

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: P930630

Luminaire Tested: DFN2DS-PN3F0-090DS940-RLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930630
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-PN3F0-090DS940-RLL
Description: 3 foot, Pentagon Define Geo, with Direct 1in Regressed Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

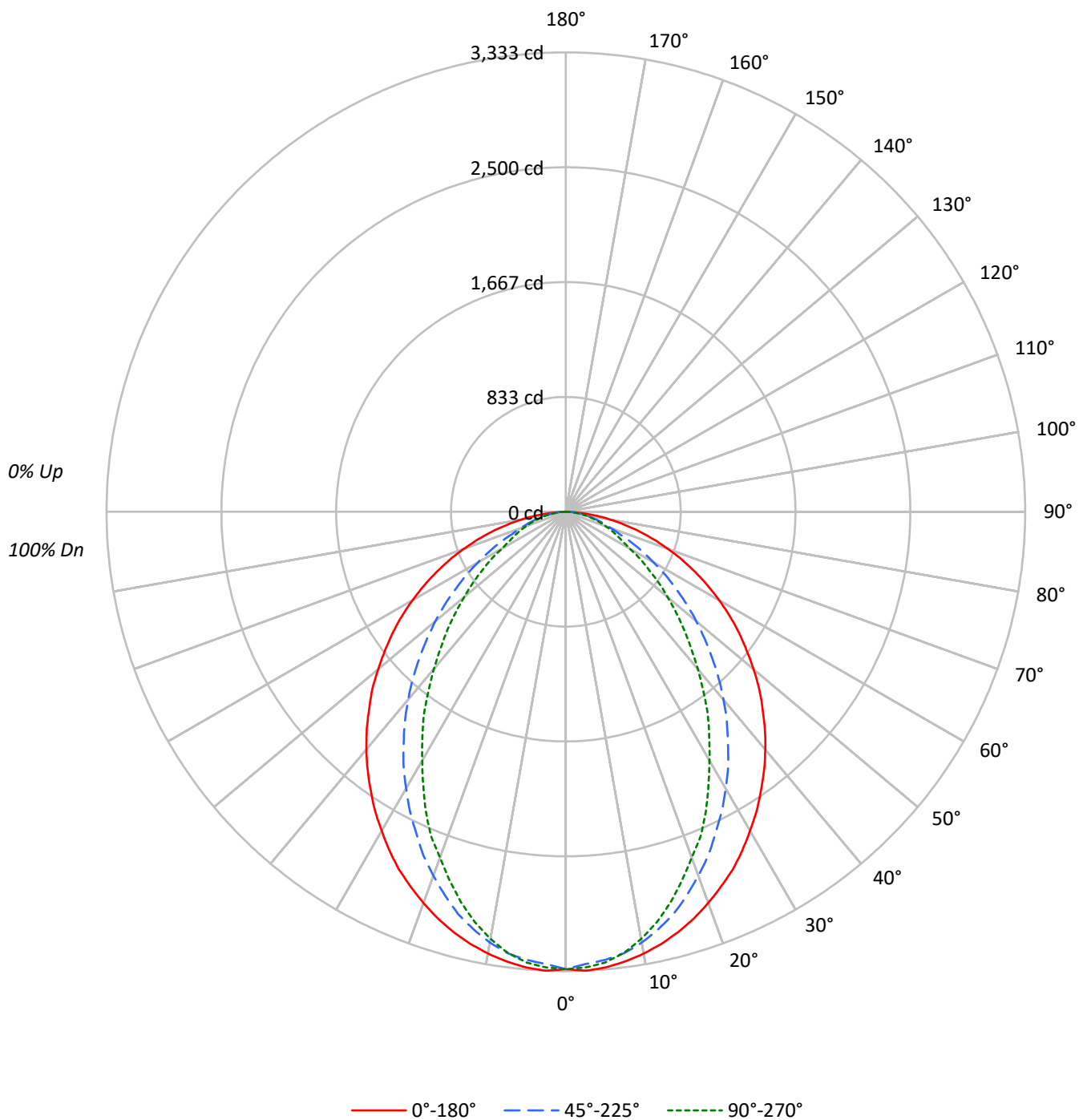
Lumens per Lamp: N/A
Luminaire Lumens: 6823.8 lumens
Efficiency: N/A
Efficacy: 70.2 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 3.11' x L: 2.96' x H: 0')
CIE Type: Direct

Input Watts (W): 97.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9954
Total Harmonic Distortion (THDi): 0.076
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

TEST NUMBER: P930630

CATALOG NUMBER: DFN2DS-PN3F0-090DS940-RLL

Luminous Intensity Polar Plot



TEST NUMBER: P930630

CATALOG NUMBER: DFN2DS-PN3F0-090DS940-RLL

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°	3879	3879	3879
5°	3893	3830	3851
10°	3864	3768	3735
15°	3819	3656	3551
20°	3758	3496	3321
25°	3695	3315	3098
30°	3607	3129	2813
35°	3522	2927	2562
40°	3437	2717	2273
45°	3336	2482	2010
50°	3233	2245	1753
55°	3127	1989	1506
60°	3005	1720	1250
65°	2866	1445	1138
70°	2699	1190	1046
75°	2495	1085	977
80°	2203	969	890
85°	1730	765	765

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 3336 cd/sqm

TEST NUMBER: P930630

CATALOG NUMBER: DFN2DS-PN3F0-090DS940-RLL

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	311.0	4.6
10°-20°	853.7	12.5
20°-30°	1198.5	17.6
30°-40°	1306.5	19.1
40°-50°	1200.8	17.6
50°-60°	943.0	13.8
60°-70°	613.8	9.0
70°-80°	316.0	4.6
80°-90°	80.7	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°	2363.1	34.6
0°-40°	3669.6	53.8
0°-60°	5813.4	85.2
0°-90°	6823.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6823.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3318	3318	3318	3318	3318	
5°	3318	3303	3264	3291	3282	315
15°	3156	3123	3021	2964	2934	889
25°	2865	2768	2570	2447	2402	1317
35°	2468	2315	2051	1862	1796	1545
45°	2018	1817	1501	1288	1216	1558
55°	1534	1300	976	796	739	1371
65°	1036	793	522	420	411	1027
75°	552	342	240	219	216	584
85°	129	66	57	57	57	155
90°	0	0	0	0	0	

TEST NUMBER: P930630

CATALOG NUMBER: DFN2DS-PN3F0-090DS940-RLL

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3318.0	3318.0	3318.0	3318.0	3318.0
2.5°	3333.0	3318.0	3284.8	3315.1	3309.1
5°	3318.0	3303.0	3263.8	3290.9	3281.9
7.5°	3290.9	3273.0	3231.0	3242.8	3227.8
10°	3254.9	3233.9	3174.0	3164.7	3146.9
12.5°	3210.0	3182.9	3101.7	3083.8	3050.6
15°	3155.8	3122.7	3020.8	2963.7	2933.8
17.5°	3092.7	3044.7	2918.4	2852.5	2804.4
20°	3020.8	2960.5	2810.4	2735.6	2669.3
22.5°	2942.7	2873.6	2699.3	2597.3	2552.5
25°	2864.7	2768.4	2570.3	2447.3	2402.1
27.5°	2771.6	2669.3	2450.1	2309.0	2239.9
30°	2672.5	2558.2	2318.0	2165.1	2083.8
32.5°	2576.3	2438.0	2192.1	2011.8	1936.6
35°	2468.3	2315.1	2051.0	1861.8	1795.5
37.5°	2363.2	2197.9	1918.8	1711.4	1636.6
40°	2252.0	2072.0	1780.5	1567.4	1489.4
42.5°	2137.9	1945.9	1642.5	1420.2	1345.3
45°	2017.9	1816.6	1501.4	1288.0	1216.0
47.5°	1903.8	1690.7	1366.4	1152.9	1087.0
50°	1777.7	1564.5	1234.2	1026.8	964.0
52.5°	1654.4	1429.2	1108.0	909.8	852.8
55°	1534.2	1300.1	975.8	795.8	738.8
57.5°	1411.3	1171.1	858.9	690.7	642.6
60°	1285.1	1044.9	735.6	582.7	534.6
62.5°	1162.2	922.0	630.5	486.5	462.6
65°	1036.0	792.6	522.4	420.5	411.3
67.5°	915.9	672.5	420.5	369.2	360.3
70°	789.8	555.6	348.2	318.3	306.1
72.5°	669.6	447.2	291.1	267.2	261.3
75°	552.4	342.2	240.2	219.2	216.3
77.5°	435.5	243.1	189.2	177.2	171.1
80°	327.2	174.3	144.0	132.2	132.2
82.5°	228.1	117.2	99.1	93.0	93.0
85°	129.0	65.9	57.0	57.0	57.0
87.5°	48.1	23.9	23.9	21.1	21.1
90°	0.0	0.0	0.0	0.0	0.0

TEST NUMBER: P930630

CATALOG NUMBER: DFN2DS-PN3F0-090DS940-RLL

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	15.94	17.47	16.31	17.78	18.09	11.91	13.43	12.27	13.74	14.05
	3H	17.71	19.07	18.09	19.40	19.76	13.17	14.54	13.55	14.86	15.22
	4H	18.38	19.66	18.78	20.01	20.38	13.67	14.95	14.07	15.30	15.68
	6H	18.86	20.05	19.28	20.41	20.81	14.05	15.24	14.46	15.60	15.99
	8H	19.03	20.16	19.46	20.55	20.95	14.18	15.30	14.60	15.69	16.09
	12H	19.13	20.21	19.56	20.59	21.02	14.26	15.34	14.69	15.72	16.15
4H	2H	16.05	17.33	16.45	17.68	18.06	12.60	13.88	13.00	14.23	14.61
	3H	17.98	19.04	18.39	19.44	19.85	14.04	15.11	14.45	15.51	15.91
	4H	18.73	19.69	19.16	20.10	20.54	14.64	15.60	15.08	16.01	16.45
	6H	19.32	20.15	19.78	20.60	21.06	15.13	15.96	15.59	16.41	16.87
	8H	19.54	20.31	20.00	20.76	21.23	15.29	16.07	15.76	16.51	16.98
	12H	19.69	20.39	20.17	20.86	21.33	15.41	16.10	15.89	16.58	17.05
8H	4H	18.75	19.53	19.22	19.98	20.44	15.00	15.77	15.46	16.22	16.69
	6H	19.39	20.04	19.89	20.53	21.00	15.58	16.23	16.08	16.72	17.19
	8H	19.64	20.22	20.16	20.73	21.22	15.80	16.38	16.32	16.89	17.38
	12H	19.85	20.36	20.36	20.85	21.41	15.98	16.49	16.49	16.99	17.55
12H	4H	18.74	19.43	19.22	19.91	20.38	15.04	15.73	15.52	16.21	16.68
	6H	19.37	19.95	19.89	20.46	20.95	15.65	16.22	16.16	16.73	17.22
	8H	19.66	20.17	20.17	20.66	21.22	15.92	16.43	16.43	16.92	17.49