

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: P929830

Luminaire Tested: DFN2DS-4P2F0-040DS850-RLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P929830
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P333882)
Test Lab: INNOVATION CENTER
Issue Date: 11/20/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: DFN2DS-4P2F0-040DS850-RLL
Description: 2 foot, 90deg - 4way Define Geo, with Direct 1in Regressed Frosted Lens
Light Source: -
Ballast/Driver: -

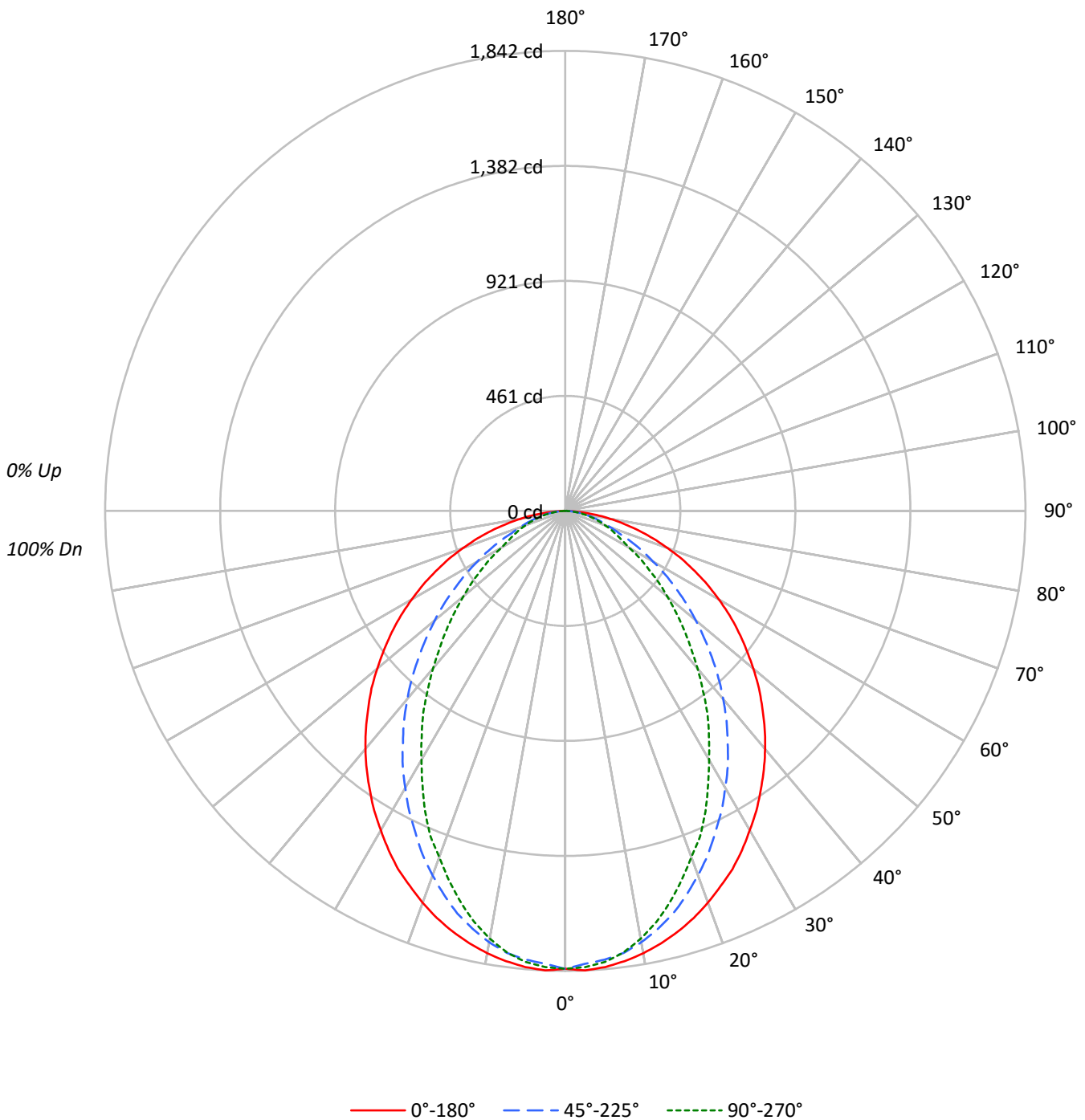
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3770.6 lumens
Efficiency: N/A
Efficacy: 87.5 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 2.07' x L: 2.07' x H: 0')
CIE Type: Direct

Input Watts (W): 43.1
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		0	
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10
RCR																				
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100	100	100
1	110	106	102	98	107	103	100	97	99	96	94	95	93	91	92	90	88	86	86	86
2	101	94	87	82	98	92	86	81	88	83	79	85	81	78	82	79	76	74	74	74
3	93	83	76	70	90	82	75	69	79	73	68	76	71	67	74	69	66	64	64	64
4	86	75	66	60	83	73	66	60	71	64	59	69	63	58	66	62	57	55	55	55
5	79	67	59	53	77	66	58	52	64	57	52	62	56	51	60	55	51	49	49	49
6	74	61	53	47	72	60	52	46	58	51	46	57	50	46	55	50	45	43	43	43
7	68	56	47	42	67	55	47	42	53	46	41	52	46	41	51	45	41	39	39	39
8	64	51	43	38	62	51	43	37	49	42	37	48	42	37	47	41	37	35	35	35
9	60	47	39	34	59	47	39	34	46	39	34	44	38	34	44	38	34	32	32	32
10	56	44	36	31	55	43	36	31	42	36	31	41	35	31	41	35	31	29	29	29

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4591	4591	4591
5°	4608	4533	4558
10°	4573	4459	4421
15°	4520	4327	4202
20°	4448	4138	3930
25°	4373	3924	3667
30°	4270	3703	3329
35°	4169	3464	3033
40°	4068	3216	2690
45°	3948	2938	2379
50°	3826	2656	2075
55°	3701	2354	1782
60°	3556	2035	1479
65°	3392	1711	1346
70°	3195	1409	1238
75°	2953	1284	1157
80°	2607	1146	1054
85°	2048	905	905

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3948 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	171.8	4.6
10°-20°	471.7	12.5
20°-30°	662.3	17.6
30°-40°	721.9	19.1
40°-50°	663.5	17.6
50°-60°	521.1	13.8
60°-70°	339.2	9.0
70°-80°	174.6	4.6
80°-90°	44.6	1.2
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°	1305.8	34.6
0°-40°	2027.7	53.8
0°-60°	3212.2	85.2
0°-90°	3770.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3770.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1833	1833	1833	1833	1833	
5°	1833	1825	1804	1818	1814	174
15°	1744	1726	1669	1638	1621	491
25°	1583	1530	1420	1352	1327	728
35°	1364	1279	1133	1029	992	854
45°	1115	1004	830	712	672	861
55°	848	718	539	440	408	758
65°	572	438	289	232	227	568
75°	305	189	133	121	120	323
85°	71	36	32	32	32	86
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1833.4	1833.4	1833.4	1833.4	1833.4
2.5°	1841.7	1833.4	1815.1	1831.8	1828.4
5°	1833.4	1825.1	1803.5	1818.4	1813.5
7.5°	1818.4	1808.6	1785.4	1791.8	1783.6
10°	1798.6	1786.9	1753.8	1748.7	1738.9
12.5°	1773.7	1758.8	1713.8	1704.0	1685.7
15°	1743.8	1725.5	1669.2	1637.7	1621.1
17.5°	1709.0	1682.4	1612.6	1576.2	1549.6
20°	1669.2	1635.9	1552.9	1511.6	1475.0
22.5°	1626.0	1587.9	1491.5	1435.2	1410.4
25°	1582.9	1529.8	1420.2	1352.3	1327.3
27.5°	1531.5	1475.0	1353.9	1275.9	1237.6
30°	1476.7	1413.5	1280.8	1196.3	1151.5
32.5°	1423.6	1347.2	1211.2	1111.7	1070.1
35°	1364.0	1279.2	1133.3	1028.7	992.1
37.5°	1305.8	1214.5	1060.2	945.6	904.3
40°	1244.4	1144.9	983.9	866.1	823.0
42.5°	1181.3	1075.2	907.6	784.7	743.4
45°	1115.0	1003.8	829.6	711.8	671.9
47.5°	1052.0	934.2	755.0	637.1	600.6
50°	982.2	864.5	681.9	567.4	532.7
52.5°	914.1	789.7	612.3	502.7	471.2
55°	847.8	718.4	539.2	439.7	408.2
57.5°	779.8	647.1	474.5	381.6	355.1
60°	710.1	577.3	406.4	321.9	295.4
62.5°	642.2	509.5	348.3	268.8	255.6
65°	572.5	437.9	288.7	232.3	227.2
67.5°	506.1	371.6	232.3	204.1	199.1
70°	436.4	307.0	192.4	175.9	169.1
72.5°	370.1	247.2	160.9	147.7	144.4
75°	305.2	189.1	132.7	121.1	119.6
77.5°	240.7	134.3	104.6	97.9	94.5
80°	180.8	96.3	79.5	73.1	73.1
82.5°	126.1	64.8	54.8	51.3	51.3
85°	71.3	36.5	31.5	31.5	31.5
87.5°	26.6	13.2	13.2	11.6	11.6
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	16.53	18.05	16.89	18.36	18.68	12.49	14.01	12.85	14.33	14.64
	3H	18.30	19.66	18.67	19.99	20.35	13.76	15.12	14.13	15.45	15.81
	4H	18.96	20.24	19.36	20.59	20.97	14.26	15.54	14.66	15.89	16.27
	6H	19.45	20.63	19.86	21.00	21.39	14.64	15.82	15.05	16.19	16.58
	8H	19.62	20.74	20.04	21.13	21.53	14.76	15.89	15.19	16.28	16.68
	12H	19.72	20.80	20.15	21.18	21.61	14.84	15.92	15.27	16.30	16.73
4H	2H	16.63	17.91	17.03	18.26	18.64	13.19	14.47	13.59	14.81	15.19
	3H	18.57	19.63	18.98	20.03	20.43	14.63	15.69	15.04	16.09	16.49
	4H	19.32	20.27	19.75	20.69	21.13	15.23	16.19	15.66	16.60	17.04
	6H	19.91	20.74	20.37	21.18	21.64	15.72	16.55	16.17	16.99	17.45
	8H	20.12	20.90	20.59	21.34	21.81	15.88	16.66	16.34	17.10	17.57
	12H	20.28	20.97	20.76	21.45	21.92	16.00	16.69	16.48	17.17	17.64
8H	4H	19.34	20.12	19.80	20.56	21.03	15.58	16.36	16.05	16.80	17.27
	6H	19.98	20.62	20.48	21.11	21.59	16.17	16.81	16.67	17.30	17.78
	8H	20.23	20.81	20.74	21.32	21.80	16.39	16.97	16.90	17.48	17.96
	12H	20.43	20.94	20.94	21.44	22.00	16.57	17.08	17.08	17.57	18.13
12H	4H	19.33	20.02	19.81	20.50	20.97	15.63	16.32	16.11	16.80	17.27
	6H	19.96	20.54	20.47	21.05	21.53	16.23	16.81	16.75	17.32	17.81
	8H	20.24	20.75	20.75	21.25	21.81	16.51	17.02	17.01	17.51	18.07