

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: P929903

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

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P929903
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-4P3F0-050DS927-FLL
Description: 3 foot, 90deg - 4way Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

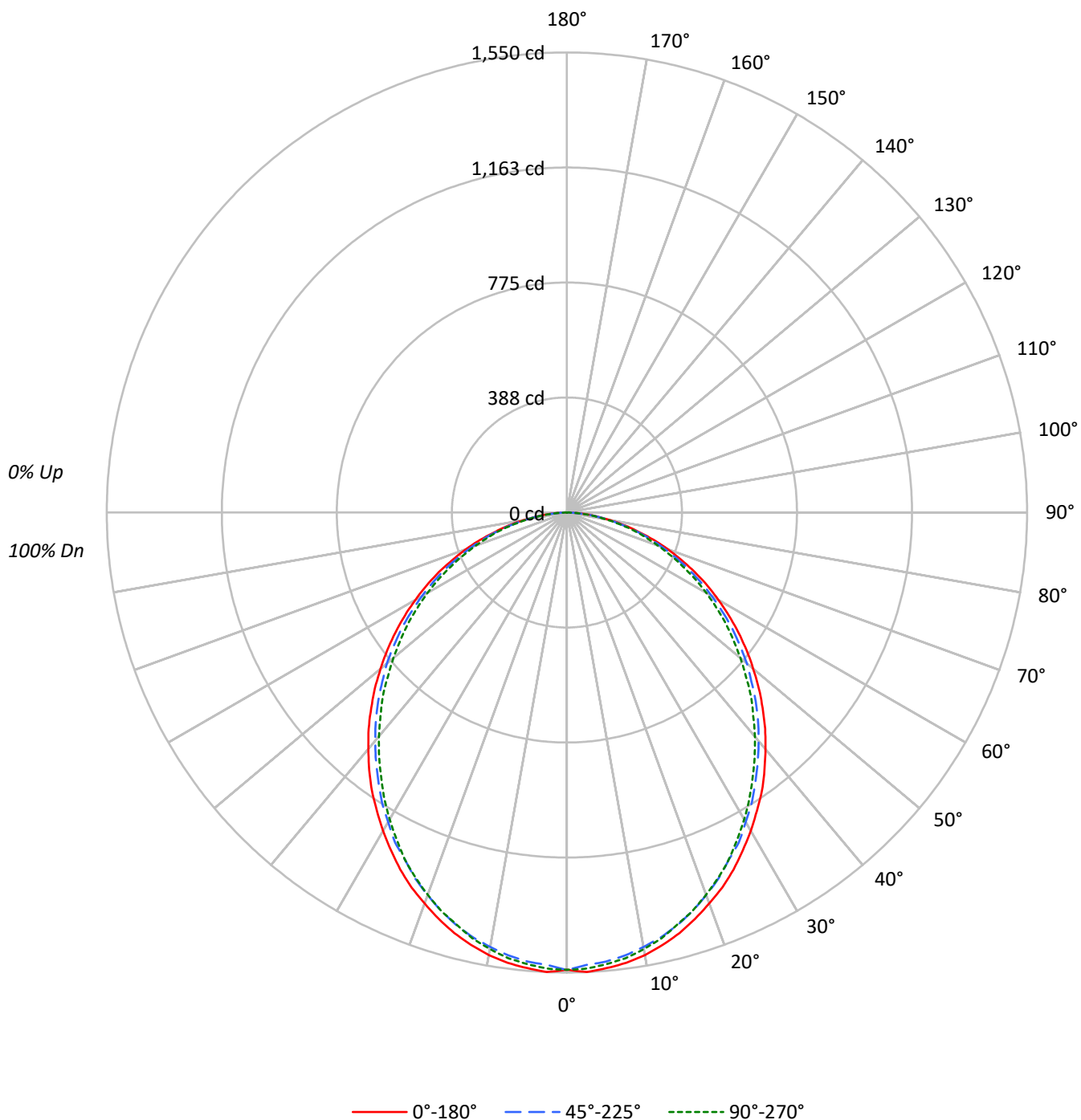
Lumens per Lamp: N/A
Luminaire Lumens: 3920.4 lumens
Efficiency: N/A
Efficacy: 75.7 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 3.07' x L: 3.07' x H: 0')
CIE Type: Direct

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

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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	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°	1756	1756	1756
5°	1763	1737	1748
10°	1752	1720	1728
15°	1731	1697	1696
20°	1700	1664	1662
25°	1669	1623	1623
30°	1630	1585	1572
35°	1593	1540	1517
40°	1547	1494	1466
45°	1502	1449	1414
50°	1453	1403	1353
55°	1402	1348	1298
60°	1344	1283	1236
65°	1283	1219	1163
70°	1205	1140	1087
75°	1095	1050	1025
80°	973	943	894
85°	794	756	679

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 1502 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	145.0	3.7
10°-20°	408.0	10.4
20°-30°	599.7	15.3
30°-40°	696.5	17.8
40°-50°	695.6	17.7
50°-60°	606.6	15.5
60°-70°	448.4	11.4
70°-80°	253.7	6.5
80°-90°	67.0	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°	1152.7	29.4
0°-40°	1849.2	47.2
0°-60°	3151.4	80.4
0°-90°	3920.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3920.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1541	1541	1541	1541	1541	
5°	1541	1535	1519	1530	1528	146
15°	1467	1458	1439	1445	1437	413
25°	1328	1316	1291	1293	1291	611
35°	1145	1131	1107	1098	1090	715
45°	932	922	899	883	877	719
55°	705	696	679	661	654	631
65°	476	467	452	439	431	470
75°	249	246	238	230	233	266
85°	61	59	58	53	52	71
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1540.8	1540.8	1540.8	1540.8	1540.8
2.5°	1549.8	1542.4	1526.1	1540.8	1538.1
5°	1540.8	1535.1	1518.7	1530.5	1527.7
7.5°	1530.5	1521.7	1505.4	1517.3	1514.3
10°	1514.3	1503.9	1486.2	1497.9	1493.6
12.5°	1492.0	1483.2	1465.4	1472.8	1469.8
15°	1466.8	1458.0	1438.7	1444.7	1437.2
17.5°	1435.7	1426.9	1407.5	1414.9	1407.5
20°	1401.6	1392.8	1372.1	1376.4	1370.6
22.5°	1367.6	1354.2	1334.9	1334.9	1331.9
25°	1327.6	1315.7	1290.6	1293.4	1290.6
27.5°	1283.0	1272.7	1253.5	1249.1	1241.7
30°	1238.7	1226.8	1204.6	1200.2	1194.3
32.5°	1191.2	1182.5	1158.7	1149.7	1143.8
35°	1145.3	1130.6	1106.8	1097.9	1090.5
37.5°	1093.4	1080.1	1056.4	1046.0	1038.6
40°	1040.2	1028.3	1004.5	991.3	985.3
42.5°	988.3	976.4	952.8	937.8	929.0
45°	932.0	921.7	899.3	883.2	877.1
47.5°	877.1	866.8	843.1	826.7	817.9
50°	819.3	812.0	791.2	770.5	763.0
52.5°	763.0	752.6	733.5	717.2	706.8
55°	705.4	696.4	678.6	660.8	653.5
57.5°	647.5	640.1	620.8	603.0	597.0
60°	589.6	583.9	563.1	546.7	542.4
62.5°	533.4	523.0	508.2	493.4	487.5
65°	475.7	466.7	451.9	438.6	431.2
67.5°	416.4	408.9	395.7	385.3	379.3
70°	361.5	355.6	342.2	331.8	326.1
72.5°	305.3	299.3	291.9	281.6	277.1
75°	248.8	246.0	238.5	229.7	232.7
77.5°	198.6	192.5	189.6	185.2	180.8
80°	148.3	146.7	143.7	139.3	136.3
82.5°	100.7	100.7	99.3	93.4	93.4
85°	60.7	59.2	57.8	53.3	51.9
87.5°	26.7	23.8	20.8	16.3	14.8
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	13.24	14.85	13.60	15.16	15.48	12.79	14.40	13.16	14.72	15.03
	3H	14.99	16.44	15.37	16.77	17.13	14.50	15.95	14.87	16.28	16.64
	4H	15.63	17.00	16.03	17.35	17.73	15.14	16.51	15.54	16.86	17.23
	6H	16.10	17.37	16.52	17.74	18.13	15.60	16.87	16.01	17.24	17.63
	8H	16.25	17.46	16.67	17.85	18.25	15.74	16.96	16.17	17.34	17.74
	12H	16.34	17.50	16.77	17.88	18.31	15.83	16.99	16.26	17.37	17.80
4H	2H	13.80	15.17	14.20	15.52	15.89	13.45	14.82	13.84	15.16	15.54
	3H	15.77	16.92	16.18	17.32	17.72	15.37	16.51	15.78	16.91	17.31
	4H	16.55	17.59	16.98	18.00	18.44	16.13	17.16	16.56	17.58	18.01
	6H	17.15	18.05	17.60	18.49	18.95	16.72	17.62	17.17	18.06	18.52
	8H	17.34	18.18	17.80	18.63	19.09	16.90	17.75	17.36	18.19	18.65
	12H	17.47	18.23	17.95	18.70	19.17	17.02	17.78	17.50	18.25	18.72
8H	4H	16.82	17.67	17.28	18.11	18.58	16.45	17.30	16.91	17.74	18.20
	6H	17.54	18.24	18.03	18.73	19.21	17.16	17.86	17.65	18.35	18.82
	8H	17.80	18.43	18.31	18.93	19.42	17.41	18.04	17.92	18.54	19.03
	12H	18.00	18.55	18.50	19.05	19.61	17.58	18.14	18.09	18.63	19.19
12H	4H	16.85	17.61	17.33	18.09	18.56	16.49	17.25	16.97	17.72	18.19
	6H	17.58	18.22	18.09	18.72	19.21	17.22	17.85	17.72	18.35	18.84
	8H	17.90	18.46	18.40	18.95	19.51	17.52	18.08	18.03	18.57	19.13