

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: P930884

Luminaire Tested: DFN2DS-SQ2F0-070DS950-RLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930884
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-SQ2F0-070DS950-RLL
Description: 2 foot, Square Define Geo, with Direct 1in Regressed Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

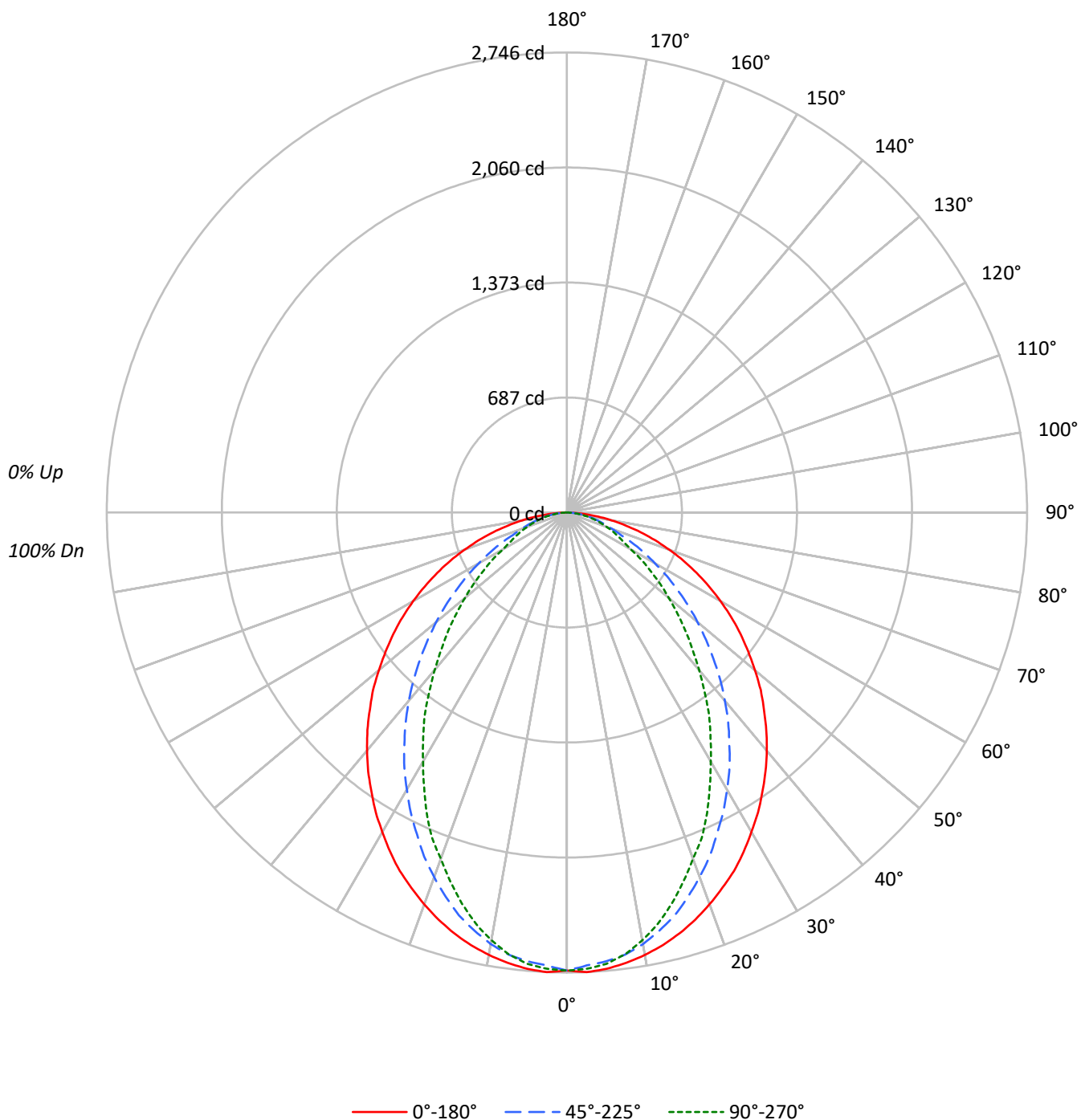
Lumens per Lamp: N/A
Luminaire Lumens: 5622.7 lumens
Efficiency: N/A
Efficacy: 78.7 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 2.21' x L: 2.21' x H: 0')
CIE Type: Direct

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

TEST NUMBER: P930884

CATALOG NUMBER: DFN2DS-SQ2F0-070DS950-RLL

Luminous Intensity Polar Plot



TEST NUMBER: P930884

CATALOG NUMBER: DFN2DS-SQ2F0-070DS950-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°	6012	6012	6012
5°	6035	5936	5969
10°	5988	5839	5790
15°	5920	5666	5503
20°	5824	5419	5147
25°	5727	5138	4802
30°	5591	4849	4360
35°	5459	4537	3971
40°	5326	4211	3523
45°	5171	3847	3116
50°	5011	3479	2718
55°	4846	3082	2334
60°	4657	2665	1937
65°	4441	2240	1763
70°	4183	1845	1621
75°	3867	1681	1514
80°	3414	1503	1380
85°	2682	1186	1186

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 5171 cd/sqm

TEST NUMBER: P930884

CATALOG NUMBER: DFN2DS-SQ2F0-070DS950-RLL

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	256.2	4.6
10°-20°	703.4	12.5
20°-30°	987.6	17.6
30°-40°	1076.5	19.1
40°-50°	989.4	17.6
50°-60°	777.0	13.8
60°-70°	505.8	9.0
70°-80°	260.3	4.6
80°-90°	66.5	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°	1947.2	34.6
0°-40°	3023.7	53.8
0°-60°	4790.2	85.2
0°-90°	5622.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5622.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2734	2734	2734	2734	2734	
5°	2734	2722	2689	2712	2704	259
15°	2600	2573	2489	2442	2417	733
25°	2360	2281	2118	2016	1979	1086
35°	2034	1908	1690	1534	1480	1273
45°	1663	1497	1237	1061	1002	1284
55°	1264	1071	804	656	609	1130
65°	854	653	430	346	339	846
75°	455	282	198	181	178	481
85°	106	54	47	47	47	127
90°	0	0	0	0	0	

TEST NUMBER: P930884

CATALOG NUMBER: DFN2DS-SQ2F0-070DS950-RLL

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2734.0	2734.0	2734.0	2734.0	2734.0
2.5°	2746.3	2734.0	2706.7	2731.6	2726.6
5°	2734.0	2721.6	2689.4	2711.7	2704.3
7.5°	2711.7	2696.9	2662.3	2672.0	2659.7
10°	2682.0	2664.7	2615.3	2607.7	2593.0
12.5°	2645.0	2622.7	2555.8	2541.0	2513.7
15°	2600.4	2573.0	2489.0	2442.1	2417.4
17.5°	2548.4	2508.8	2404.8	2350.4	2310.8
20°	2489.0	2439.4	2315.8	2254.1	2199.5
22.5°	2424.8	2367.8	2224.2	2140.1	2103.2
25°	2360.4	2281.1	2117.8	2016.5	1979.3
27.5°	2283.8	2199.5	2018.9	1902.7	1845.7
30°	2202.1	2107.9	1909.9	1784.0	1717.1
32.5°	2122.8	2009.0	1806.3	1657.7	1595.7
35°	2033.8	1907.6	1690.0	1534.1	1479.5
37.5°	1947.3	1811.0	1581.1	1410.1	1348.5
40°	1855.6	1707.3	1467.1	1291.5	1227.2
42.5°	1761.7	1603.4	1353.4	1170.2	1108.6
45°	1662.7	1496.8	1237.2	1061.3	1002.0
47.5°	1568.7	1393.1	1125.9	950.0	895.7
50°	1464.8	1289.2	1016.9	846.1	794.4
52.5°	1363.2	1177.6	913.0	749.7	702.7
55°	1264.2	1071.3	804.0	655.7	608.8
57.5°	1162.9	964.9	707.7	569.1	529.5
60°	1059.0	861.0	606.1	480.2	440.5
62.5°	957.6	759.7	519.5	400.9	381.1
65°	853.6	653.1	430.5	346.5	338.9
67.5°	754.7	554.1	346.5	304.2	296.9
70°	650.7	457.8	286.9	262.2	252.2
72.5°	551.8	368.5	239.9	220.3	215.3
75°	455.2	281.9	197.9	180.6	178.2
77.5°	358.8	200.2	155.9	145.9	141.0
80°	269.6	143.5	118.7	109.0	109.0
82.5°	188.0	96.6	81.6	76.6	76.6
85°	106.3	54.3	47.0	47.0	47.0
87.5°	39.6	19.7	19.7	17.3	17.3
90°	0.0	0.0	0.0	0.0	0.0

TEST NUMBER: P930884

CATALOG NUMBER: DFN2DS-SQ2F0-070DS950-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	17.47	18.99	17.83	19.30	19.62	13.43	14.95	13.79	15.26	15.58
	3H	19.23	20.60	19.61	20.92	21.29	14.69	16.06	15.07	16.39	16.75
	4H	19.90	21.18	20.30	21.53	21.91	15.19	16.47	15.59	16.82	17.20
	6H	20.39	21.57	20.80	21.94	22.33	15.58	16.76	15.99	17.12	17.52
	8H	20.55	21.68	20.98	22.07	22.47	15.70	16.83	16.13	17.22	17.62
	12H	20.66	21.73	21.09	22.12	22.55	15.78	16.86	16.21	17.24	17.67
4H	2H	17.57	18.85	17.97	19.20	19.58	14.12	15.40	14.52	15.75	16.13
	3H	19.50	20.57	19.91	20.97	21.37	15.57	16.63	15.98	17.03	17.43
	4H	20.25	21.21	20.69	21.63	22.06	16.17	17.12	16.60	17.54	17.98
	6H	20.84	21.68	21.30	22.12	22.58	16.65	17.49	17.11	17.93	18.39
	8H	21.06	21.84	21.52	22.28	22.75	16.82	17.59	17.28	18.04	18.50
	12H	21.21	21.91	21.69	22.39	22.86	16.93	17.63	17.41	18.11	18.58
8H	4H	20.28	21.05	20.74	21.50	21.97	16.52	17.30	16.98	17.74	18.21
	6H	20.91	21.56	21.41	22.05	22.53	17.11	17.75	17.60	18.24	18.72
	8H	21.16	21.74	21.68	22.25	22.74	17.33	17.90	17.84	18.41	18.90
	12H	21.37	21.88	21.88	22.37	22.94	17.51	18.02	18.02	18.51	19.07
12H	4H	20.26	20.96	20.74	21.43	21.91	16.56	17.26	17.04	17.74	18.21
	6H	20.90	21.47	21.41	21.98	22.47	17.17	17.75	17.68	18.26	18.74
	8H	21.18	21.69	21.69	22.18	22.75	17.44	17.95	17.95	18.44	19.01

END OF REPORT

FIELD PERFORMANCE MAY DIFFER FROM LABORATORY PERFORMANCE

7 of 7