

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: P931042

Luminaire Tested: DFN2DS-SQ3F0-110DS935-RLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P931042
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-SQ3F0-110DS935-RLL
Description: 3 foot, Square Define Geo, with Direct 1in Regressed Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

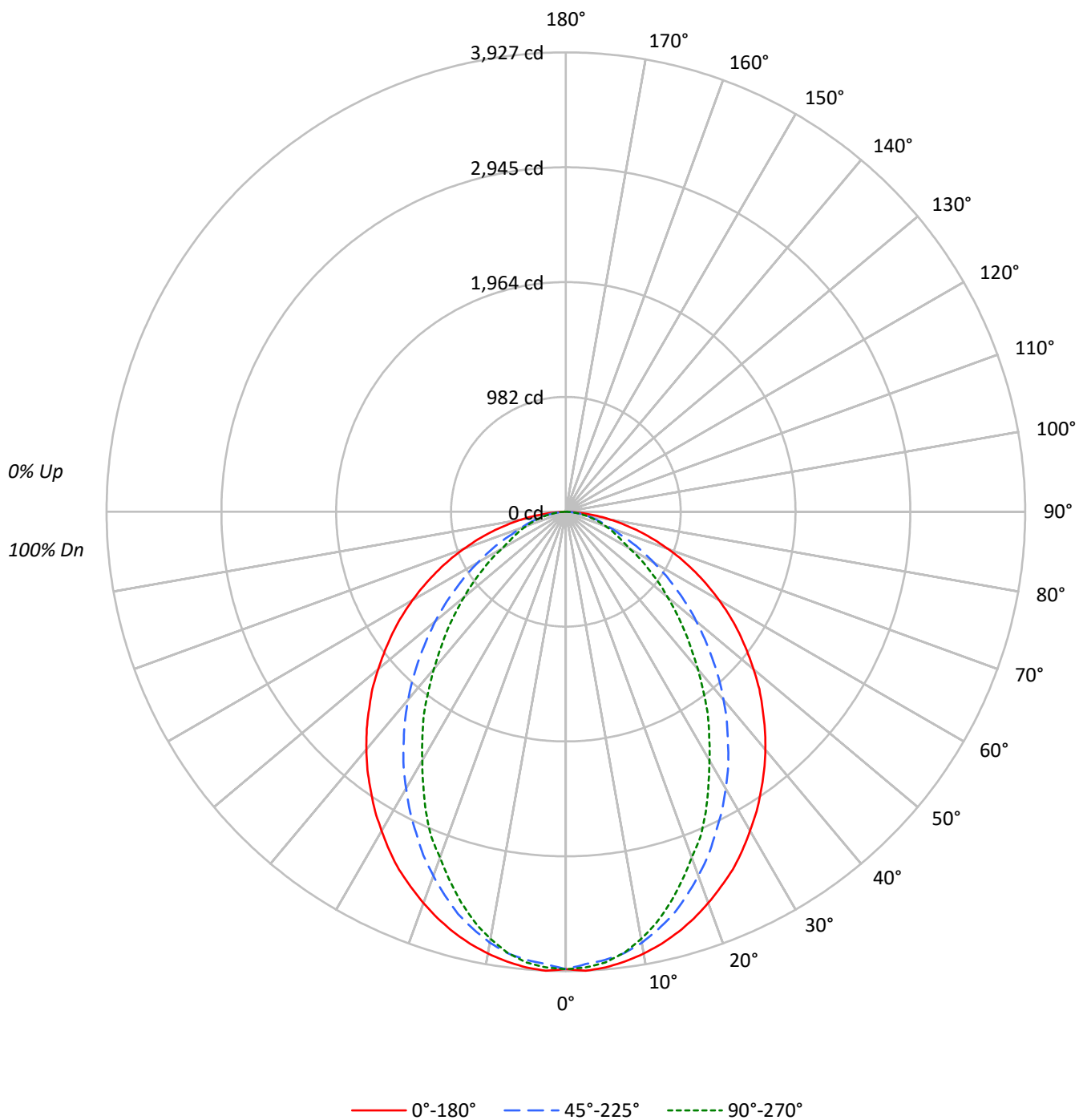
Lumens per Lamp: N/A
Luminaire Lumens: 8041.0 lumens
Efficiency: N/A
Efficacy: 68.3 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 3.06' x L: 3.06' x H: 0')
CIE Type: Direct

Input Watts (W): 117.7
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9977
Total Harmonic Distortion (THDi): 0.049
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	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°	4480	4480	4480
5°	4497	4424	4448
10°	4463	4352	4314
15°	4411	4222	4101
20°	4340	4038	3835
25°	4268	3829	3578
30°	4167	3614	3249
35°	4068	3381	2960
40°	3969	3138	2625
45°	3853	2867	2322
50°	3734	2592	2025
55°	3612	2297	1739
60°	3470	1986	1444
65°	3310	1669	1314
70°	3118	1375	1209
75°	2882	1253	1128
80°	2544	1120	1028
85°	1998	883	883

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 3853 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	366.4	4.6
10°-20°	1005.9	12.5
20°-30°	1412.3	17.6
30°-40°	1539.5	19.1
40°-50°	1414.9	17.6
50°-60°	1111.2	13.8
60°-70°	723.3	9.0
70°-80°	372.3	4.6
80°-90°	95.1	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°	2784.6	34.6
0°-40°	4324.1	53.8
0°-60°	6850.3	85.2
0°-90°	8041.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8041.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3910	3910	3910	3910	3910	
5°	3910	3892	3846	3878	3867	371
15°	3719	3680	3560	3492	3457	1048
25°	3376	3262	3029	2884	2830	1552
35°	2909	2728	2417	2194	2116	1821
45°	2378	2140	1769	1518	1433	1836
55°	1808	1532	1150	938	871	1616
65°	1221	934	616	496	485	1210
75°	651	403	283	258	255	688
85°	152	78	67	67	67	182
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3909.8	3909.8	3909.8	3909.8	3909.8
2.5°	3927.4	3909.8	3870.8	3906.5	3899.3
5°	3909.8	3892.2	3846.0	3877.9	3867.4
7.5°	3877.9	3856.8	3807.3	3821.2	3803.5
10°	3835.5	3810.7	3740.1	3729.2	3708.2
12.5°	3782.5	3750.6	3654.9	3633.8	3594.8
15°	3718.7	3679.7	3559.5	3492.4	3457.0
17.5°	3644.4	3587.7	3439.1	3361.3	3304.6
20°	3559.5	3488.6	3311.8	3223.5	3145.4
22.5°	3467.6	3386.1	3180.8	3060.7	3007.7
25°	3375.6	3262.2	3028.7	2883.8	2830.5
27.5°	3266.0	3145.4	2887.2	2720.9	2639.4
30°	3149.2	3014.5	2731.4	2551.2	2455.5
32.5°	3035.9	2872.9	2583.1	2370.7	2282.1
35°	2908.6	2728.0	2416.9	2193.9	2115.8
37.5°	2784.8	2589.9	2261.0	2016.6	1928.5
40°	2653.7	2441.6	2098.1	1846.9	1755.0
42.5°	2519.3	2292.9	1935.6	1673.6	1585.3
45°	2377.8	2140.5	1769.3	1517.7	1432.9
47.5°	2243.4	1992.3	1610.1	1358.5	1280.9
50°	2094.7	1843.6	1454.3	1209.9	1136.0
52.5°	1949.4	1684.1	1305.7	1072.2	1004.9
55°	1807.9	1532.0	1149.8	937.7	870.6
57.5°	1663.1	1380.0	1012.0	813.9	757.1
60°	1514.4	1231.3	866.8	686.6	630.0
62.5°	1369.5	1086.4	743.0	573.3	545.1
65°	1220.8	934.0	615.7	495.5	484.6
67.5°	1079.3	792.5	495.5	435.1	424.6
70°	930.6	654.7	410.3	375.0	360.8
72.5°	789.0	527.1	343.1	314.9	307.8
75°	650.9	403.2	283.0	258.3	254.9
77.5°	513.2	286.5	223.0	208.7	201.6
80°	385.5	205.4	169.7	155.8	155.8
82.5°	268.8	138.1	116.8	109.6	109.6
85°	152.0	77.7	67.2	67.2	67.2
87.5°	56.7	28.1	28.1	24.8	24.8
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	16.44	17.97	16.81	18.28	18.59	12.41	13.93	12.77	14.24	14.56
	3H	18.21	19.58	18.59	19.90	20.27	13.67	15.04	14.05	15.36	15.73
	4H	18.88	20.16	19.28	20.51	20.88	14.17	15.45	14.57	15.80	16.18
	6H	19.37	20.55	19.78	20.91	21.31	14.55	15.74	14.97	16.10	16.49
	8H	19.53	20.66	19.96	21.05	21.45	14.68	15.80	15.10	16.19	16.60
	12H	19.63	20.71	20.06	21.09	21.52	14.76	15.84	15.19	16.22	16.65
4H	2H	16.55	17.83	16.95	18.18	18.56	13.10	14.38	13.50	14.73	15.11
	3H	18.48	19.55	18.89	19.94	20.35	14.54	15.61	14.95	16.01	16.41
	4H	19.23	20.19	19.66	20.60	21.04	15.14	16.10	15.58	16.52	16.95
	6H	19.82	20.66	20.28	21.10	21.56	15.63	16.46	16.09	16.91	17.37
	8H	20.04	20.82	20.50	21.26	21.73	15.79	16.57	16.26	17.02	17.48
	12H	20.19	20.89	20.67	21.36	21.84	15.91	16.61	16.39	17.08	17.55
8H	4H	19.26	20.03	19.72	20.48	20.94	15.50	16.27	15.96	16.72	17.19
	6H	19.89	20.54	20.39	21.03	21.50	16.08	16.73	16.58	17.22	17.69
	8H	20.14	20.72	20.66	21.23	21.72	16.30	16.88	16.82	17.39	17.88
	12H	20.35	20.86	20.86	21.35	21.91	16.48	16.99	16.99	17.49	18.05
12H	4H	19.24	19.93	19.72	20.41	20.88	15.54	16.24	16.02	16.71	17.18
	6H	19.87	20.45	20.39	20.96	21.45	16.15	16.72	16.66	17.23	17.72
	8H	20.16	20.67	20.67	21.16	21.73	16.42	16.93	16.93	17.42	17.99