

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: P931117

Luminaire Tested: DFN2DS-SQ4F0-080DS950-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P931117
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-SQ4F0-080DS950-FLL
Description: 4 foot, Square Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

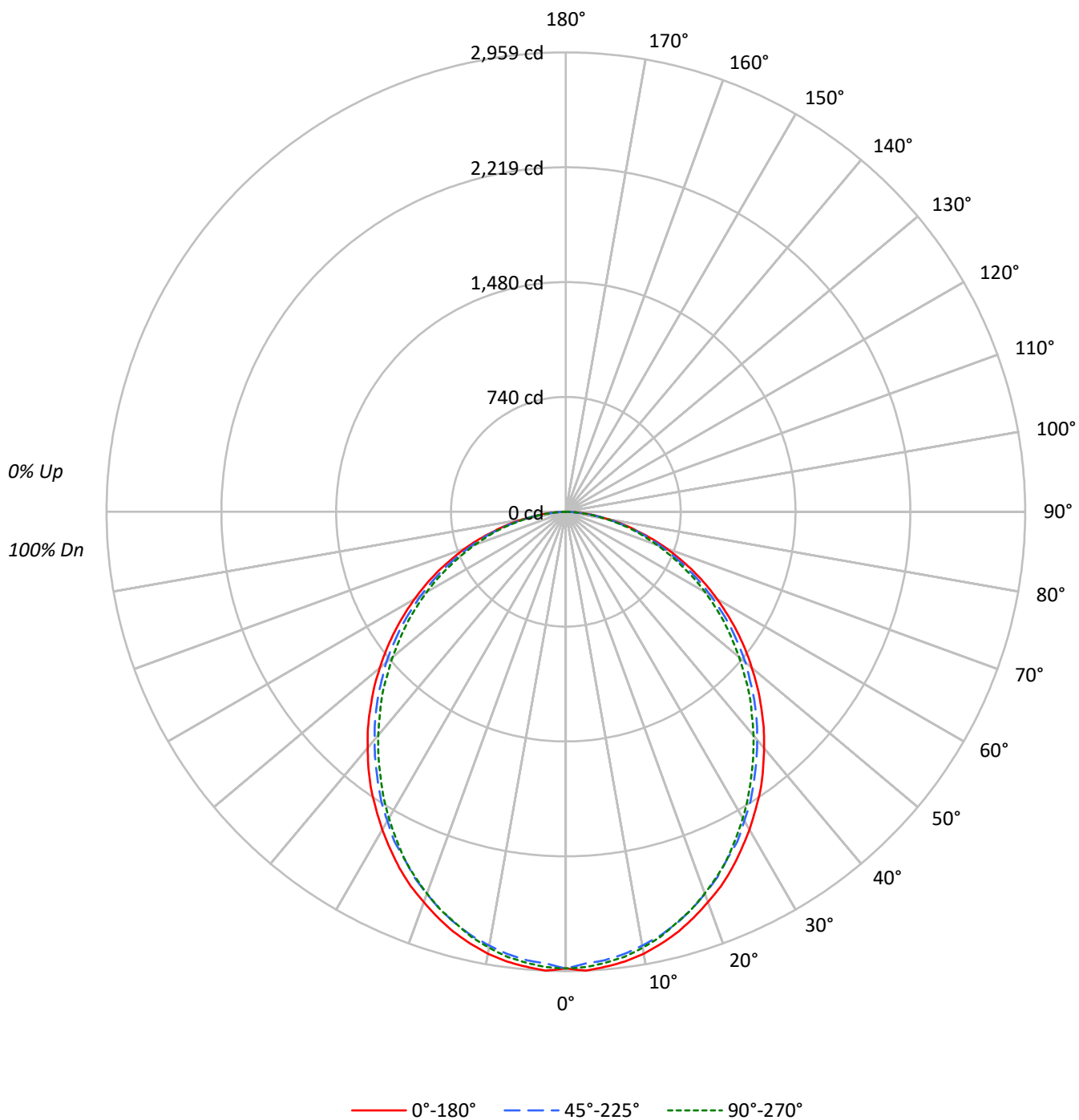
Lumens per Lamp: N/A
Luminaire Lumens: 7484.4 lumens
Efficiency: N/A
Efficacy: 94.4 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 3.92' x L: 3.92' x H: 0')
CIE Type: Direct

Input Watts (W): 79.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9954
Total Harmonic Distortion (THDi): 0.076
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°	2064	2064	2064
5°	2072	2042	2054
10°	2060	2022	2032
15°	2034	1995	1993
20°	1998	1956	1954
25°	1962	1908	1908
30°	1916	1863	1847
35°	1873	1810	1783
40°	1819	1757	1723
45°	1766	1704	1662
50°	1708	1649	1590
55°	1647	1585	1526
60°	1580	1508	1453
65°	1508	1433	1367
70°	1416	1340	1277
75°	1288	1234	1204
80°	1144	1108	1051
85°	933	890	797

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
Vertical Angle: 45°
Luminance: 1766 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	276.9	3.7
10°-20°	779.0	10.4
20°-30°	1144.8	15.3
30°-40°	1329.6	17.8
40°-50°	1328.0	17.7
50°-60°	1158.0	15.5
60°-70°	856.0	11.4
70°-80°	484.3	6.5
80°-90°	127.8	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°	2200.7	29.4
0°-40°	3530.3	47.2
0°-60°	6016.3	80.4
0°-90°	7484.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7484.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2942	2942	2942	2942	2942	
5°	2942	2930	2899	2922	2916	279
15°	2800	2784	2746	2758	2744	789
25°	2534	2512	2464	2469	2464	1166
35°	2186	2158	2113	2096	2082	1365
45°	1779	1760	1717	1686	1675	1373
55°	1346	1329	1296	1262	1248	1204
65°	908	891	863	837	823	898
75°	475	470	455	438	444	507
85°	116	113	110	102	99	136
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2941.6	2941.6	2941.6	2941.6	2941.6
2.5°	2958.7	2944.6	2913.4	2941.6	2936.2
5°	2941.6	2930.5	2899.4	2921.8	2916.5
7.5°	2921.8	2905.0	2873.8	2896.6	2890.9
10°	2890.9	2871.1	2837.2	2859.7	2851.3
12.5°	2848.3	2831.5	2797.6	2811.7	2806.0
15°	2800.3	2783.5	2746.5	2758.0	2743.9
17.5°	2740.9	2724.1	2687.1	2701.3	2687.1
20°	2675.8	2658.9	2619.4	2627.8	2616.6
22.5°	2610.9	2585.4	2548.5	2548.5	2542.8
25°	2534.4	2511.9	2463.9	2469.3	2463.9
27.5°	2449.4	2429.7	2393.0	2384.6	2370.5
30°	2364.9	2342.0	2299.8	2291.3	2279.9
32.5°	2274.2	2257.4	2212.1	2195.0	2183.6
35°	2186.5	2158.4	2113.0	2095.9	2081.8
37.5°	2087.5	2062.0	2016.7	1996.9	1982.8
40°	1985.8	1963.0	1917.7	1892.5	1881.0
42.5°	1886.8	1863.9	1818.9	1790.4	1773.7
45°	1779.3	1759.5	1716.9	1686.0	1674.6
47.5°	1674.6	1654.8	1609.4	1578.2	1561.4
50°	1564.2	1550.1	1510.4	1470.8	1456.7
52.5°	1456.7	1436.9	1400.3	1369.1	1349.3
55°	1346.5	1329.4	1295.6	1261.7	1247.5
57.5°	1236.2	1222.1	1185.1	1151.2	1139.8
60°	1125.7	1114.6	1074.9	1043.8	1035.3
62.5°	1018.2	998.5	970.2	942.1	930.6
65°	908.1	891.0	862.8	837.3	823.2
67.5°	794.9	780.6	755.3	735.6	724.2
70°	690.2	678.8	653.4	633.5	622.4
72.5°	582.8	571.4	557.3	537.5	529.1
75°	475.1	469.7	455.3	438.5	444.2
77.5°	379.0	367.6	361.9	353.5	345.1
80°	283.0	280.0	274.3	265.9	260.2
82.5°	192.4	192.4	189.7	178.2	178.2
85°	115.9	113.1	110.5	101.8	99.0
87.5°	51.0	45.4	39.6	31.2	28.3
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	13.80	15.41	14.17	15.73	16.04	13.36	14.97	13.72	15.28	15.60
	3H	15.55	17.01	15.93	17.33	17.69	15.06	16.51	15.44	16.84	17.20
	4H	16.20	17.57	16.60	17.91	18.29	15.70	17.07	16.10	17.42	17.79
	6H	16.67	17.93	17.08	18.30	18.69	16.16	17.43	16.58	17.80	18.19
	8H	16.81	18.02	17.23	18.41	18.81	16.31	17.52	16.73	17.91	18.30
	12H	16.90	18.06	17.33	18.44	18.87	16.39	17.55	16.82	17.93	18.36
4H	2H	14.36	15.73	14.76	16.08	16.45	14.01	15.38	14.41	15.72	16.10
	3H	16.34	17.48	16.75	17.88	18.28	15.93	17.08	16.34	17.47	17.87
	4H	17.11	18.15	17.54	18.56	19.00	16.69	17.72	17.12	18.14	18.57
	6H	17.71	18.61	18.16	19.05	19.51	17.28	18.18	17.73	18.62	19.08
	8H	17.90	18.74	18.36	19.19	19.65	17.46	18.31	17.92	18.75	19.21
	12H	18.03	18.79	18.51	19.27	19.74	17.58	18.34	18.06	18.81	19.28
8H	4H	17.39	18.23	17.85	18.67	19.14	17.01	17.86	17.47	18.30	18.77
	6H	18.10	18.80	18.59	19.29	19.77	17.72	18.42	18.21	18.91	19.39
	8H	18.36	18.99	18.87	19.50	19.98	17.97	18.60	18.48	19.11	19.59
	12H	18.56	19.12	19.07	19.61	20.17	18.15	18.70	18.65	19.19	19.76
12H	4H	17.41	18.17	17.89	18.65	19.12	17.05	17.81	17.53	18.28	18.75
	6H	18.15	18.78	18.66	19.28	19.77	17.78	18.41	18.29	18.92	19.40
	8H	18.46	19.02	18.97	19.51	20.07	18.08	18.64	18.59	19.13	19.69