

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: P929890

Luminaire Tested: DFN2DS-4P3F0-040DS935-RLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P929890
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-4P3F0-040DS935-RLL
Description: 3 foot, 90deg - 4way Define Geo, with Direct 1in Regressed Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

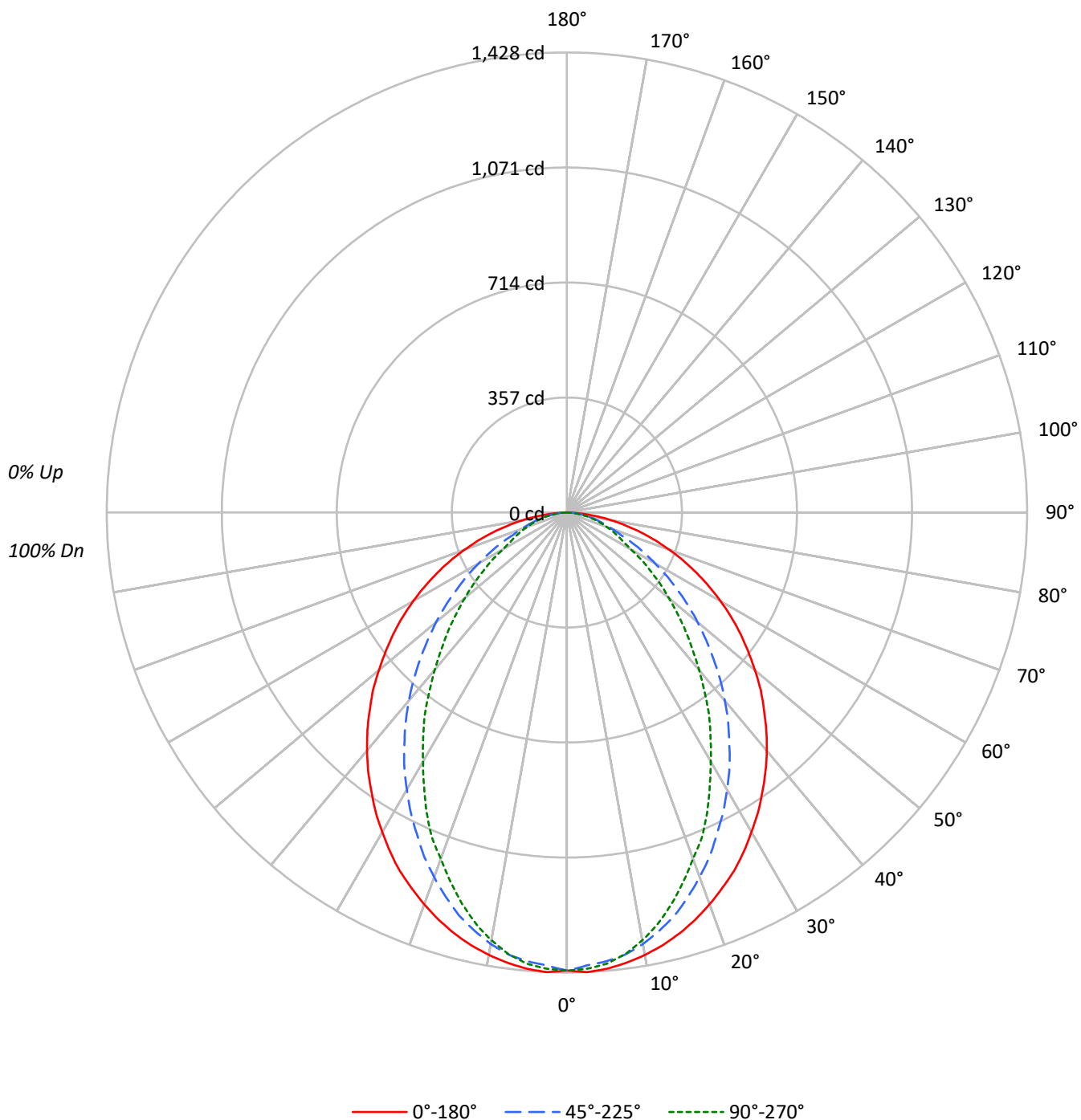
Lumens per Lamp: N/A
Luminaire Lumens: 2924.0 lumens
Efficiency: N/A
Efficacy: 72.0 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 3.07' x L: 3.07' x H: 0')
CIE Type: Direct

Input Watts (W): 40.6
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

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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°	1620	1620	1620
5°	1626	1600	1609
10°	1614	1574	1560
15°	1595	1527	1483
20°	1570	1460	1387
25°	1543	1385	1294
30°	1507	1307	1175
35°	1471	1223	1070
40°	1436	1135	949
45°	1393	1037	840
50°	1350	938	732
55°	1306	831	629
60°	1255	718	522
65°	1197	604	475
70°	1128	497	437
75°	1042	453	408
80°	920	405	372
85°	723	319	319

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 1393 cd/sqm

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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	

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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

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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	12.91	14.43	13.28	14.75	15.06	8.87	10.39	9.24	10.71	11.02
	3H	14.68	16.04	15.05	16.37	16.73	10.14	11.50	10.51	11.83	12.19
	4H	15.34	16.62	15.74	16.97	17.35	10.64	11.92	11.04	12.27	12.65
	6H	15.83	17.01	16.24	17.38	17.77	11.02	12.20	11.43	12.57	12.96
	8H	16.00	17.12	16.42	17.51	17.91	11.14	12.27	11.57	12.66	13.06
	12H	16.10	17.18	16.53	17.56	17.99	11.22	12.30	11.66	12.69	13.11
4H	2H	13.02	14.30	13.42	14.64	15.02	9.57	10.85	9.97	11.20	11.57
	3H	14.95	16.01	15.36	16.41	16.81	11.01	12.07	11.42	12.47	12.87
	4H	15.70	16.65	16.13	17.07	17.51	11.61	12.57	12.04	12.98	13.42
	6H	16.29	17.12	16.75	17.56	18.02	12.10	12.93	12.56	13.37	13.83
	8H	16.50	17.28	16.97	17.73	18.19	12.26	13.04	12.72	13.48	13.95
	12H	16.66	17.35	17.14	17.83	18.30	12.38	13.07	12.86	13.55	14.02
8H	4H	15.72	16.50	16.19	16.94	17.41	11.96	12.74	12.43	13.19	13.65
	6H	16.36	17.00	16.86	17.49	17.97	12.55	13.19	13.05	13.68	14.16
	8H	16.61	17.19	17.12	17.70	18.18	12.77	13.35	13.29	13.86	14.35
	12H	16.81	17.32	17.32	17.82	18.38	12.95	13.46	13.46	13.95	14.52
12H	4H	15.71	16.40	16.19	16.88	17.35	12.01	12.70	12.49	13.18	13.65
	6H	16.34	16.92	16.85	17.43	17.92	12.61	13.19	13.13	13.70	14.19
	8H	16.62	17.13	17.13	17.63	18.19	12.89	13.40	13.40	13.89	14.45