

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: P930460

Luminaire Tested: DFN2DS-PN2F0-040DS850-RLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930460
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-PN2F0-040DS850-RLL
Description: 2 foot, Pentagon Define Geo, with Direct 1in Regressed Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

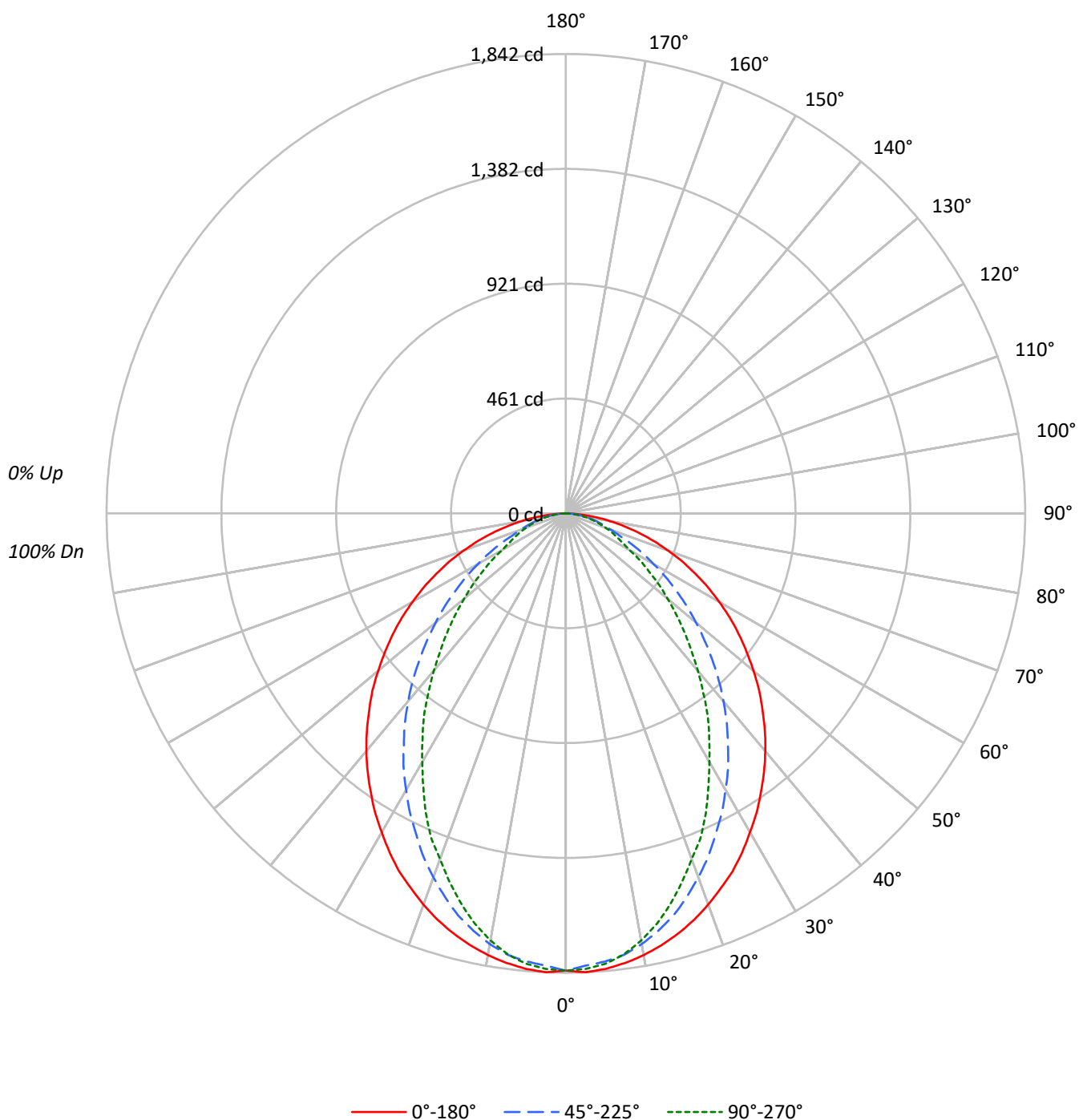
Lumens per Lamp: N/A
Luminaire Lumens: 3770.6 lumens
Efficiency: N/A
Efficacy: 89.4 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 2.29' x L: 2.17' x H: 0')
CIE Type: Direct

Input Watts (W): 42.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9613
Total Harmonic Distortion (THDi): 0.083
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

TEST NUMBER: P930460

CATALOG NUMBER: DFN2DS-PN2F0-040DS850-RLL

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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3971	3971	3971
5°	3986	3921	3943
10°	3956	3857	3824
15°	3910	3743	3635
20°	3847	3579	3400
25°	3783	3394	3172
30°	3693	3203	2880
35°	3606	2996	2623
40°	3518	2782	2327
45°	3415	2541	2058
50°	3310	2298	1795
55°	3201	2036	1541
60°	3076	1760	1280
65°	2934	1480	1164
70°	2764	1218	1071
75°	2554	1110	1001
80°	2255	992	912
85°	1772	783	783

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 3415 cd/sqm

TEST NUMBER: P930460

CATALOG NUMBER: DFN2DS-PN2F0-040DS850-RLL

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	

TEST NUMBER: P930460

CATALOG NUMBER: DFN2DS-PN2F0-040DS850-RLL

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

TEST NUMBER: P930460

CATALOG NUMBER: DFN2DS-PN2F0-040DS850-RLL

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	16.03	17.55	16.39	17.86	18.18	11.99	13.51	12.35	13.82	14.14
	3H	17.79	19.16	18.17	19.48	19.85	13.25	14.62	13.63	14.94	15.31
	4H	18.46	19.74	18.86	20.09	20.47	13.75	15.03	14.15	15.38	15.76
	6H	18.95	20.13	19.36	20.50	20.89	14.13	15.32	14.55	15.68	16.08
	8H	19.11	20.24	19.54	20.63	21.03	14.26	15.39	14.69	15.77	16.18
	12H	19.22	20.29	19.65	20.68	21.10	14.34	15.42	14.77	15.80	16.23
4H	2H	16.13	17.41	16.53	17.76	18.14	12.68	13.96	13.08	14.31	14.69
	3H	18.06	19.13	18.47	19.53	19.93	14.12	15.19	14.54	15.59	15.99
	4H	18.81	19.77	19.25	20.18	20.62	14.72	15.68	15.16	16.10	16.54
	6H	19.40	20.24	19.86	20.68	21.14	15.21	16.04	15.67	16.49	16.95
	8H	19.62	20.40	20.08	20.84	21.31	15.37	16.15	15.84	16.60	17.06
	12H	19.77	20.47	20.25	20.95	21.42	15.49	16.19	15.97	16.66	17.14
8H	4H	18.84	19.61	19.30	20.06	20.53	15.08	15.86	15.54	16.30	16.77
	6H	19.47	20.12	19.97	20.61	21.09	15.67	16.31	16.16	16.80	17.28
	8H	19.72	20.30	20.24	20.81	21.30	15.89	16.46	16.40	16.97	17.46
	12H	19.93	20.44	20.44	20.93	21.50	16.06	16.57	16.57	17.07	17.63
12H	4H	18.82	19.52	19.30	19.99	20.47	15.12	15.82	15.60	16.29	16.77
	6H	19.46	20.03	19.97	20.54	21.03	15.73	16.31	16.24	16.82	17.30
	8H	19.74	20.25	20.25	20.74	21.31	16.00	16.51	16.51	17.00	17.57