

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: P929836

Luminaire Tested: DFN2DS-4P2F0-040DS935-RLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P929836
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-4P2F0-040DS935-RLL
Description: 2 foot, 90deg - 4way Define Geo, with Direct 1in Regressed Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

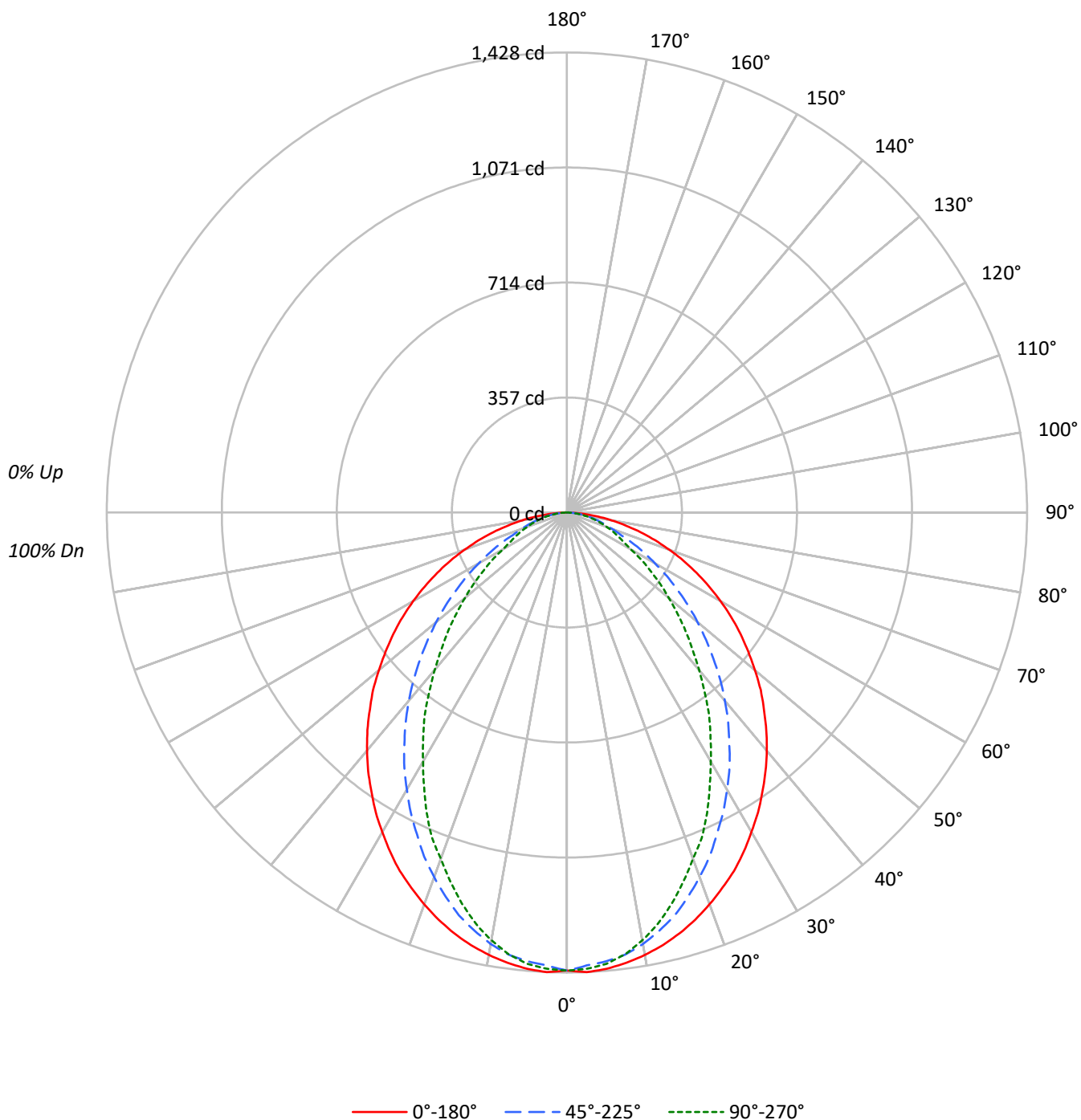
Lumens per Lamp: N/A
Luminaire Lumens: 2924.0 lumens
Efficiency: N/A
Efficacy: 67.8 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 2.07' x L: 2.07' x H: 0')
CIE Type: Direct

Input Watts (W): 43.1
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.983
Total Harmonic Distortion (THDi): 0.073
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

TEST NUMBER: P929836

CATALOG NUMBER: DFN2DS-4P2F0-040DS935-RLL

Luminous Intensity Polar Plot



TEST NUMBER: P929836

CATALOG NUMBER: DFN2DS-4P2F0-040DS935-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°	3560	3560	3560
5°	3574	3515	3535
10°	3546	3458	3429
15°	3506	3355	3259
20°	3449	3209	3048
25°	3391	3043	2844
30°	3311	2872	2582
35°	3233	2686	2352
40°	3154	2494	2086
45°	3062	2278	1845
50°	2967	2060	1609
55°	2870	1825	1382
60°	2758	1579	1147
65°	2630	1327	1044
70°	2477	1092	961
75°	2290	996	897
80°	2022	890	818
85°	1589	701	701

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 3062 cd/sqm

TEST NUMBER: P929836

CATALOG NUMBER: DFN2DS-4P2F0-040DS935-RLL

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	133.2	4.6
10°-20°	365.8	12.5
20°-30°	513.6	17.6
30°-40°	559.8	19.1
40°-50°	514.5	17.6
50°-60°	404.1	13.8
60°-70°	263.0	9.0
70°-80°	135.4	4.6
80°-90°	34.6	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°	1012.6	34.6
0°-40°	1572.4	53.8
0°-60°	2491.0	85.2
0°-90°	2924.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2924.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1422	1422	1422	1422	1422	
5°	1422	1415	1398	1410	1406	135
15°	1352	1338	1294	1270	1257	381
25°	1228	1186	1101	1049	1029	565
35°	1058	992	879	798	769	662
45°	865	778	643	552	521	668
55°	658	557	418	341	317	588
65°	444	340	224	180	176	440
75°	237	147	103	94	93	250
85°	55	28	24	24	24	66
90°	0	0	0	0	0	

TEST NUMBER: P929836

CATALOG NUMBER: DFN2DS-4P2F0-040DS935-RLL

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1421.8	1421.8	1421.8	1421.8	1421.8
2.5°	1428.2	1421.8	1407.6	1420.5	1417.9
5°	1421.8	1415.3	1398.5	1410.1	1406.4
7.5°	1410.1	1402.5	1384.5	1389.5	1383.1
10°	1394.7	1385.7	1360.0	1356.0	1348.5
12.5°	1375.5	1363.9	1329.0	1321.4	1307.2
15°	1352.3	1338.1	1294.4	1270.0	1257.1
17.5°	1325.3	1304.6	1250.5	1222.3	1201.7
20°	1294.4	1268.6	1204.3	1172.2	1143.8
22.5°	1260.9	1231.3	1156.6	1112.9	1093.7
25°	1227.5	1186.3	1101.3	1048.7	1029.2
27.5°	1187.7	1143.8	1049.9	989.4	959.8
30°	1145.2	1096.2	993.2	927.7	892.9
32.5°	1104.0	1044.7	939.3	862.1	829.8
35°	1057.7	992.0	878.8	797.7	769.4
37.5°	1012.6	941.8	822.2	733.3	701.2
40°	965.0	887.9	763.0	671.7	638.2
42.5°	916.1	833.8	703.8	608.5	576.5
45°	864.6	778.4	643.4	551.9	521.1
47.5°	815.8	724.5	585.5	494.1	465.8
50°	761.7	670.4	528.8	440.0	413.1
52.5°	708.9	612.4	474.8	389.8	365.4
55°	657.5	557.1	418.1	341.0	316.6
57.5°	604.8	501.8	368.0	295.9	275.4
60°	550.7	447.7	315.2	249.7	229.1
62.5°	498.0	395.1	270.1	208.5	198.2
65°	443.9	339.6	223.9	180.2	176.2
67.5°	392.5	288.2	180.2	158.2	154.4
70°	338.4	238.0	149.2	136.4	131.2
72.5°	287.0	191.7	124.8	114.6	112.0
75°	236.7	146.6	102.9	93.9	92.7
77.5°	186.6	104.1	81.1	75.9	73.3
80°	140.2	74.6	61.7	56.7	56.7
82.5°	97.8	50.2	42.5	39.8	39.8
85°	55.3	28.3	24.4	24.4	24.4
87.5°	20.6	10.2	10.2	9.0	9.0
90°	0.0	0.0	0.0	0.0	0.0

TEST NUMBER: P929836

CATALOG NUMBER: DFN2DS-4P2F0-040DS935-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	15.65	17.17	16.01	17.48	17.80	11.61	13.13	11.97	13.44	13.76
	3H	17.41	18.78	17.79	19.10	19.47	12.87	14.24	13.25	14.56	14.93
	4H	18.08	19.36	18.48	19.71	20.09	13.37	14.65	13.77	15.00	15.38
	6H	18.57	19.75	18.98	20.12	20.51	13.75	14.94	14.17	15.30	15.70
	8H	18.73	19.86	19.16	20.25	20.65	13.88	15.01	14.31	15.40	15.80
	12H	18.84	19.91	19.27	20.30	20.73	13.96	15.04	14.39	15.42	15.85
4H	2H	15.75	17.03	16.15	17.38	17.76	12.30	13.58	12.70	13.93	14.31
	3H	17.68	18.75	18.09	19.15	19.55	13.75	14.81	14.16	15.21	15.61
	4H	18.43	19.39	18.87	19.81	20.24	14.35	15.30	14.78	15.72	16.16
	6H	19.02	19.86	19.48	20.30	20.76	14.83	15.67	15.29	16.11	16.57
	8H	19.24	20.02	19.70	20.46	20.93	15.00	15.77	15.46	16.22	16.68
	12H	19.39	20.09	19.87	20.57	21.04	15.11	15.81	15.59	16.28	16.76
8H	4H	18.46	19.23	18.92	19.68	20.15	14.70	15.48	15.16	15.92	16.39
	6H	19.09	19.74	19.59	20.23	20.71	15.29	15.93	15.78	16.42	16.90
	8H	19.34	19.92	19.86	20.43	20.92	15.51	16.08	16.02	16.59	17.08
	12H	19.55	20.06	20.06	20.55	21.12	15.69	16.19	16.19	16.69	17.25
12H	4H	18.44	19.14	18.92	19.61	20.09	14.74	15.44	15.22	15.91	16.39
	6H	19.08	19.65	19.59	20.16	20.65	15.35	15.93	15.86	16.44	16.92
	8H	19.36	19.87	19.87	20.36	20.93	15.62	16.13	16.13	16.62	17.19