

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: P930029

Luminaire Tested: DFN2DS-4P4F0-080DS927-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930029
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-4P4F0-080DS927-FLL
Description: 4 foot, 90deg - 4way Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

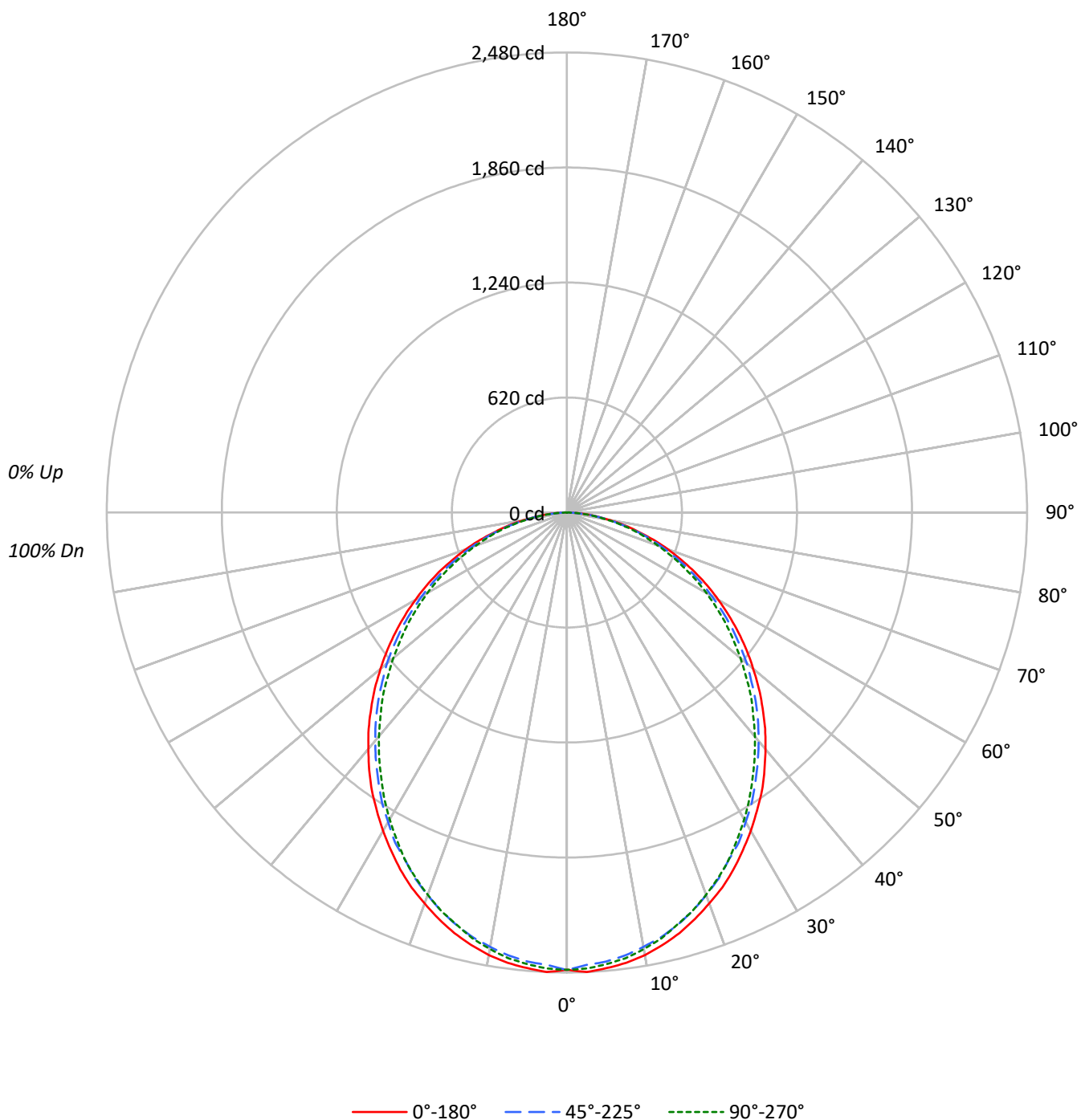
Lumens per Lamp: N/A
Luminaire Lumens: 6272.6 lumens
Efficiency: N/A
Efficacy: 72.7 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 4.07' x L: 4.07' x H: 0')
CIE Type: Direct

Input Watts (W): 86.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9971
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: P930029

CATALOG NUMBER: DFN2DS-4P4F0-080DS927-FLL

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°	1599	1599	1599
5°	1605	1582	1592
10°	1596	1566	1574
15°	1576	1546	1545
20°	1548	1516	1514
25°	1520	1478	1478
30°	1485	1444	1431
35°	1451	1402	1382
40°	1409	1361	1335
45°	1368	1320	1288
50°	1323	1278	1232
55°	1276	1228	1183
60°	1224	1169	1126
65°	1168	1110	1059
70°	1097	1039	989
75°	998	956	933
80°	886	859	814
85°	723	689	618

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 1368 cd/sqm

TEST NUMBER: P930029

CATALOG NUMBER: DFN2DS-4P4F0-080DS927-FLL

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	232.0	3.7
10°-20°	652.9	10.4
20°-30°	959.5	15.3
30°-40°	1114.4	17.8
40°-50°	1113.0	17.7
50°-60°	970.5	15.5
60°-70°	717.4	11.4
70°-80°	405.9	6.5
80°-90°	107.1	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°	1844.4	29.4
0°-40°	2958.8	47.2
0°-60°	5042.2	80.4
0°-90°	6272.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6272.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2465	2465	2465	2465	2465	
5°	2465	2456	2430	2449	2444	234
15°	2347	2333	2302	2312	2300	661
25°	2124	2105	2065	2070	2065	977
35°	1832	1809	1771	1757	1745	1144
45°	1491	1475	1439	1413	1404	1151
55°	1128	1114	1086	1057	1046	1009
65°	761	747	723	702	690	752
75°	398	394	382	368	372	425
85°	97	95	93	85	83	114
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2465.3	2465.3	2465.3	2465.3	2465.3
2.5°	2479.7	2467.9	2441.7	2465.3	2460.8
5°	2465.3	2456.1	2429.9	2448.8	2444.3
7.5°	2448.8	2434.7	2408.6	2427.6	2422.9
10°	2422.9	2406.3	2377.8	2396.7	2389.7
12.5°	2387.2	2373.1	2344.6	2356.4	2351.7
15°	2346.9	2332.8	2301.9	2311.5	2299.7
17.5°	2297.1	2283.0	2252.1	2263.9	2252.1
20°	2242.5	2228.5	2195.3	2202.3	2193.0
22.5°	2188.2	2166.8	2135.9	2135.9	2131.1
25°	2124.1	2105.2	2065.0	2069.5	2065.0
27.5°	2052.9	2036.3	2005.6	1998.5	1986.7
30°	1982.0	1962.8	1927.4	1920.4	1910.8
32.5°	1906.0	1891.9	1853.9	1839.6	1830.1
35°	1832.5	1808.9	1770.9	1756.6	1744.8
37.5°	1749.5	1728.1	1690.2	1673.6	1661.8
40°	1664.3	1645.1	1607.2	1586.1	1576.5
42.5°	1581.3	1562.1	1524.4	1500.5	1486.5
45°	1491.3	1474.6	1438.9	1413.0	1403.5
47.5°	1403.5	1386.9	1348.9	1322.7	1308.6
50°	1310.9	1299.1	1265.9	1232.7	1220.9
52.5°	1220.9	1204.2	1173.6	1147.4	1130.8
55°	1128.5	1114.2	1085.8	1057.4	1045.5
57.5°	1036.0	1024.2	993.2	964.8	955.2
60°	943.4	934.2	900.9	874.8	867.7
62.5°	853.4	836.8	813.1	789.5	780.0
65°	761.1	746.8	723.1	701.7	689.9
67.5°	666.2	654.2	633.0	616.5	606.9
70°	578.5	568.9	547.6	531.0	521.6
72.5°	488.4	478.9	467.0	450.5	443.4
75°	398.1	393.6	381.6	367.5	372.2
77.5°	317.7	308.1	303.3	296.3	289.2
80°	237.2	234.7	229.9	222.9	218.0
82.5°	161.3	161.3	159.0	149.4	149.4
85°	97.1	94.8	92.6	85.3	83.0
87.5°	42.8	38.0	33.2	26.1	23.7
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	12.91	14.53	13.28	14.84	15.15	12.47	14.08	12.83	14.39	14.71
	3H	14.66	16.12	15.04	16.45	16.81	14.17	15.63	14.55	15.95	16.31
	4H	15.31	16.68	15.71	17.03	17.40	14.82	16.18	15.21	16.53	16.91
	6H	15.78	17.05	16.19	17.41	17.80	15.28	16.55	15.69	16.91	17.30
	8H	15.92	17.13	16.35	17.52	17.92	15.42	16.63	15.84	17.02	17.42
	12H	16.01	17.17	16.44	17.55	17.98	15.50	16.66	15.93	17.04	17.47
4H	2H	13.47	14.84	13.87	15.19	15.57	13.12	14.49	13.52	14.84	15.21
	3H	15.45	16.60	15.86	16.99	17.39	15.04	16.19	15.45	16.59	16.99
	4H	16.23	17.26	16.66	17.68	18.11	15.80	16.84	16.23	17.25	17.69
	6H	16.82	17.73	17.28	18.17	18.62	16.39	17.30	16.84	17.74	18.19
	8H	17.01	17.86	17.47	18.30	18.77	16.57	17.42	17.03	17.86	18.33
	12H	17.14	17.90	17.62	18.38	18.85	16.69	17.45	17.17	17.93	18.40
8H	4H	16.50	17.35	16.96	17.79	18.25	16.13	16.97	16.59	17.41	17.88
	6H	17.21	17.92	17.71	18.41	18.88	16.83	17.54	17.33	18.02	18.50
	8H	17.47	18.10	17.98	18.61	19.10	17.08	17.71	17.59	18.22	18.71
	12H	17.67	18.23	18.18	18.72	19.28	17.26	17.82	17.77	18.31	18.87
12H	4H	16.53	17.29	17.01	17.76	18.23	16.16	16.92	16.64	17.40	17.87
	6H	17.26	17.89	17.77	18.40	18.88	16.89	17.52	17.40	18.03	18.52
	8H	17.57	18.13	18.08	18.62	19.18	17.20	17.75	17.70	18.24	18.80