

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: P931002

Luminaire Tested: DFN2DS-SQ3F0-090DS927-RLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P931002
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-SQ3F0-090DS927-RLL
Description: 3 foot, Square Define Geo, with Direct 1in Regressed Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

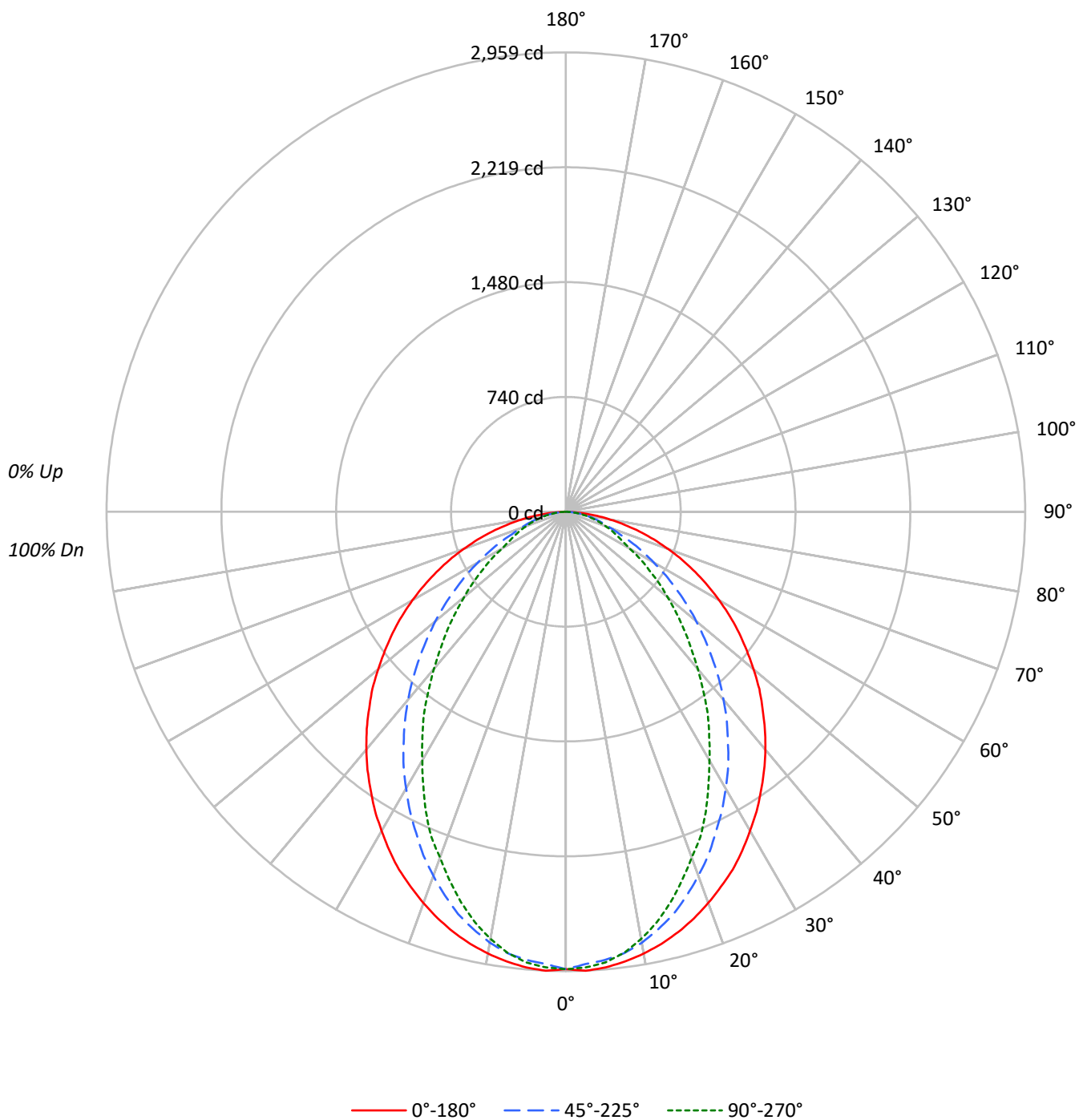
Lumens per Lamp: N/A
Luminaire Lumens: 6058.8 lumens
Efficiency: N/A
Efficacy: 64.7 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 3.06' x L: 3.06' x H: 0')
CIE Type: Direct

Input Watts (W): 93.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.996
Total Harmonic Distortion (THDi): 0.064
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

TEST NUMBER: P931002

CATALOG NUMBER: DFN2DS-SQ3F0-090DS927-RLL

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	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°	3376	3376	3376
5°	3388	3333	3352
10°	3362	3279	3251
15°	3324	3182	3090
20°	3270	3043	2890
25°	3216	2885	2696
30°	3139	2723	2448
35°	3066	2547	2230
40°	2991	2365	1978
45°	2903	2160	1750
50°	2814	1953	1526
55°	2721	1731	1310
60°	2615	1497	1088
65°	2494	1258	990
70°	2349	1036	911
75°	2171	944	850
80°	1917	843	775
85°	1505	665	665

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 2903 cd/sqm

TEST NUMBER: P931002

CATALOG NUMBER: DFN2DS-SQ3F0-090DS927-RLL

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	276.1	4.6
10°-20°	758.0	12.5
20°-30°	1064.1	17.6
30°-40°	1160.0	19.1
40°-50°	1066.2	17.6
50°-60°	837.3	13.8
60°-70°	545.0	9.0
70°-80°	280.5	4.6
80°-90°	71.6	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°	2098.2	34.6
0°-40°	3258.2	53.8
0°-60°	5161.6	85.2
0°-90°	6058.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6058.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2946	2946	2946	2946	2946	
5°	2946	2933	2898	2922	2914	279
15°	2802	2773	2682	2631	2605	790
25°	2544	2458	2282	2173	2133	1170
35°	2192	2056	1821	1653	1594	1372
45°	1792	1613	1333	1144	1080	1384
55°	1362	1154	866	707	656	1217
65°	920	704	464	373	365	912
75°	490	304	213	195	192	519
85°	114	58	51	51	51	137
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2946.0	2946.0	2946.0	2946.0	2946.0
2.5°	2959.3	2946.0	2916.5	2943.5	2938.1
5°	2946.0	2932.7	2897.9	2921.9	2914.0
7.5°	2921.9	2906.1	2868.8	2879.2	2865.9
10°	2890.0	2871.3	2818.2	2809.9	2794.1
12.5°	2850.1	2826.1	2753.9	2738.1	2708.6
15°	2802.0	2772.6	2682.1	2631.4	2604.9
17.5°	2746.0	2703.3	2591.3	2532.7	2490.0
20°	2682.1	2628.6	2495.4	2428.9	2370.1
22.5°	2612.8	2551.4	2396.7	2306.1	2266.3
25°	2543.5	2458.1	2282.1	2172.9	2132.8
27.5°	2460.9	2370.1	2175.5	2050.2	1988.8
30°	2372.9	2271.4	2058.1	1922.3	1850.2
32.5°	2287.5	2164.7	1946.3	1786.3	1719.5
35°	2191.6	2055.6	1821.0	1653.1	1594.2
37.5°	2098.2	1951.5	1703.7	1519.5	1453.1
40°	1999.6	1839.7	1580.9	1391.7	1322.4
42.5°	1898.3	1727.7	1458.4	1261.0	1194.5
45°	1791.7	1612.9	1333.1	1143.6	1079.7
47.5°	1690.4	1501.2	1213.2	1023.7	965.1
50°	1578.4	1389.1	1095.8	911.7	855.9
52.5°	1468.9	1268.9	983.8	807.8	757.2
55°	1362.2	1154.3	866.4	706.6	655.9
57.5°	1253.1	1039.8	762.6	613.2	570.6
60°	1141.0	927.7	653.2	517.3	474.6
62.5°	1031.9	818.6	559.8	432.0	410.7
65°	919.8	703.8	463.9	373.3	365.2
67.5°	813.2	597.1	373.3	327.8	319.9
70°	701.2	493.3	309.2	282.6	271.8
72.5°	594.6	397.1	258.5	237.3	232.0
75°	490.5	303.8	213.3	194.6	192.1
77.5°	386.7	215.8	168.0	157.3	151.9
80°	290.5	154.8	127.8	117.4	117.4
82.5°	202.5	104.1	88.0	82.6	82.6
85°	114.5	58.5	50.6	50.6	50.6
87.5°	42.7	21.2	21.2	18.7	18.7
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	15.46	16.98	15.83	17.30	17.61	11.42	12.94	11.79	13.26	13.57
	3H	17.23	18.59	17.60	18.92	19.28	12.69	14.05	13.06	14.38	14.74
	4H	17.89	19.17	18.29	19.52	19.90	13.19	14.47	13.59	14.82	15.20
	6H	18.38	19.57	18.79	19.93	20.32	13.57	14.75	13.98	15.12	15.51
	8H	18.55	19.67	18.97	20.06	20.46	13.69	14.82	14.12	15.21	15.61
	12H	18.65	19.73	19.08	20.11	20.54	13.78	14.85	14.21	15.24	15.66
4H	2H	15.57	16.85	15.97	17.19	17.57	12.12	13.40	12.52	13.75	14.13
	3H	17.50	18.56	17.91	18.96	19.36	13.56	14.62	13.97	15.02	15.42
	4H	18.25	19.20	18.68	19.62	20.06	14.16	15.12	14.59	15.53	15.97
	6H	18.84	19.67	19.30	20.11	20.57	14.65	15.48	15.11	15.92	16.38
	8H	19.05	19.83	19.52	20.28	20.74	14.81	15.59	15.27	16.03	16.50
	12H	19.21	19.90	19.69	20.38	20.85	14.93	15.62	15.41	16.10	16.57
8H	4H	18.27	19.05	18.74	19.49	19.96	14.51	15.29	14.98	15.74	16.20
	6H	18.91	19.55	19.41	20.04	20.52	15.10	15.74	15.60	16.23	16.71
	8H	19.16	19.74	19.67	20.25	20.73	15.32	15.90	15.84	16.41	16.90
	12H	19.36	19.87	19.87	20.37	20.93	15.50	16.01	16.01	16.50	17.07
12H	4H	18.26	18.95	18.74	19.43	19.90	14.56	15.25	15.04	15.73	16.20
	6H	18.89	19.47	19.40	19.98	20.47	15.16	15.74	15.68	16.25	16.74
	8H	19.18	19.69	19.68	20.18	20.74	15.44	15.95	15.95	16.44	17.00