

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: P930659

Luminaire Tested: DFN2DS-PN4F0-050DS927-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930659
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-PN4F0-050DS927-FLL
Description: 4 foot, Pentagon Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

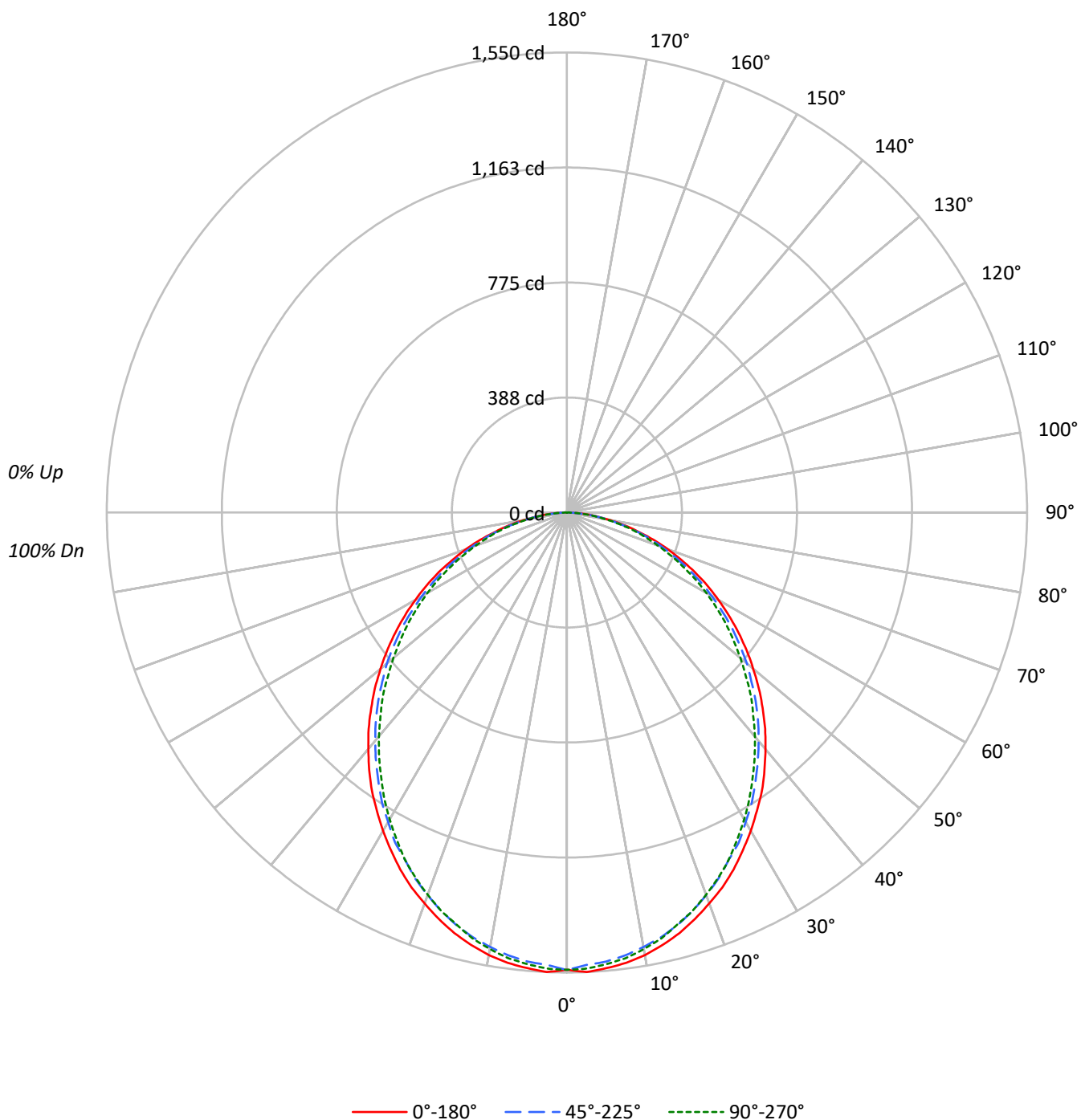
Lumens per Lamp: N/A
Luminaire Lumens: 3920.4 lumens
Efficiency: N/A
Efficacy: 80.3 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 3.94' x L: 3.74' x H: 0')
CIE Type: Direct

Input Watts (W): 48.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9951
Total Harmonic Distortion (THDi): 0.07
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°	1125	1125	1125
5°	1129	1113	1119
10°	1122	1102	1107
15°	1108	1087	1086
20°	1089	1066	1065
25°	1069	1039	1039
30°	1044	1015	1007
35°	1021	986	972
40°	991	957	939
45°	962	928	905
50°	930	898	866
55°	898	864	832
60°	861	822	792
65°	822	781	745
70°	772	730	696
75°	702	673	656
80°	623	604	573
85°	508	484	435

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 962 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	11.69	13.30	12.06	13.62	13.93	11.25	12.86	11.61	13.17	13.49
	3H	13.44	14.90	13.82	15.22	15.58	12.95	14.40	13.33	14.73	15.09
	4H	14.09	15.46	14.49	15.80	16.18	13.59	14.96	13.99	15.31	15.69
	6H	14.56	15.83	14.97	16.19	16.58	14.06	15.32	14.47	15.69	16.08
	8H	14.70	15.91	15.12	16.30	16.70	14.20	15.41	14.62	15.80	16.20
	12H	14.79	15.95	15.22	16.33	16.76	14.28	15.44	14.71	15.82	16.25
4H	2H	12.25	13.62	12.65	13.97	14.34	11.90	13.27	12.30	13.62	13.99
	3H	14.23	15.37	14.64	15.77	16.17	13.82	14.97	14.23	15.36	15.76
	4H	15.00	16.04	15.43	16.45	16.89	14.58	15.62	15.01	16.03	16.47
	6H	15.60	16.50	16.05	16.95	17.40	15.17	16.07	15.62	16.51	16.97
	8H	15.79	16.64	16.25	17.08	17.54	15.35	16.20	15.81	16.64	17.11
	12H	15.92	16.68	16.40	17.16	17.63	15.47	16.23	15.95	16.70	17.17
8H	4H	15.28	16.12	15.74	16.57	17.03	14.90	15.75	15.36	16.19	16.66
	6H	15.99	16.69	16.48	17.18	17.66	15.61	16.31	16.10	16.80	17.28
	8H	16.25	16.88	16.76	17.39	17.87	15.86	16.49	16.37	17.00	17.48
	12H	16.45	17.01	16.96	17.50	18.06	16.04	16.59	16.54	17.09	17.65
12H	4H	15.30	16.06	15.78	16.54	17.01	14.94	15.70	15.42	16.17	16.64
	6H	16.04	16.67	16.55	17.17	17.66	15.67	16.30	16.18	16.81	17.29
	8H	16.35	16.91	16.86	17.40	17.96	15.97	16.53	16.48	17.02	17.58