

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: P931127

Luminaire Tested: DFN2DS-SQ4F0-090DS927-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P931127
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P333812)
Test Lab: INNOVATION CENTER
Issue Date: 11/20/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: DFN2DS-SQ4F0-090DS927-FLL
Description: 4 foot, Square Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

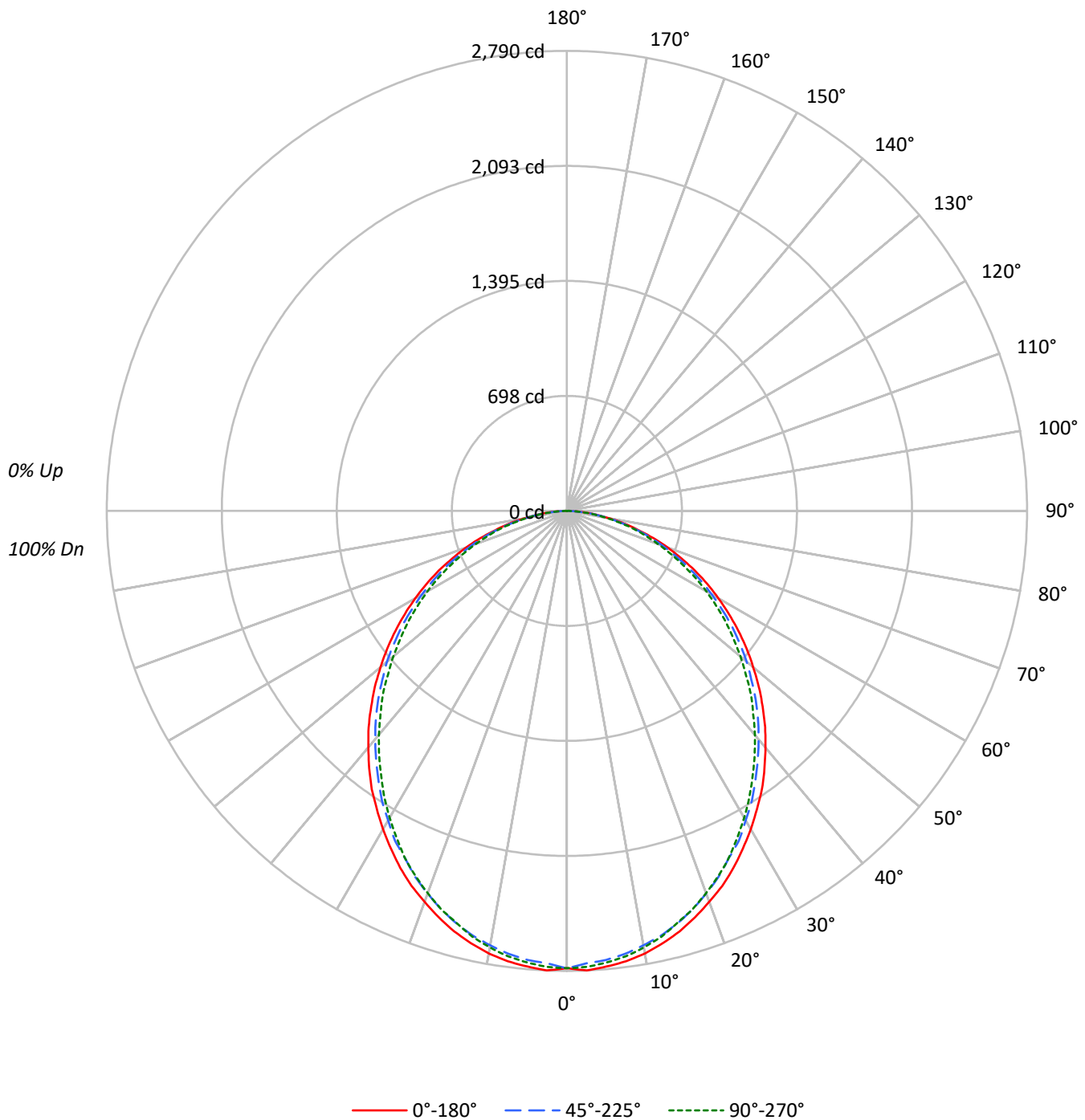
Lumens per Lamp: N/A
Luminaire Lumens: 7056.8 lumens
Efficiency: N/A
Efficacy: 77.9 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 3.92' x L: 3.92' x H: 0')
CIE Type: Direct

Input Watts (W): 90.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.983
Total Harmonic Distortion (THDi): 0.073
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	109	104	100	96	106	102	98	95	98	95	92		94	91	89		90
2	99	91	85	79	97	89	83	78	86	81	76		83	78	74		80
3	91	80	72	66	88	79	71	65	76	69	64		73	68	63		71
4	83	71	63	56	81	70	62	56	68	61	55		65	59	54		63
5	77	64	55	49	75	63	55	48	61	53	48		59	52	47		57
6	71	58	49	43	69	57	48	42	55	48	42		53	47	42		52
7	66	52	44	38	64	52	43	38	50	43	37		49	42	37		47
8	61	48	40	34	60	47	39	34	46	39	33		45	38	33		44
9	57	44	36	30	56	43	36	30	42	35	30		41	35	30		40
10	54	41	33	28	53	40	33	28	39	32	27		38	32	27		37

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1946	1946	1946
5°	1954	1926	1937
10°	1942	1906	1915
15°	1918	1881	1879
20°	1884	1844	1842
25°	1850	1799	1799
30°	1807	1757	1742
35°	1766	1707	1681
40°	1715	1656	1625
45°	1665	1606	1567
50°	1610	1555	1499
55°	1553	1494	1439
60°	1490	1422	1370
65°	1422	1351	1289
70°	1335	1264	1204
75°	1215	1164	1135
80°	1078	1045	992
85°	879	838	752

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 1665 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	261.0	3.7
10°-20°	734.5	10.4
20°-30°	1079.4	15.3
30°-40°	1253.7	17.8
40°-50°	1252.1	17.7
50°-60°	1091.8	15.5
60°-70°	807.1	11.4
70°-80°	456.6	6.5
80°-90°	120.5	1.7
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°	2074.9	29.4
0°-40°	3328.6	47.2
0°-60°	5672.5	80.4
0°-90°	7056.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7056.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2774	2774	2774	2774	2774	
5°	2774	2763	2734	2755	2750	263
15°	2640	2624	2590	2600	2587	744
25°	2390	2368	2323	2328	2323	1100
35°	2062	2035	1992	1976	1963	1287
45°	1678	1659	1619	1590	1579	1295
55°	1270	1254	1222	1190	1176	1135
65°	856	840	814	790	776	847
75°	448	443	429	413	419	478
85°	109	107	104	96	93	128
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2773.5	2773.5	2773.5	2773.5	2773.5
2.5°	2789.7	2776.4	2747.0	2773.5	2768.4
5°	2773.5	2763.1	2733.7	2754.9	2749.7
7.5°	2754.9	2739.1	2709.6	2731.1	2725.7
10°	2725.7	2707.1	2675.1	2696.3	2688.4
12.5°	2685.5	2669.7	2637.8	2651.0	2645.7
15°	2640.3	2624.5	2589.6	2600.4	2587.1
17.5°	2584.2	2568.4	2533.6	2546.9	2533.6
20°	2522.8	2507.0	2469.6	2477.5	2467.1
22.5°	2461.7	2437.7	2402.8	2402.8	2397.5
25°	2389.5	2368.3	2323.1	2328.2	2323.1
27.5°	2309.5	2290.8	2256.3	2248.4	2235.1
30°	2229.7	2208.2	2168.3	2160.3	2149.6
32.5°	2144.3	2128.4	2085.7	2069.6	2058.8
35°	2061.7	2035.0	1992.3	1976.2	1962.9
37.5°	1968.3	1944.2	1901.4	1882.8	1869.5
40°	1872.3	1850.8	1808.1	1784.3	1773.6
42.5°	1778.9	1757.4	1715.0	1688.1	1672.3
45°	1677.6	1659.0	1618.8	1589.6	1578.9
47.5°	1578.9	1560.2	1517.5	1488.1	1472.2
50°	1474.8	1461.5	1424.1	1386.8	1373.5
52.5°	1373.5	1354.8	1320.3	1290.9	1272.2
55°	1269.7	1253.5	1221.5	1189.6	1176.3
57.5°	1165.5	1152.2	1117.4	1085.4	1074.7
60°	1061.4	1050.9	1013.5	984.1	976.2
62.5°	960.1	941.4	914.8	888.2	877.5
65°	856.2	840.1	813.5	789.5	776.2
67.5°	749.5	736.0	712.2	693.6	682.8
70°	650.8	640.0	616.0	597.3	586.9
72.5°	549.5	538.7	525.4	506.8	498.9
75°	448.0	442.8	429.3	413.4	418.8
77.5°	357.4	346.7	341.3	333.4	325.4
80°	266.8	264.0	258.6	250.7	245.4
82.5°	181.4	181.4	178.8	168.1	168.1
85°	109.2	106.7	104.1	95.9	93.4
87.5°	48.1	42.7	37.4	29.5	26.6
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	13.60	15.21	13.96	15.52	15.83	13.15	14.76	13.52	15.08	15.39
	3H	15.35	16.80	15.72	17.13	17.49	14.85	16.31	15.23	16.64	17.00
	4H	15.99	17.36	16.39	17.71	18.09	15.50	16.87	15.90	17.21	17.59
	6H	16.46	17.73	16.87	18.09	18.49	15.96	17.23	16.37	17.59	17.98
	8H	16.60	17.82	17.03	18.20	18.60	16.10	17.31	16.53	17.70	18.10
	12H	16.69	17.85	17.12	18.24	18.67	16.18	17.34	16.61	17.72	18.15
4H	2H	14.16	15.53	14.55	15.87	16.25	13.80	15.17	14.20	15.52	15.90
	3H	16.13	17.28	16.54	17.68	18.08	15.72	16.87	16.13	17.27	17.67
	4H	16.91	17.94	17.34	18.36	18.79	16.48	17.52	16.92	17.93	18.37
	6H	17.50	18.41	17.96	18.85	19.31	17.07	17.98	17.53	18.42	18.87
	8H	17.69	18.54	18.15	18.98	19.45	17.26	18.10	17.72	18.55	19.01
	12H	17.83	18.59	18.31	19.06	19.53	17.37	18.13	17.85	18.61	19.08
8H	4H	17.18	18.03	17.64	18.47	18.94	16.81	17.65	17.27	18.10	18.56
	6H	17.90	18.60	18.39	19.09	19.56	17.51	18.22	18.01	18.71	19.18
	8H	18.15	18.79	18.66	19.29	19.78	17.76	18.39	18.27	18.90	19.39
	12H	18.35	18.91	18.86	19.40	19.96	17.94	18.50	18.45	18.99	19.55
12H	4H	17.21	17.97	17.69	18.44	18.91	16.84	17.60	17.32	18.08	18.55
	6H	17.94	18.57	18.45	19.08	19.57	17.57	18.20	18.08	18.71	19.20
	8H	18.25	18.81	18.76	19.30	19.86	17.88	18.43	18.38	18.93	19.49