	1022.1	878.2	773.2	734.7
42.5°	1054.6	959.8	810.2	700.5	663.6
45°	995.4	896.1	740.6	635.3	599.8
47.5°	939.1	834.0	674.0	568.7	536.2
50°	876.9	771.7	608.8	506.5	475.5
52.5°	816.1	705.0	546.6	448.8	420.7
55°	756.8	641.3	481.3	392.5	364.4
57.5°	696.2	577.7	423.6	340.7	317.0
60°	633.9	515.4	362.8	287.4	263.7
62.5°	573.2	454.8	311.0	240.0	228.2
65°	511.0	391.0	257.7	207.4	202.9
67.5°	451.8	331.8	207.4	182.2	177.7
70°	389.6	274.0	171.8	157.0	151.0
72.5°	330.3	220.7	143.7	131.9	128.9
75°	272.5	168.8	118.5	108.1	106.7
77.5°	214.8	119.9	93.4	87.4	84.3
80°	161.4	85.9	71.0	65.2	65.2
82.5°	112.5	57.8	48.9	45.9	45.9
85°	63.7	32.6	28.1	28.1	28.1
87.5°	23.8	11.8	11.8	10.4	10.4
90°	0.0	0.0	0.0	0.0	0.0

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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	13.40	14.92	13.77	15.24	15.55	9.36	10.88	9.73	11.20	11.51
	3H	15.17	16.53	15.54	16.86	17.22	10.63	11.99	11.00	12.32	12.68
	4H	15.83	17.11	16.23	17.46	17.84	11.13	12.41	11.53	12.76	13.14
	6H	16.32	17.50	16.73	17.87	18.26	11.51	12.69	11.92	13.06	13.45
	8H	16.49	17.61	16.91	18.00	18.40	11.63	12.76	12.06	13.15	13.55
	12H	16.59	17.67	17.02	18.05	18.48	11.71	12.79	12.14	13.17	13.60
4H	2H	13.50	14.79	13.90	15.13	15.51	10.06	11.34	10.46	11.69	12.06
	3H	15.44	16.50	15.85	16.90	17.30	11.50	12.56	11.91	12.96	13.36
	4H	16.19	17.14	16.62	17.56	18.00	12.10	13.06	12.53	13.47	13.91
	6H	16.78	17.61	17.24	18.05	18.51	12.59	13.42	13.04	13.86	14.32
	8H	16.99	17.77	17.46	18.21	18.68	12.75	13.53	13.21	13.97	14.44
	12H	17.15	17.84	17.63	18.32	18.79	12.87	13.56	13.35	14.04	14.51
8H	4H	16.21	16.99	16.67	17.43	17.90	12.45	13.23	12.92	13.67	14.14
	6H	16.85	17.49	17.35	17.98	18.46	13.04	13.68	13.54	14.17	14.65
	8H	17.10	17.68	17.61	18.19	18.67	13.26	13.84	13.77	14.35	14.84
	12H	17.30	17.81	17.81	18.31	18.87	13.44	13.95	13.95	14.44	15.01
12H	4H	16.20	16.89	16.68	17.37	17.84	12.50	13.19	12.98	13.67	14.14
	6H	16.83	17.41	17.34	17.92	18.41	13.10	13.68	13.62	14.19	14.68
	8H	17.11	17.62	17.62	18.12	18.68	13.38	13.89	13.89	14.38	14.94