

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: P930735

Luminaire Tested: DFN2DS-PN4F0-090DS935-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930735
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-PN4F0-090DS935-FLL
Description: 4 foot, Pentagon Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

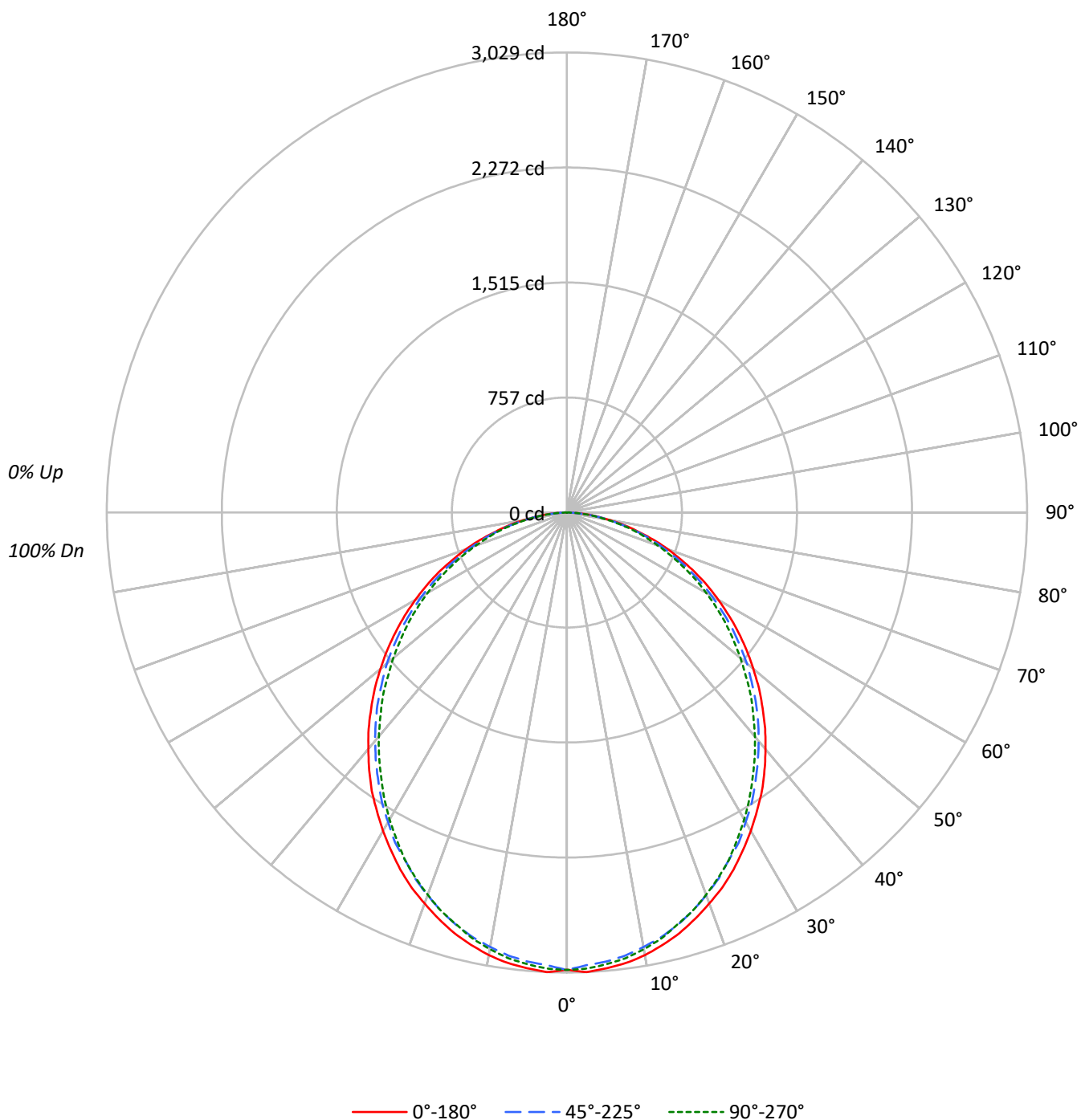
Lumens per Lamp: N/A
Luminaire Lumens: 7662.6 lumens
Efficiency: N/A
Efficacy: 82.3 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 3.94' x L: 3.74' x H: 0')
CIE Type: Direct

Input Watts (W): 93.1
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9963
Total Harmonic Distortion (THDi): 0.065
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

TEST NUMBER: P930735

CATALOG NUMBER: DFN2DS-PN4F0-090DS935-FLL

Luminous Intensity Polar Plot



TEST NUMBER: P930735

CATALOG NUMBER: DFN2DS-PN4F0-090DS935-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°	2198	2198	2198
5°	2207	2175	2188
10°	2194	2153	2164
15°	2167	2125	2123
20°	2128	2083	2081
25°	2090	2032	2032
30°	2041	1984	1967
35°	1995	1928	1899
40°	1937	1871	1835
45°	1881	1815	1770
50°	1819	1756	1694
55°	1755	1688	1626
60°	1683	1607	1548
65°	1606	1526	1456
70°	1508	1428	1360
75°	1372	1315	1283
80°	1218	1180	1120
85°	993	947	849

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 1881 cd/sqm

TEST NUMBER: P930735

CATALOG NUMBER: DFN2DS-PN4F0-090DS935-FLL

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	283.5	3.7
10°-20°	797.5	10.4
20°-30°	1172.1	15.3
30°-40°	1361.3	17.8
40°-50°	1359.6	17.7
50°-60°	1185.5	15.5
60°-70°	876.4	11.4
70°-80°	495.8	6.5
80°-90°	130.9	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°	2253.1	29.4
0°-40°	3614.4	47.2
0°-60°	6159.5	80.4
0°-90°	7662.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7662.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3012	3012	3012	3012	3012	
5°	3012	3000	2968	2991	2986	286
15°	2867	2850	2812	2824	2809	807
25°	2595	2572	2523	2528	2523	1194
35°	2239	2210	2163	2146	2131	1398
45°	1822	1801	1758	1726	1714	1406
55°	1379	1361	1326	1292	1277	1233
65°	930	912	883	857	843	919
75°	486	481	466	449	455	519
85°	119	116	113	104	101	139
90°	0	0	0	0	0	

TEST NUMBER: P930735

CATALOG NUMBER: DFN2DS-PN4F0-090DS935-FLL

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3011.6	3011.6	3011.6	3011.6	3011.6
2.5°	3029.2	3014.7	2982.8	3011.6	3006.1
5°	3011.6	3000.3	2968.4	2991.4	2985.8
7.5°	2991.4	2974.2	2942.2	2965.6	2959.8
10°	2959.8	2939.5	2904.7	2927.8	2919.2
12.5°	2916.1	2898.9	2864.2	2878.6	2872.8
15°	2867.0	2849.8	2811.9	2823.6	2809.2
17.5°	2806.1	2788.9	2751.1	2765.6	2751.1
20°	2739.4	2722.2	2681.7	2690.3	2678.9
22.5°	2673.1	2647.0	2609.2	2609.2	2603.3
25°	2594.7	2571.7	2522.6	2528.1	2522.6
27.5°	2507.8	2487.5	2450.1	2441.5	2427.0
30°	2421.2	2397.8	2354.4	2345.8	2334.2
32.5°	2328.4	2311.2	2264.7	2247.3	2235.6
35°	2238.7	2209.8	2163.3	2145.9	2131.4
37.5°	2137.3	2111.1	2064.7	2044.5	2030.0
40°	2033.0	2009.7	1963.3	1937.5	1925.9
42.5°	1931.6	1908.3	1862.2	1833.1	1815.9
45°	1821.7	1801.4	1757.8	1726.1	1714.5
47.5°	1714.5	1694.2	1647.8	1615.9	1598.7
50°	1601.4	1587.0	1546.4	1505.9	1491.4
52.5°	1491.4	1471.1	1433.6	1401.7	1381.4
55°	1378.7	1361.1	1326.4	1291.7	1277.3
57.5°	1265.6	1251.1	1213.4	1178.6	1166.9
60°	1152.5	1141.1	1100.5	1068.6	1060.0
62.5°	1042.5	1022.2	993.3	964.5	952.8
65°	929.7	912.2	883.3	857.2	842.8
67.5°	813.9	799.2	773.3	753.1	741.4
70°	706.7	695.0	668.9	648.6	637.3
72.5°	596.7	585.0	570.5	550.3	541.7
75°	486.4	480.8	466.1	448.9	454.8
77.5°	388.0	376.4	370.6	362.0	353.4
80°	289.7	286.6	280.8	272.2	266.4
82.5°	196.9	196.9	194.2	182.5	182.5
85°	118.6	115.8	113.1	104.1	101.4
87.5°	52.2	46.4	40.6	32.0	28.9
90°	0.0	0.0	0.0	0.0	0.0

TEST NUMBER: P930735

CATALOG NUMBER: DFN2DS-PN4F0-090DS935-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	14.02	15.63	14.38	15.94	16.26	13.57	15.19	13.94	15.50	15.81
	3H	15.77	17.22	16.15	17.55	17.91	15.28	16.73	15.66	17.06	17.42
	4H	16.42	17.78	16.81	18.13	18.51	15.92	17.29	16.32	17.64	18.01
	6H	16.88	18.15	17.30	18.52	18.91	16.38	17.65	16.79	18.02	18.41
	8H	17.03	18.24	17.45	18.63	19.03	16.53	17.74	16.95	18.13	18.52
	12H	17.12	18.28	17.55	18.66	19.09	16.61	17.77	17.04	18.15	18.58
4H	2H	14.58	15.95	14.98	16.30	16.67	14.23	15.60	14.63	15.94	16.32
	3H	16.56	17.70	16.96	18.10	18.50	16.15	17.29	16.56	17.69	18.09
	4H	17.33	18.37	17.76	18.78	19.22	16.91	17.94	17.34	18.36	18.79
	6H	17.93	18.83	18.38	19.27	19.73	17.50	18.40	17.95	18.84	19.30
	8H	18.12	18.96	18.58	19.41	19.87	17.68	18.53	18.14	18.97	19.43
	12H	18.25	19.01	18.73	19.48	19.95	17.80	18.56	18.28	19.03	19.50
8H	4H	17.60	18.45	18.07	18.89	19.36	17.23	18.08	17.69	18.52	18.99
	6H	18.32	19.02	18.81	19.51	19.99	17.94	18.64	18.43	19.13	19.60
	8H	18.58	19.21	19.09	19.72	20.20	18.19	18.82	18.70	19.32	19.81
	12H	18.78	19.34	19.28	19.83	20.39	18.37	18.92	18.87	19.41	19.97
12H	4H	17.63	18.39	18.11	18.87	19.34	17.27	18.03	17.75	18.50	18.97
	6H	18.36	19.00	18.87	19.50	19.99	18.00	18.63	18.51	19.13	19.62
	8H	18.68	19.24	19.19	19.73	20.29	18.30	18.86	18.81	19.35	19.91