

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: P930880

Luminaire Tested: DFN2DS-SQ2F0-070DS935-RLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930880
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-SQ2F0-070DS935-RLL
Description: 2 foot, Square Define Geo, with Direct 1in Regressed Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

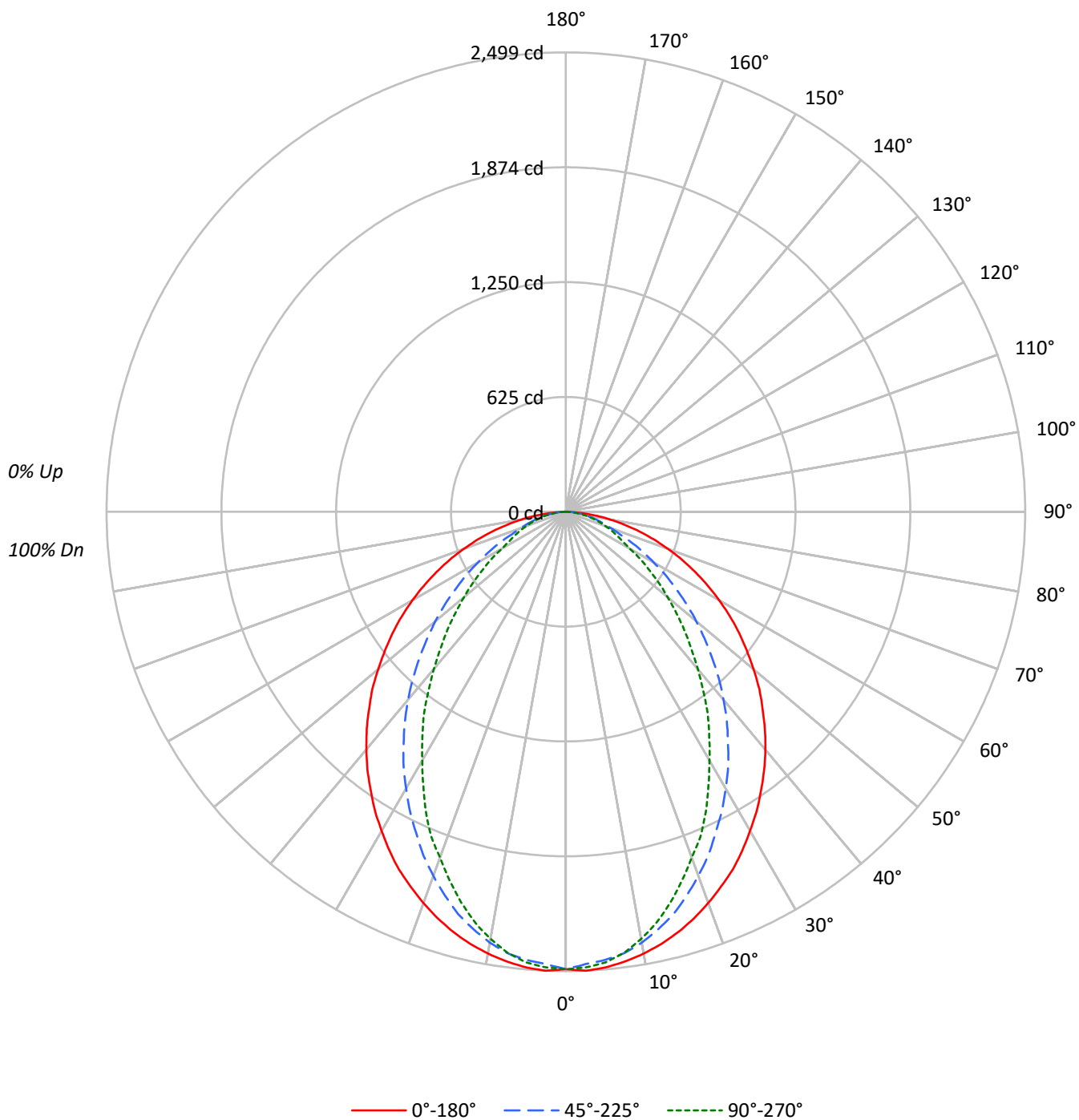
Lumens per Lamp: N/A
Luminaire Lumens: 5117.0 lumens
Efficiency: N/A
Efficacy: 71.7 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 2.21' x L: 2.21' x H: 0')
CIE Type: Direct

Input Watts (W): 71.4
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°	5471	5471	5471
5°	5492	5402	5432
10°	5450	5314	5269
15°	5387	5157	5008
20°	5301	4932	4684
25°	5212	4676	4370
30°	5089	4413	3968
35°	4968	4129	3614
40°	4847	3833	3206
45°	4706	3501	2836
50°	4560	3166	2473
55°	4411	2805	2124
60°	4238	2426	1763
65°	4042	2039	1605
70°	3807	1679	1475
75°	3520	1530	1378
80°	3107	1368	1256
85°	2442	1077	1077

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 4706 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	233.2	4.6
10°-20°	640.1	12.5
20°-30°	898.7	17.6
30°-40°	979.7	19.1
40°-50°	900.4	17.6
50°-60°	707.1	13.8
60°-70°	460.3	9.0
70°-80°	236.9	4.6
80°-90°	60.5	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°	1772.1	34.6
0°-40°	2751.7	53.8
0°-60°	4359.3	85.2
0°-90°	5117.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5117.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2488	2488	2488	2488	2488	
5°	2488	2477	2448	2468	2461	236
15°	2366	2342	2265	2222	2200	667
25°	2148	2076	1927	1835	1801	988
35°	1851	1736	1538	1396	1346	1158
45°	1513	1362	1126	966	912	1169
55°	1150	975	732	597	554	1028
65°	777	594	392	315	308	770
75°	414	256	180	164	162	438
85°	97	49	43	43	43	116
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2488.1	2488.1	2488.1	2488.1	2488.1
2.5°	2499.2	2488.1	2463.2	2485.9	2481.4
5°	2488.1	2476.8	2447.5	2467.8	2461.1
7.5°	2467.8	2454.4	2422.9	2431.6	2420.5
10°	2440.8	2425.0	2380.0	2373.2	2359.8
12.5°	2407.1	2386.8	2325.9	2312.5	2287.6
15°	2366.5	2341.6	2265.2	2222.4	2200.0
17.5°	2319.2	2283.1	2188.5	2139.0	2103.0
20°	2265.2	2220.0	2107.5	2051.4	2001.6
22.5°	2206.7	2154.8	2024.1	1947.6	1914.0
25°	2148.1	2076.0	1927.3	1835.2	1801.3
27.5°	2078.4	2001.6	1837.3	1731.5	1679.7
30°	2004.1	1918.3	1738.1	1623.5	1562.6
32.5°	1931.9	1828.3	1643.8	1508.6	1452.2
35°	1850.9	1736.0	1538.0	1396.1	1346.4
37.5°	1772.1	1648.1	1438.9	1283.3	1227.2
40°	1688.7	1553.8	1335.2	1175.4	1116.8
42.5°	1603.2	1459.2	1231.7	1064.9	1008.9
45°	1513.2	1362.2	1125.9	965.9	911.9
47.5°	1427.6	1267.8	1024.6	864.6	815.1
50°	1333.0	1173.2	925.4	770.0	722.9
52.5°	1240.6	1071.6	830.8	682.2	639.5
55°	1150.5	974.9	731.7	596.8	554.0
57.5°	1058.3	878.1	644.1	517.9	481.9
60°	963.7	783.5	551.6	437.0	400.8
62.5°	871.4	691.4	472.7	364.8	346.8
65°	776.8	594.3	391.8	315.4	308.4
67.5°	686.8	504.3	315.4	276.8	270.2
70°	592.2	416.6	261.1	238.6	229.5
72.5°	502.2	335.4	218.4	200.5	195.9
75°	414.3	256.5	180.1	164.3	162.2
77.5°	326.5	182.2	141.9	132.8	128.3
80°	245.4	130.6	108.0	99.2	99.2
82.5°	171.1	87.9	74.3	69.7	69.7
85°	96.8	49.4	42.7	42.7	42.7
87.5°	36.0	17.9	17.9	15.7	15.7
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	17.14	18.66	17.50	18.97	19.29	13.10	14.62	13.46	14.94	15.25
	3H	18.90	20.27	19.28	20.60	20.96	14.36	15.73	14.74	16.06	16.42
	4H	19.57	20.85	19.97	21.20	21.58	14.87	16.15	15.27	16.50	16.87
	6H	20.06	21.24	20.47	21.61	22.00	15.25	16.43	15.66	16.80	17.19
	8H	20.22	21.35	20.65	21.74	22.14	15.37	16.50	15.80	16.89	17.29
	12H	20.33	21.41	20.76	21.79	22.22	15.45	16.53	15.88	16.91	17.34
4H	2H	17.24	18.52	17.64	18.87	19.25	13.80	15.08	14.20	15.42	15.80
	3H	19.18	20.24	19.59	20.64	21.04	15.24	16.30	15.65	16.70	17.10
	4H	19.93	20.88	20.36	21.30	21.74	15.84	16.79	16.27	17.21	17.65
	6H	20.52	21.35	20.97	21.79	22.25	16.33	17.16	16.78	17.60	18.06
	8H	20.73	21.51	21.20	21.95	22.42	16.49	17.27	16.95	17.71	18.18
	12H	20.89	21.58	21.37	22.06	22.53	16.60	17.30	17.09	17.78	18.25
8H	4H	19.95	20.73	20.41	21.17	21.64	16.19	16.97	16.65	17.41	17.88
	6H	20.59	21.23	21.08	21.72	22.20	16.78	17.42	17.27	17.91	18.39
	8H	20.84	21.41	21.35	21.92	22.41	17.00	17.58	17.51	18.09	18.57
	12H	21.04	21.55	21.55	22.04	22.61	17.18	17.69	17.69	18.18	18.74
12H	4H	19.93	20.63	20.42	21.11	21.58	16.23	16.93	16.72	17.41	17.88
	6H	20.57	21.15	21.08	21.66	22.14	16.84	17.42	17.36	17.93	18.42
	8H	20.85	21.36	21.36	21.85	22.42	17.11	17.62	17.62	18.12	18.68