

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: P929919

Luminaire Tested: DFN2DS-4P3F0-060DS850-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P929919
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-4P3F0-060DS850-FLL
Description: 3 foot, 90deg - 4way Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

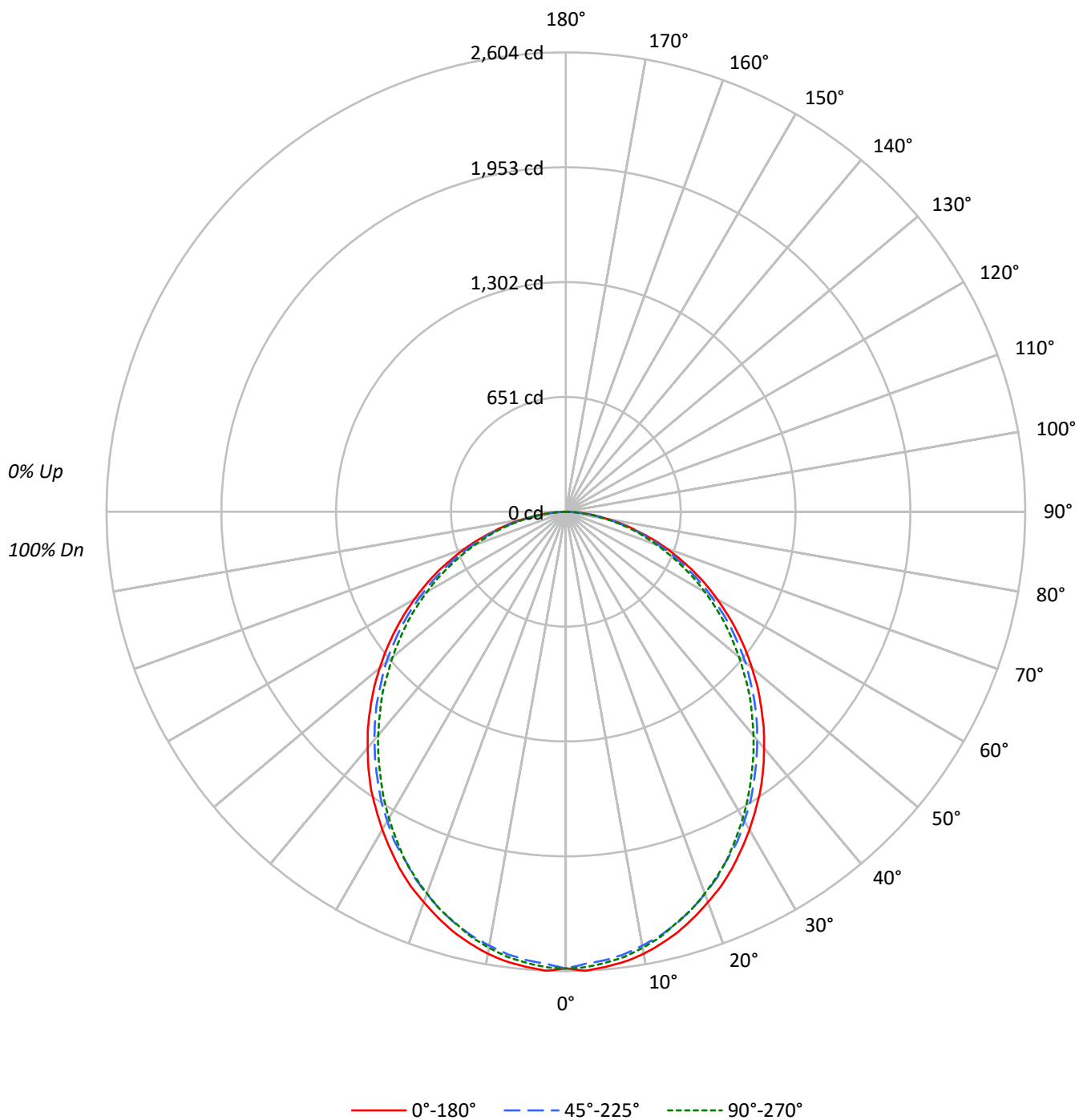
Lumens per Lamp: N/A
Luminaire Lumens: 6587.4 lumens
Efficiency: N/A
Efficacy: 101.3 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 3.07' x L: 3.07' x H: 0')
CIE Type: Direct

Input Watts (W): 65
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9963
Total Harmonic Distortion (THDi): 0.065
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

TEST NUMBER: P929919

CATALOG NUMBER: DFN2DS-4P3F0-060DS850-FLL

Luminous Intensity Polar Plot



TEST NUMBER: P929919

CATALOG NUMBER: DFN2DS-4P3F0-060DS850-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°	2951	2951	2951
5°	2962	2919	2936
10°	2944	2890	2904
15°	2908	2852	2849
20°	2856	2796	2793
25°	2805	2727	2727
30°	2739	2663	2640
35°	2677	2587	2549
40°	2600	2511	2463
45°	2524	2435	2375
50°	2441	2357	2273
55°	2355	2266	2182
60°	2258	2157	2077
65°	2155	2048	1954
70°	2024	1916	1825
75°	1841	1764	1721
80°	1635	1584	1503
85°	1332	1270	1140

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
Vertical Angle: 45°
Luminance: 2524 cd/sqm

TEST NUMBER: P929919

CATALOG NUMBER: DFN2DS-4P3F0-060DS850-FLL

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	243.7	3.7
10°-20°	685.6	10.4
20°-30°	1007.6	15.3
30°-40°	1170.3	17.8
40°-50°	1168.8	17.7
50°-60°	1019.2	15.5
60°-70°	753.4	11.4
70°-80°	426.3	6.5
80°-90°	112.5	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°	1937.0	29.4
0°-40°	3107.2	47.2
0°-60°	5295.3	80.4
0°-90°	6587.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6587.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2589	2589	2589	2589	2589	
5°	2589	2579	2552	2572	2567	246
15°	2465	2450	2417	2428	2415	694
25°	2231	2211	2168	2173	2168	1026
35°	1925	1900	1860	1845	1832	1202
45°	1566	1549	1511	1484	1474	1209
55°	1185	1170	1140	1110	1098	1060
65°	799	784	759	737	724	790
75°	418	413	401	386	391	446
85°	102	100	97	90	87	120
90°	0	0	0	0	0	

TEST NUMBER: P929919

CATALOG NUMBER: DFN2DS-4P3F0-060DS850-FLL

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2589.1	2589.1	2589.1	2589.1	2589.1
2.5°	2604.2	2591.7	2564.2	2589.1	2584.3
5°	2589.1	2579.3	2551.8	2571.7	2566.9
7.5°	2571.7	2556.9	2529.4	2549.5	2544.5
10°	2544.5	2527.1	2497.1	2517.0	2509.6
12.5°	2507.0	2492.1	2462.3	2474.7	2469.7
15°	2464.6	2449.9	2417.4	2427.5	2415.1
17.5°	2412.4	2397.7	2365.2	2377.5	2365.2
20°	2355.1	2340.3	2305.4	2312.8	2303.1
22.5°	2298.1	2275.6	2243.1	2243.1	2238.1
25°	2230.6	2210.9	2168.5	2173.3	2168.5
27.5°	2155.9	2138.5	2106.2	2098.9	2086.5
30°	2081.5	2061.3	2024.1	2016.7	2006.6
32.5°	2001.6	1986.9	1947.0	1931.9	1921.9
35°	1924.6	1899.7	1859.8	1844.7	1832.3
37.5°	1837.4	1814.9	1775.1	1757.5	1745.1
40°	1747.8	1727.7	1687.9	1665.7	1655.6
42.5°	1660.6	1640.5	1601.0	1575.9	1561.0
45°	1566.1	1548.6	1511.1	1484.0	1473.9
47.5°	1473.9	1456.4	1416.6	1389.1	1374.3
50°	1376.7	1364.3	1329.5	1294.5	1282.1
52.5°	1282.1	1264.7	1232.4	1205.0	1187.6
55°	1185.2	1170.1	1140.3	1110.4	1098.0
57.5°	1088.0	1075.6	1043.1	1013.3	1003.2
60°	990.8	981.0	946.2	918.7	911.3
62.5°	896.2	878.8	853.9	829.1	819.1
65°	799.3	784.3	759.4	736.9	724.5
67.5°	699.7	687.0	664.8	647.4	637.3
70°	607.5	597.5	575.0	557.6	547.8
72.5°	512.9	502.9	490.5	473.1	465.7
75°	418.1	413.4	400.7	385.9	390.9
77.5°	333.6	323.6	318.5	311.2	303.8
80°	249.1	246.4	241.4	234.0	229.0
82.5°	169.3	169.3	166.9	156.9	156.9
85°	101.9	99.6	97.1	89.5	87.2
87.5°	44.9	39.9	34.8	27.5	24.8
90°	0.0	0.0	0.0	0.0	0.0

TEST NUMBER: P929919

CATALOG NUMBER: DFN2DS-4P3F0-060DS850-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	15.04	16.65	15.41	16.97	17.28	14.60	16.21	14.96	16.52	16.84
	3H	16.79	18.25	17.17	18.57	18.93	16.30	17.76	16.68	18.08	18.44
	4H	17.44	18.81	17.84	19.15	19.53	16.94	18.31	17.34	18.66	19.04
	6H	17.91	19.18	18.32	19.54	19.93	17.41	18.67	17.82	19.04	19.43
	8H	18.05	19.26	18.48	19.65	20.05	17.55	18.76	17.97	19.15	19.55
	12H	18.14	19.30	18.57	19.68	20.11	17.63	18.79	18.06	19.17	19.60
4H	2H	15.60	16.97	16.00	17.32	17.70	15.25	16.62	15.65	16.97	17.34
	3H	17.58	18.72	17.99	19.12	19.52	17.17	18.32	17.58	18.71	19.11
	4H	18.35	19.39	18.79	19.80	20.24	17.93	18.97	18.36	19.38	19.82
	6H	18.95	19.86	19.40	20.30	20.75	18.52	19.42	18.97	19.86	20.32
	8H	19.14	19.99	19.60	20.43	20.89	18.70	19.55	19.16	19.99	20.46
	12H	19.27	20.03	19.75	20.51	20.98	18.82	19.58	19.30	20.06	20.52
8H	4H	18.63	19.47	19.09	19.92	20.38	18.25	19.10	18.71	19.54	20.01
	6H	19.34	20.04	19.84	20.53	21.01	18.96	19.66	19.45	20.15	20.63
	8H	19.60	20.23	20.11	20.74	21.22	19.21	19.84	19.72	20.35	20.83
	12H	19.80	20.36	20.31	20.85	21.41	19.39	19.95	19.89	20.44	21.00
12H	4H	18.65	19.41	19.13	19.89	20.36	18.29	19.05	18.77	19.52	19.99
	6H	19.39	20.02	19.90	20.53	21.01	19.02	19.65	19.53	20.16	20.64
	8H	19.70	20.26	20.21	20.75	21.31	19.32	19.88	19.83	20.37	20.93