

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: P930038

Luminaire Tested: DFN2DS-4P4F0-080DS950-RLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930038
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-4P4F0-080DS950-RLL
Description: 4 foot, 90deg - 4way Define Geo, with Direct 1in Regressed Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

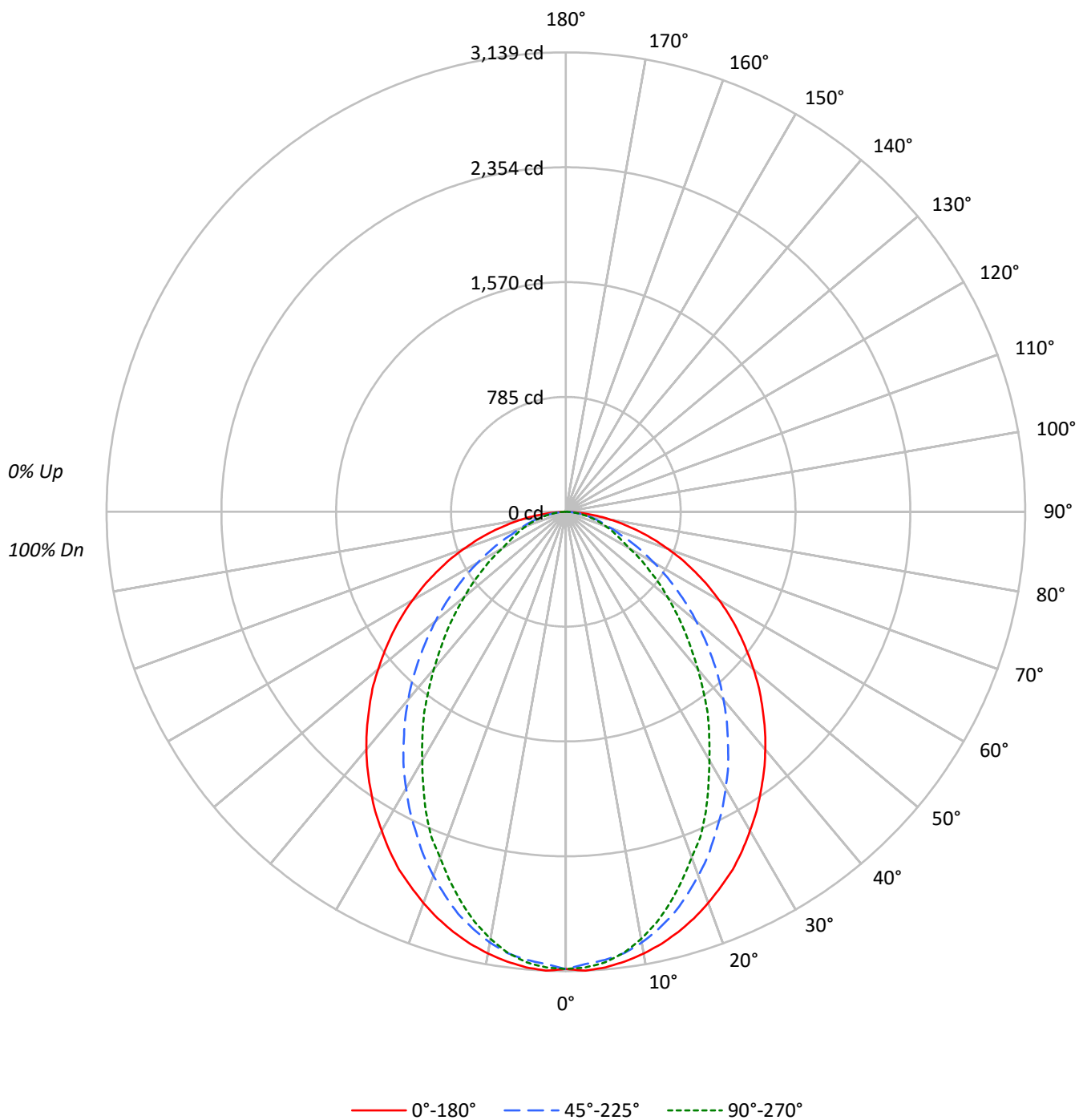
Lumens per Lamp: N/A
Luminaire Lumens: 6426.0 lumens
Efficiency: N/A
Efficacy: 74.5 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 4.07' x L: 4.07' x H: 0')
CIE Type: Direct

Input Watts (W): 86.3
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: P930038

CATALOG NUMBER: DFN2DS-4P4F0-080DS950-RLL

Luminous Intensity Polar Plot



TEST NUMBER: P930038

CATALOG NUMBER: DFN2DS-4P4F0-080DS950-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°	2027	2027	2027
5°	2035	2002	2013
10°	2019	1969	1952
15°	1996	1911	1855
20°	1964	1827	1735
25°	1931	1733	1619
30°	1885	1635	1470
35°	1841	1530	1339
40°	1796	1420	1188
45°	1743	1297	1051
50°	1690	1173	916
55°	1634	1039	787
60°	1570	899	653
65°	1498	755	595
70°	1411	622	547
75°	1304	567	511
80°	1151	507	465
85°	904	400	400

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 1743 cd/sqm

TEST NUMBER: P930038

CATALOG NUMBER: DFN2DS-4P4F0-080DS950-RLL

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	292.8	4.6
10°-20°	803.9	12.5
20°-30°	1128.6	17.6
30°-40°	1230.3	19.1
40°-50°	1130.8	17.6
50°-60°	888.0	13.8
60°-70°	578.0	9.0
70°-80°	297.5	4.6
80°-90°	76.0	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°	2225.4	34.6
0°-40°	3455.7	53.8
0°-60°	5474.5	85.2
0°-90°	6426.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6426.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3124	3124	3124	3124	3124	
5°	3124	3110	3074	3099	3091	296
15°	2972	2941	2845	2791	2763	837
25°	2698	2607	2420	2305	2262	1241
35°	2324	2180	1931	1753	1691	1455
45°	1900	1711	1414	1213	1145	1467
55°	1445	1224	919	749	696	1291
65°	976	746	492	396	387	967
75°	520	322	226	206	204	550
85°	122	62	54	54	54	146
90°	0	0	0	0	0	

TEST NUMBER: P930038

CATALOG NUMBER: DFN2DS-4P4F0-080DS950-RLL

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3124.5	3124.5	3124.5	3124.5	3124.5
2.5°	3138.6	3124.5	3093.4	3121.8	3116.1
5°	3124.5	3110.5	3073.5	3099.0	3090.6
7.5°	3099.0	3082.2	3042.6	3053.8	3039.6
10°	3065.1	3045.4	2988.9	2980.2	2963.4
12.5°	3022.9	2997.4	2920.8	2904.0	2872.8
15°	2971.8	2940.7	2844.6	2791.0	2762.7
17.5°	2912.4	2867.1	2748.3	2686.3	2640.9
20°	2844.6	2787.9	2646.7	2576.2	2513.7
22.5°	2771.1	2706.0	2542.0	2445.9	2403.6
25°	2697.6	2607.1	2420.4	2304.7	2262.0
27.5°	2610.0	2513.7	2307.3	2174.4	2109.3
30°	2516.7	2409.0	2182.9	2038.8	1962.3
32.5°	2426.1	2296.0	2064.4	1894.5	1823.8
35°	2324.4	2180.1	1931.4	1753.3	1690.8
37.5°	2225.4	2069.7	1806.9	1611.6	1541.1
40°	2120.8	1951.2	1676.7	1476.0	1402.5
42.5°	2013.3	1832.4	1546.8	1337.5	1266.9
45°	1900.2	1710.6	1413.9	1212.9	1145.2
47.5°	1792.9	1592.1	1286.7	1085.7	1023.6
50°	1674.0	1473.3	1162.3	966.9	907.8
52.5°	1557.9	1345.8	1043.4	856.8	803.2
55°	1444.8	1224.3	918.9	749.4	695.7
57.5°	1329.0	1102.8	808.8	650.4	605.1
60°	1210.2	984.0	692.7	548.7	503.4
62.5°	1094.4	868.2	593.7	458.1	435.6
65°	975.6	746.4	492.0	396.0	387.3
67.5°	862.5	633.3	396.0	347.7	339.3
70°	743.7	523.2	327.9	299.7	288.3
72.5°	630.6	421.2	274.2	251.7	246.0
75°	520.2	322.2	226.2	206.4	203.7
77.5°	410.1	228.9	178.2	166.8	161.1
80°	308.1	164.1	135.6	124.5	124.5
82.5°	214.8	110.4	93.3	87.6	87.6
85°	121.5	62.1	53.7	53.7	53.7
87.5°	45.3	22.5	22.5	19.8	19.8
90°	0.0	0.0	0.0	0.0	0.0

TEST NUMBER: P930038

CATALOG NUMBER: DFN2DS-4P4F0-080DS950-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	13.69	15.21	14.05	15.52	15.84	9.65	11.17	10.01	11.49	11.80
	3H	15.45	16.82	15.83	17.15	17.51	10.92	12.28	11.29	12.61	12.97
	4H	16.12	17.40	16.52	17.75	18.13	11.42	12.70	11.82	13.05	13.42
	6H	16.61	17.79	17.02	18.16	18.55	11.80	12.98	12.21	13.35	13.74
	8H	16.78	17.90	17.20	18.29	18.69	11.92	13.05	12.35	13.44	13.84
	12H	16.88	17.96	17.31	18.34	18.77	12.00	13.08	12.43	13.46	13.89
4H	2H	13.79	15.07	14.19	15.42	15.80	10.35	11.63	10.75	11.97	12.35
	3H	15.73	16.79	16.14	17.19	17.59	11.79	12.85	12.20	13.25	13.65
	4H	16.48	17.43	16.91	17.85	18.29	12.39	13.34	12.82	13.76	14.20
	6H	17.07	17.90	17.53	18.34	18.80	12.88	13.71	13.33	14.15	14.61
	8H	17.28	18.06	17.75	18.50	18.97	13.04	13.82	13.50	14.26	14.73
	12H	17.44	18.13	17.92	18.61	19.08	13.16	13.85	13.64	14.33	14.80
8H	4H	16.50	17.28	16.96	17.72	18.19	12.74	13.52	13.21	13.96	14.43
	6H	17.14	17.78	17.63	18.27	18.75	13.33	13.97	13.83	14.46	14.94
	8H	17.39	17.96	17.90	18.47	18.96	13.55	14.13	14.06	14.64	15.12
	12H	17.59	18.10	18.10	18.59	19.16	13.73	14.24	14.24	14.73	15.30
12H	4H	16.48	17.18	16.97	17.66	18.13	12.79	13.48	13.27	13.96	14.43
	6H	17.12	17.70	17.63	18.21	18.69	13.39	13.97	13.91	14.48	14.97
	8H	17.40	17.91	17.91	18.41	18.97	13.67	14.17	14.17	14.67	15.23