

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: P930499

Luminaire Tested: DFN2DS-PN2F0-060DS930-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930499
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-PN2F0-060DS930-FLL
Description: 2 foot, Pentagon Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

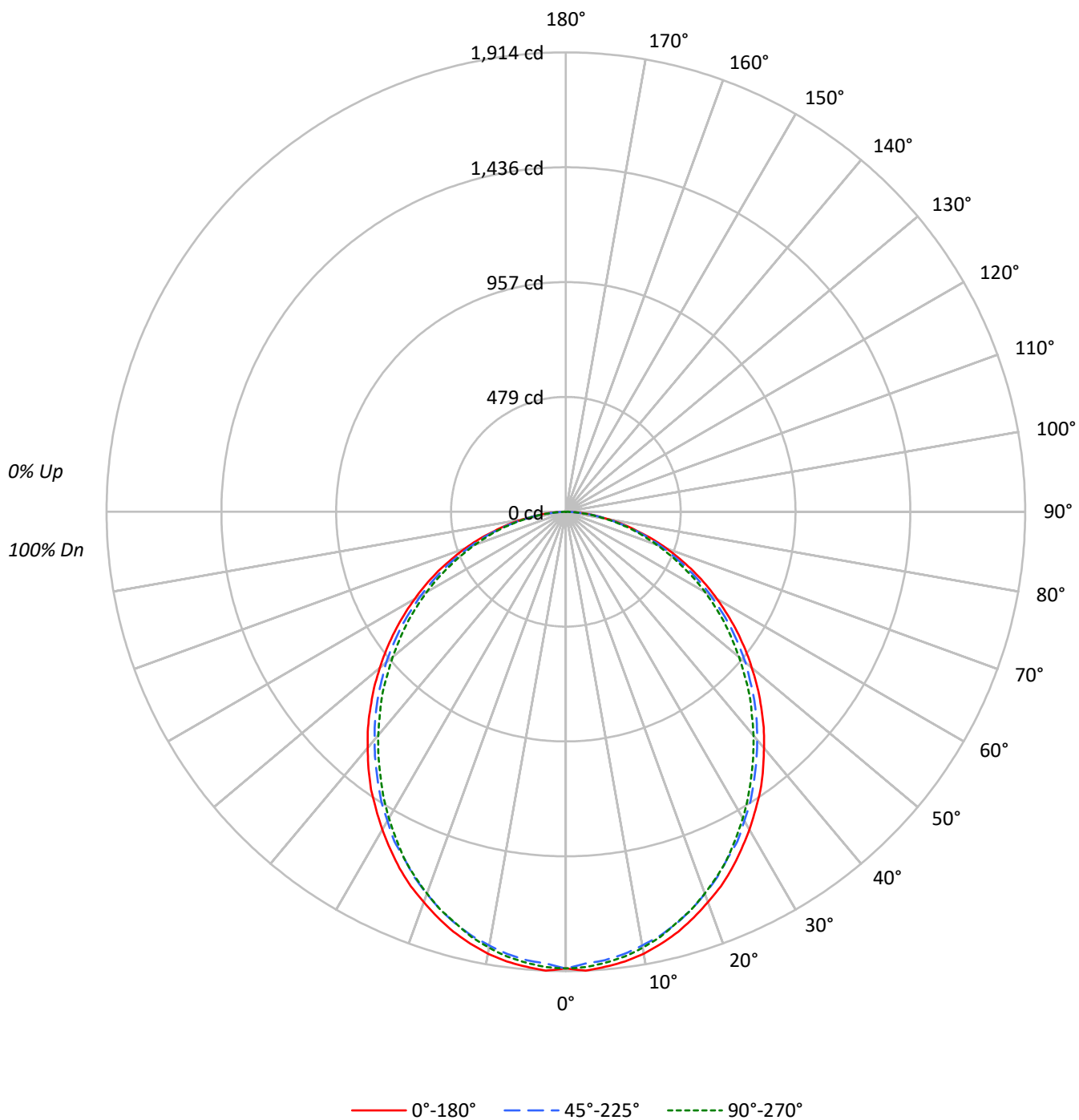
Lumens per Lamp: N/A
Luminaire Lumens: 4841.1 lumens
Efficiency: N/A
Efficacy: 71.6 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 2.29' x L: 2.17' x H: 0')
CIE Type: Direct

Input Watts (W): 67.6
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.946
Total Harmonic Distortion (THDi): 0.132
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

TEST NUMBER: P930499

CATALOG NUMBER: DFN2DS-PN2F0-060DS930-FLL

Luminous Intensity Polar Plot



TEST NUMBER: P930499

CATALOG NUMBER: DFN2DS-PN2F0-060DS930-FLL

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°	4121	4121	4121
5°	4137	4077	4101
10°	4112	4036	4056
15°	4061	3983	3980
20°	3989	3905	3901
25°	3918	3809	3809
30°	3826	3720	3688
35°	3740	3614	3560
40°	3631	3507	3440
45°	3525	3401	3318
50°	3409	3292	3175
55°	3289	3164	3047
60°	3154	3012	2901
65°	3010	2860	2728
70°	2828	2676	2549
75°	2572	2464	2404
80°	2283	2213	2099
85°	1861	1774	1593

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
Vertical Angle: 45°
Luminance: 3525 cd/sqm

TEST NUMBER: P930499

CATALOG NUMBER: DFN2DS-PN2F0-060DS930-FLL

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	179.1	3.7
10°-20°	503.9	10.4
20°-30°	740.5	15.3
30°-40°	860.0	17.8
40°-50°	859.0	17.7
50°-60°	749.0	15.5
60°-70°	553.7	11.4
70°-80°	313.3	6.5
80°-90°	82.7	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°	1423.5	29.4
0°-40°	2283.5	47.2
0°-60°	3891.5	80.4
0°-90°	4841.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4841.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1903	1903	1903	1903	1903	
5°	1903	1896	1875	1890	1886	181
15°	1811	1800	1776	1784	1775	510
25°	1639	1625	1594	1597	1594	754
35°	1414	1396	1367	1356	1346	883
45°	1151	1138	1110	1091	1083	888
55°	871	860	838	816	807	779
65°	587	576	558	542	532	581
75°	307	304	294	284	287	328
85°	75	73	71	66	64	88
90°	0	0	0	0	0	

TEST NUMBER: P930499

CATALOG NUMBER: DFN2DS-PN2F0-060DS930-FLL

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1902.7	1902.7	1902.7	1902.7	1902.7
2.5°	1913.8	1904.7	1884.4	1902.7	1899.2
5°	1902.7	1895.5	1875.3	1889.9	1886.4
7.5°	1889.9	1879.1	1858.9	1873.6	1869.9
10°	1869.9	1857.1	1835.1	1849.7	1844.3
12.5°	1842.4	1831.5	1809.5	1818.7	1815.0
15°	1811.3	1800.4	1776.5	1784.0	1774.8
17.5°	1772.9	1762.0	1738.2	1747.2	1738.2
20°	1730.7	1719.9	1694.2	1699.7	1692.5
22.5°	1688.8	1672.3	1648.4	1648.4	1644.8
25°	1639.3	1624.8	1593.7	1597.2	1593.7
27.5°	1584.4	1571.6	1547.8	1542.5	1533.3
30°	1529.7	1514.8	1487.5	1482.1	1474.7
32.5°	1471.0	1460.2	1430.8	1419.7	1412.4
35°	1414.4	1396.1	1366.8	1355.7	1346.5
37.5°	1350.3	1333.7	1304.5	1291.6	1282.5
40°	1284.4	1269.7	1240.4	1224.1	1216.7
42.5°	1220.4	1205.6	1176.5	1158.1	1147.2
45°	1150.9	1138.1	1110.5	1090.6	1083.1
47.5°	1083.1	1070.3	1041.1	1020.9	1009.9
50°	1011.7	1002.6	977.0	951.3	942.2
52.5°	942.2	929.4	905.7	885.6	872.8
55°	871.0	859.9	838.0	816.1	806.9
57.5°	799.6	790.5	766.6	744.7	737.2
60°	728.1	720.9	695.4	675.1	669.7
62.5°	658.6	645.8	627.6	609.3	602.0
65°	587.4	576.4	558.1	541.6	532.4
67.5°	514.2	504.9	488.6	475.8	468.4
70°	446.5	439.1	422.6	409.8	402.6
72.5°	376.9	369.6	360.5	347.7	342.2
75°	307.3	303.8	294.5	283.6	287.3
77.5°	245.2	237.8	234.1	228.7	223.2
80°	183.0	181.1	177.4	172.0	168.3
82.5°	124.5	124.5	122.7	115.3	115.3
85°	74.9	73.2	71.4	65.8	64.1
87.5°	33.0	29.3	25.6	20.2	18.3
90°	0.0	0.0	0.0	0.0	0.0

TEST NUMBER: P930499

CATALOG NUMBER: DFN2DS-PN2F0-060DS930-FLL

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	16.20	17.81	16.57	18.13	18.44	15.76	17.37	16.12	17.68	18.00
	3H	17.95	19.41	18.33	19.73	20.09	17.46	18.92	17.84	19.24	19.60
	4H	18.60	19.97	19.00	20.32	20.69	18.10	19.47	18.50	19.82	20.20
	6H	19.07	20.34	19.48	20.70	21.09	18.57	19.84	18.98	20.20	20.59
	8H	19.21	20.42	19.64	20.81	21.21	18.71	19.92	19.13	20.31	20.71
	12H	19.30	20.46	19.73	20.84	21.27	18.79	19.95	19.22	20.33	20.76
4H	2H	16.76	18.13	17.16	18.48	18.86	16.41	17.78	16.81	18.13	18.50
	3H	18.74	19.88	19.15	20.28	20.68	18.33	19.48	18.74	19.88	20.28
	4H	19.51	20.55	19.95	20.96	21.40	19.09	20.13	19.52	20.54	20.98
	6H	20.11	21.02	20.57	21.46	21.91	19.68	20.58	20.13	21.02	21.48
	8H	20.30	21.15	20.76	21.59	22.06	19.86	20.71	20.32	21.15	21.62
	12H	20.43	21.19	20.91	21.67	22.14	19.98	20.74	20.46	21.22	21.69
8H	4H	19.79	20.63	20.25	21.08	21.54	19.41	20.26	19.87	20.70	21.17
	6H	20.50	21.21	21.00	21.69	22.17	20.12	20.82	20.61	21.31	21.79
	8H	20.76	21.39	21.27	21.90	22.39	20.37	21.00	20.88	21.51	21.99
	12H	20.96	21.52	21.47	22.01	22.57	20.55	21.11	21.06	21.60	22.16
12H	4H	19.81	20.57	20.29	21.05	21.52	19.45	20.21	19.93	20.69	21.15
	6H	20.55	21.18	21.06	21.69	22.17	20.18	20.81	20.69	21.32	21.80
	8H	20.86	21.42	21.37	21.91	22.47	20.48	21.04	20.99	21.53	22.09