

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: P931146

Luminaire Tested: DFN2DS-SQ4F0-100DS927-RLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P931146
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-SQ4F0-100DS927-RLL
Description: 4 foot, Square Define Geo, with Direct 1in Regressed Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

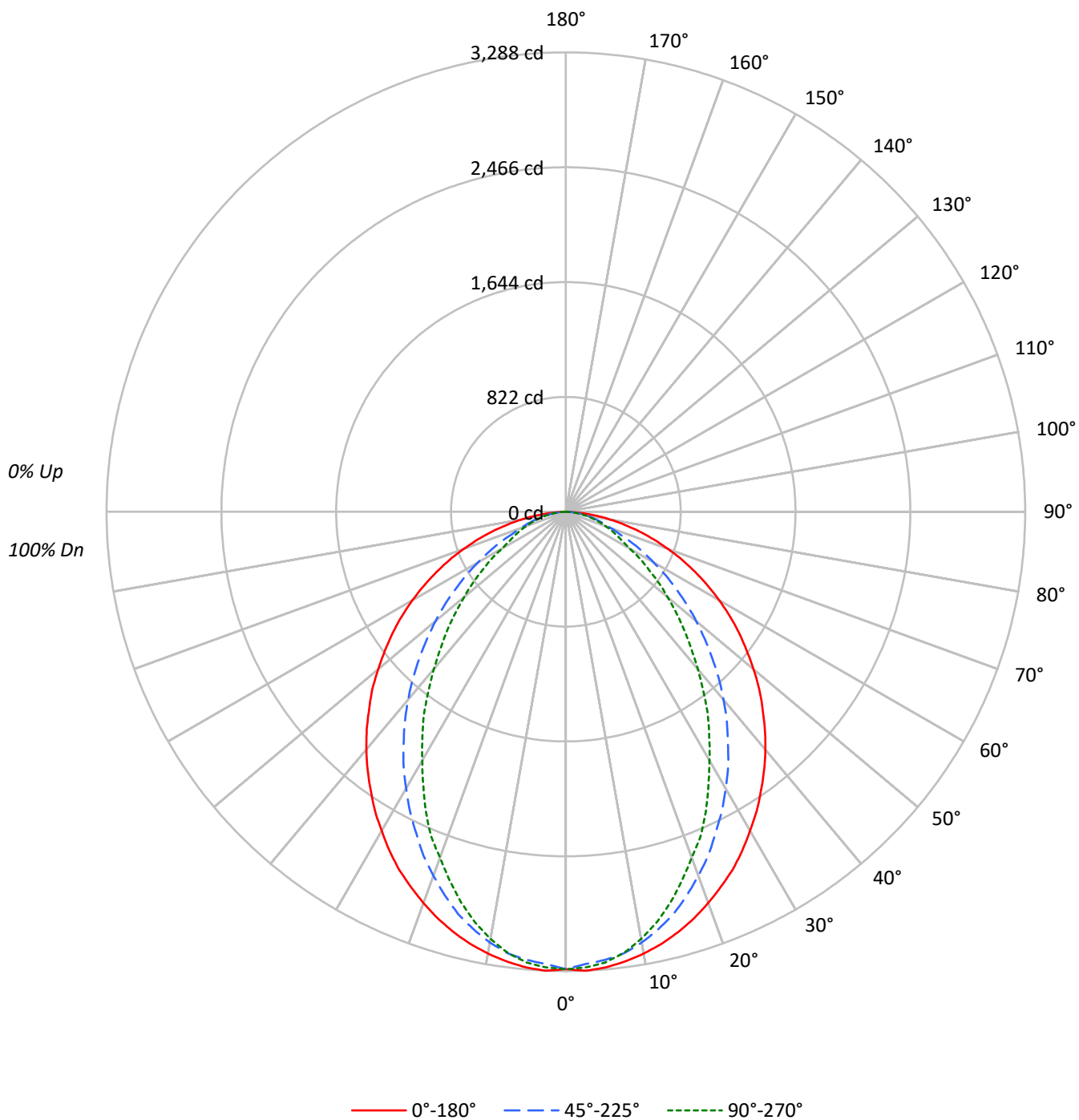
Lumens per Lamp: N/A
Luminaire Lumens: 6732.0 lumens
Efficiency: N/A
Efficacy: 66.9 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 3.92' x L: 3.92' x H: 0')
CIE Type: Direct

Input Watts (W): 100.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9968
Total Harmonic Distortion (THDi): 0.064
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°	2297	2297	2297
5°	2306	2268	2281
10°	2288	2231	2212
15°	2262	2165	2103
20°	2225	2070	1966
25°	2188	1963	1835
30°	2136	1853	1666
35°	2086	1733	1517
40°	2035	1609	1346
45°	1975	1470	1190
50°	1914	1329	1038
55°	1852	1178	892
60°	1779	1018	740
65°	1697	856	674
70°	1598	705	620
75°	1478	643	579
80°	1304	574	527
85°	1025	452	452

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 1975 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	306.8	4.6
10°-20°	842.2	12.5
20°-30°	1182.4	17.6
30°-40°	1288.9	19.1
40°-50°	1184.6	17.6
50°-60°	930.3	13.8
60°-70°	605.5	9.0
70°-80°	311.7	4.6
80°-90°	79.6	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°	2331.3	34.6
0°-40°	3620.2	53.8
0°-60°	5735.1	85.2
0°-90°	6732.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6732.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3273	3273	3273	3273	3273	
5°	3273	3258	3220	3247	3238	310
15°	3113	3081	2980	2924	2894	877
25°	2826	2731	2536	2414	2370	1300
35°	2435	2284	2023	1837	1771	1524
45°	1991	1792	1481	1271	1200	1537
55°	1514	1283	963	785	729	1353
65°	1022	782	515	415	406	1013
75°	545	338	237	216	213	576
85°	127	65	56	56	56	153
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3273.3	3273.3	3273.3	3273.3	3273.3
2.5°	3288.1	3273.3	3240.6	3270.5	3264.5
5°	3273.3	3258.5	3219.9	3246.6	3237.8
7.5°	3246.6	3229.0	3187.5	3199.1	3184.4
10°	3211.1	3190.3	3131.3	3122.1	3104.6
12.5°	3166.8	3140.0	3059.9	3042.3	3009.6
15°	3113.4	3080.6	2980.1	2923.8	2894.3
17.5°	3051.1	3003.7	2879.2	2814.1	2766.7
20°	2980.1	2920.7	2772.6	2698.8	2633.4
22.5°	2903.1	2834.9	2662.9	2562.4	2518.1
25°	2826.1	2731.2	2535.7	2414.3	2369.7
27.5°	2734.3	2633.4	2417.2	2278.0	2209.8
30°	2636.6	2523.7	2286.7	2135.9	2055.8
32.5°	2541.7	2405.2	2162.6	1984.8	1910.5
35°	2435.1	2284.0	2023.4	1836.7	1771.3
37.5°	2331.4	2168.3	1893.0	1688.4	1614.5
40°	2221.7	2044.2	1756.6	1546.3	1469.3
42.5°	2109.2	1919.6	1620.5	1401.1	1327.2
45°	1990.7	1792.1	1481.3	1270.7	1199.6
47.5°	1878.2	1668.0	1348.0	1137.4	1072.4
50°	1753.7	1543.4	1217.5	1013.0	951.0
52.5°	1632.1	1409.9	1093.1	897.6	841.3
55°	1513.6	1282.6	962.7	785.1	728.8
57.5°	1392.3	1155.3	847.4	681.4	633.9
60°	1267.8	1030.9	725.7	574.8	527.4
62.5°	1146.5	909.5	622.0	480.0	456.4
65°	1022.1	781.9	515.4	414.8	405.7
67.5°	903.6	663.5	414.8	364.2	355.4
70°	779.1	548.1	343.5	313.9	302.1
72.5°	660.6	441.2	287.3	263.7	257.7
75°	545.0	337.6	237.0	216.2	213.4
77.5°	429.7	239.8	186.7	174.7	168.8
80°	322.7	171.9	142.1	130.4	130.4
82.5°	225.0	115.6	97.7	91.8	91.8
85°	127.3	65.0	56.2	56.2	56.2
87.5°	47.4	23.6	23.6	20.8	20.8
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	14.12	15.65	14.49	15.96	16.27	10.08	11.61	10.45	11.92	12.23
	3H	15.89	17.25	16.27	17.58	17.94	11.35	12.71	11.73	13.04	13.40
	4H	16.56	17.84	16.96	18.18	18.56	11.85	13.13	12.25	13.48	13.86
	6H	17.04	18.23	17.46	18.59	18.99	12.23	13.41	12.64	13.78	14.17
	8H	17.21	18.34	17.64	18.73	19.13	12.36	13.48	12.78	13.87	14.27
	12H	17.31	18.39	17.74	18.77	19.20	12.44	13.52	12.87	13.90	14.33
4H	2H	14.23	15.51	14.63	15.86	16.24	10.78	12.06	11.18	12.41	12.79
	3H	16.16	17.22	16.57	17.62	18.02	12.22	13.29	12.63	13.69	14.09
	4H	16.91	17.87	17.34	18.28	18.72	12.82	13.78	13.25	14.19	14.63
	6H	17.50	18.33	17.96	18.78	19.24	13.31	14.14	13.77	14.58	15.04
	8H	17.72	18.49	18.18	18.94	19.41	13.47	14.25	13.94	14.69	15.16
	12H	17.87	18.56	18.35	19.04	19.51	13.59	14.28	14.07	14.76	15.23
8H	4H	16.93	17.71	17.40	18.16	18.62	13.18	13.95	13.64	14.40	14.86
	6H	17.57	18.21	18.07	18.71	19.18	13.76	14.40	14.26	14.90	15.37
	8H	17.82	18.40	18.34	18.91	19.40	13.98	14.56	14.50	15.07	15.56
	12H	18.03	18.54	18.54	19.03	19.59	14.16	14.67	14.67	15.16	15.73
12H	4H	16.92	17.61	17.40	18.09	18.56	13.22	13.91	13.70	14.39	14.86
	6H	17.55	18.13	18.07	18.64	19.13	13.83	14.40	14.34	14.91	15.40
	8H	17.84	18.35	18.35	18.84	19.40	14.10	14.61	14.61	15.10	15.67

END OF REPORT