

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: P931505

Luminaire Tested: DFN2DS-TR4F0-070DS927-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P931505
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-TR4F0-070DS927-FLL
Description: 4 foot, Triangle Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

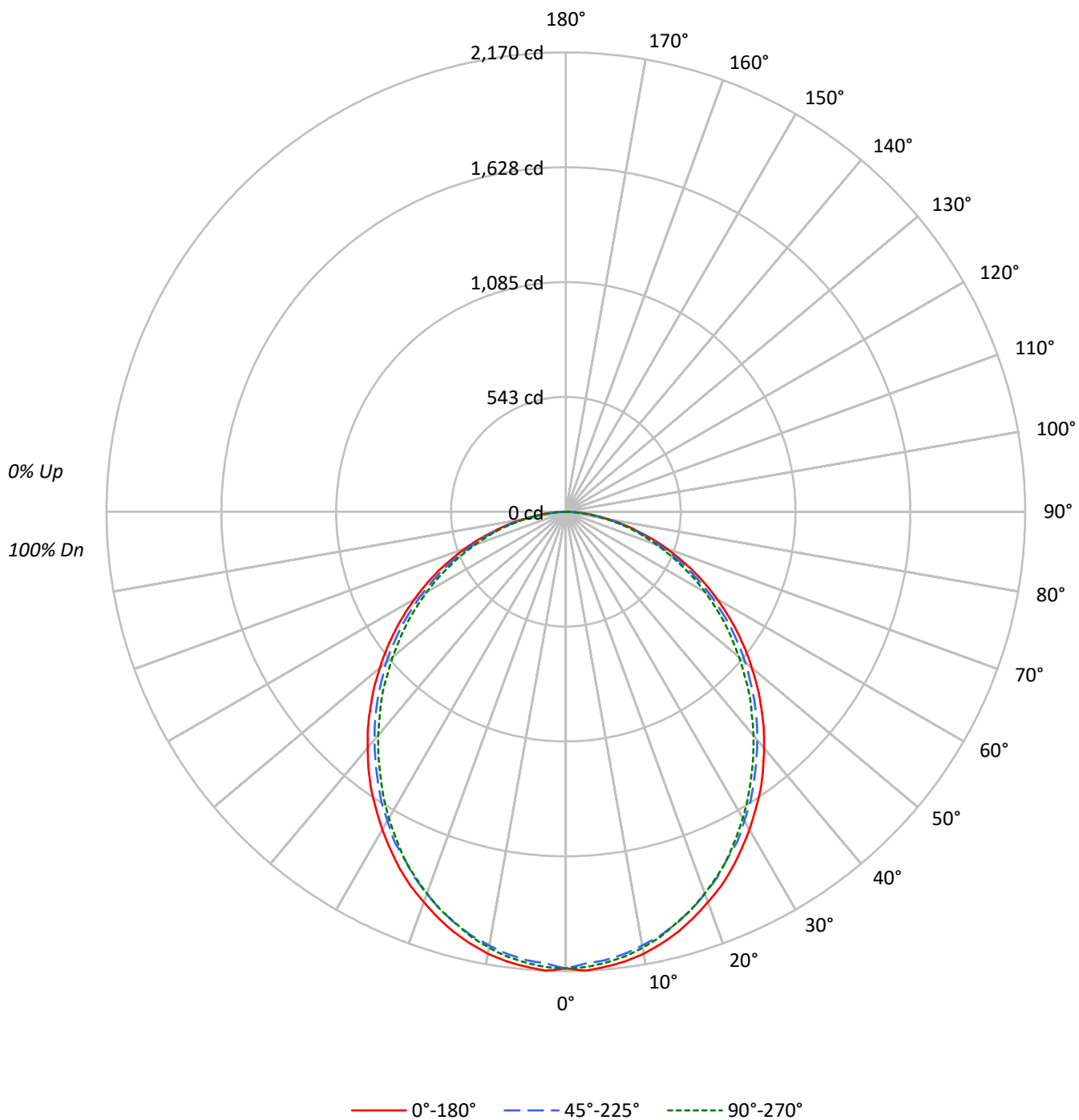
Lumens per Lamp: N/A
Luminaire Lumens: 5488.6 lumens
Efficiency: N/A
Efficacy: 76.4 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 3.96' x L: 3.43' x H: 0')
CIE Type: Direct

Input Watts (W): 71.8
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: P931505

CATALOG NUMBER: DFN2DS-TR4F0-070DS927-FLL

Luminous Intensity Polar Plot



TEST NUMBER: P931505

CATALOG NUMBER: DFN2DS-TR4F0-070DS927-FLL

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°	1714	1714	1714
5°	1720	1696	1706
10°	1710	1678	1687
15°	1689	1657	1655
20°	1659	1624	1622
25°	1629	1584	1584
30°	1591	1547	1534
35°	1555	1503	1481
40°	1510	1458	1431
45°	1466	1414	1380
50°	1418	1369	1320
55°	1368	1316	1267
60°	1312	1253	1206
65°	1252	1189	1135
70°	1176	1113	1060
75°	1069	1025	1000
80°	949	920	873
85°	775	738	662

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 1466 cd/sqm

TEST NUMBER: P931505

CATALOG NUMBER: DFN2DS-TR4F0-070DS927-FLL

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	203.0	3.7
10°-20°	571.3	10.4
20°-30°	839.5	15.3
30°-40°	975.1	17.8
40°-50°	973.8	17.7
50°-60°	849.2	15.5
60°-70°	627.7	11.4
70°-80°	355.2	6.5
80°-90°	93.8	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°	1613.8	29.4
0°-40°	2588.9	47.2
0°-60°	4411.9	80.4
0°-90°	5488.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5488.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2157	2157	2157	2157	2157	
5°	2157	2149	2126	2143	2139	205
15°	2054	2041	2014	2022	2012	578
25°	1859	1842	1807	1811	1807	855
35°	1604	1583	1550	1537	1527	1001
45°	1305	1290	1259	1236	1228	1007
55°	988	975	950	925	915	883
65°	666	653	633	614	604	658
75°	348	344	334	322	326	372
85°	85	83	81	75	73	100
90°	0	0	0	0	0	

TEST NUMBER: P931505

CATALOG NUMBER: DFN2DS-TR4F0-070DS927-FLL

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2157.2	2157.2	2157.2	2157.2	2157.2
2.5°	2169.8	2159.4	2136.5	2157.2	2153.2
5°	2157.2	2149.1	2126.2	2142.7	2138.7
7.5°	2142.7	2130.3	2107.4	2124.2	2120.0
10°	2120.0	2105.5	2080.6	2097.1	2091.0
12.5°	2088.7	2076.5	2051.6	2061.9	2057.7
15°	2053.6	2041.2	2014.1	2022.5	2012.2
17.5°	2009.9	1997.7	1970.6	1981.0	1970.6
20°	1962.2	1949.9	1920.8	1927.0	1918.9
22.5°	1914.7	1896.0	1868.9	1868.9	1864.7
25°	1858.6	1842.0	1806.9	1810.8	1806.9
27.5°	1796.3	1781.8	1754.9	1748.7	1738.4
30°	1734.2	1717.5	1686.5	1680.3	1671.9
32.5°	1667.7	1655.4	1622.2	1609.7	1601.3
35°	1603.5	1582.8	1549.5	1537.0	1526.7
37.5°	1530.9	1512.2	1478.9	1464.4	1454.0
40°	1456.3	1439.5	1406.3	1387.8	1379.4
42.5°	1383.6	1366.9	1333.9	1313.0	1300.6
45°	1304.8	1290.3	1259.0	1236.4	1228.0
47.5°	1228.0	1213.5	1180.2	1157.3	1145.1
50°	1147.1	1136.7	1107.6	1078.6	1068.2
52.5°	1068.2	1053.8	1026.9	1004.0	989.4
55°	987.5	975.0	950.1	925.2	914.8
57.5°	906.5	896.1	869.1	844.2	835.9
60°	825.5	817.3	788.4	765.5	759.3
62.5°	746.7	732.2	711.5	690.9	682.5
65°	666.0	653.4	632.7	614.0	603.7
67.5°	583.0	572.5	553.9	539.4	531.0
70°	506.2	497.9	479.1	464.6	456.4
72.5°	427.4	419.0	408.7	394.2	388.0
75°	348.4	344.4	333.8	321.6	325.7
77.5°	278.0	269.6	265.4	259.2	253.1
80°	207.5	205.4	201.2	195.0	190.8
82.5°	141.1	141.1	139.1	130.8	130.8
85°	85.0	83.0	81.0	74.6	72.6
87.5°	37.4	33.3	29.1	22.9	20.7
90°	0.0	0.0	0.0	0.0	0.0

TEST NUMBER: P931505

CATALOG NUMBER: DFN2DS-TR4F0-070DS927-FLL

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	13.15	14.76	13.52	15.08	15.39	12.71	14.32	13.07	14.63	14.95
	3H	14.90	16.36	15.28	16.69	17.05	14.41	15.87	14.79	16.19	16.55
	4H	15.55	16.92	15.95	17.27	17.64	15.06	16.42	15.45	16.77	17.15
	6H	16.02	17.29	16.43	17.65	18.04	15.52	16.79	15.93	17.15	17.54
	8H	16.16	17.37	16.59	17.76	18.16	15.66	16.87	16.08	17.26	17.66
	12H	16.25	17.41	16.68	17.79	18.22	15.74	16.90	16.17	17.28	17.71
4H	2H	13.71	15.08	14.11	15.43	15.81	13.36	14.73	13.76	15.08	15.45
	3H	15.69	16.84	16.10	17.23	17.63	15.28	16.43	15.69	16.83	17.23
	4H	16.47	17.50	16.90	17.92	18.35	16.04	17.08	16.47	17.49	17.93
	6H	17.06	17.97	17.52	18.41	18.86	16.63	17.54	17.08	17.98	18.43
	8H	17.25	18.10	17.71	18.54	19.01	16.81	17.66	17.27	18.10	18.57
	12H	17.38	18.14	17.86	18.62	19.09	16.93	17.69	17.41	18.17	18.64
8H	4H	16.74	17.59	17.20	18.03	18.49	16.37	17.21	16.83	17.65	18.12
	6H	17.45	18.16	17.95	18.65	19.12	17.07	17.78	17.57	18.26	18.74
	8H	17.71	18.34	18.22	18.85	19.34	17.32	17.95	17.83	18.46	18.95
	12H	17.91	18.47	18.42	18.96	19.52	17.50	18.06	18.01	18.55	19.11
12H	4H	16.77	17.53	17.25	18.00	18.47	16.40	17.16	16.88	17.64	18.11
	6H	17.50	18.13	18.01	18.64	19.12	17.13	17.76	17.64	18.27	18.76
	8H	17.81	18.37	18.32	18.86	19.42	17.44	17.99	17.94	18.48	19.04