

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: P930618

Luminaire Tested: DFN2DS-PN3F0-090DS835-RLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930618
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-PN3F0-090DS835-RLL
Description: 3 foot, Pentagon Define Geo, with Direct 1in Regressed Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

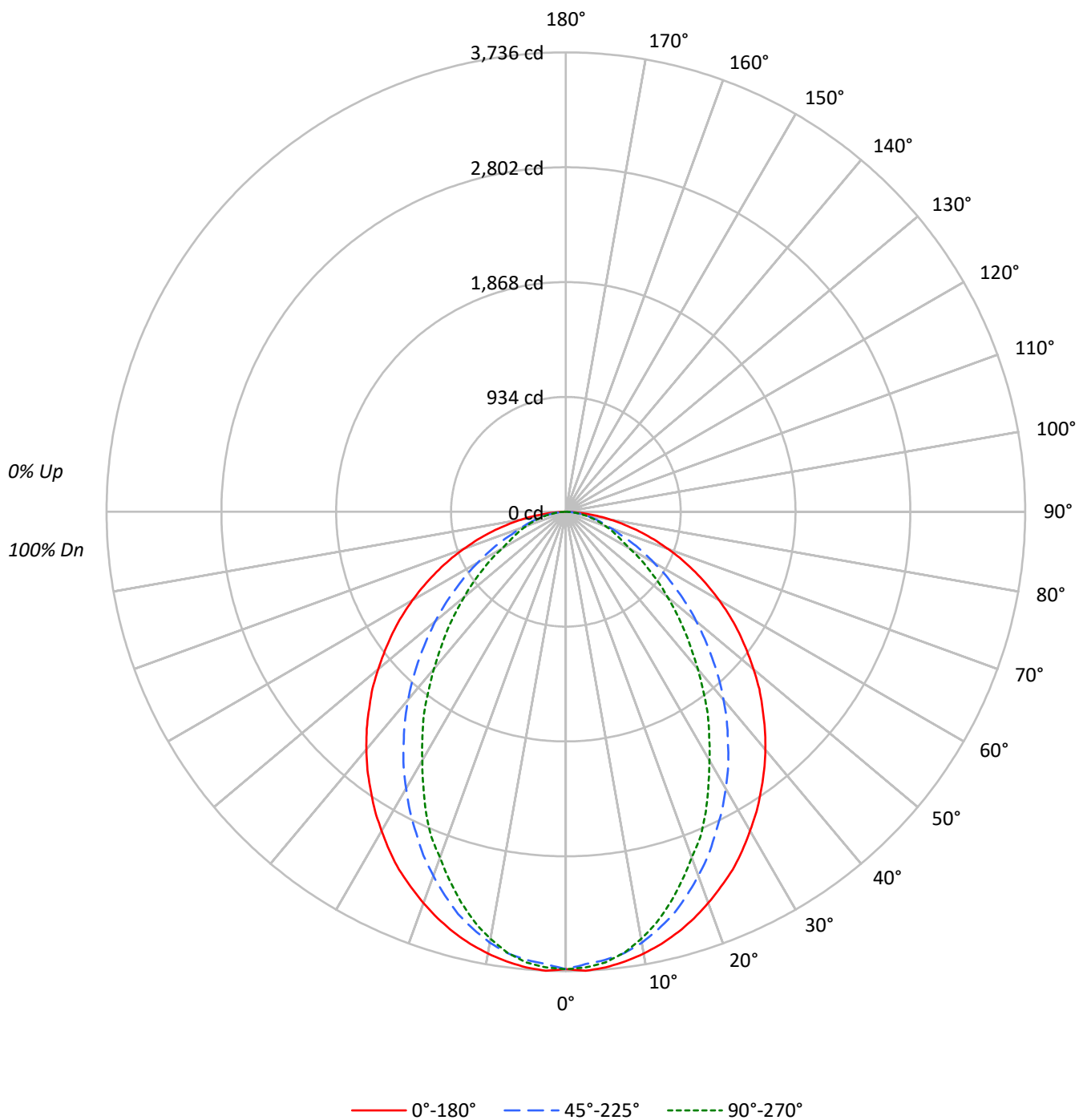
Lumens per Lamp: N/A
Luminaire Lumens: 7650.0 lumens
Efficiency: N/A
Efficacy: 78.7 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 3.11' x L: 2.96' x H: 0')
CIE Type: Direct

Input Watts (W): 97.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9954
Total Harmonic Distortion (THDi): 0.076
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

TEST NUMBER: P930618

CATALOG NUMBER: DFN2DS-PN3F0-090DS835-RLL

Luminous Intensity Polar Plot



TEST NUMBER: P930618

CATALOG NUMBER: DFN2DS-PN3F0-090DS835-RLL

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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4348	4348	4348
5°	4365	4294	4317
10°	4331	4224	4188
15°	4282	4098	3980
20°	4213	3919	3723
25°	4142	3717	3473
30°	4044	3508	3153
35°	3949	3281	2873
40°	3853	3046	2548
45°	3740	2783	2254
50°	3624	2516	1965
55°	3505	2229	1688
60°	3368	1928	1401
65°	3212	1620	1275
70°	3026	1334	1173
75°	2797	1216	1095
80°	2469	1087	998
85°	1939	857	857

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 3740 cd/sqm

TEST NUMBER: P930618

CATALOG NUMBER: DFN2DS-PN3F0-090DS835-RLL

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	348.6	4.6
10°-20°	957.0	12.5
20°-30°	1343.6	17.6
30°-40°	1464.6	19.1
40°-50°	1346.2	17.6
50°-60°	1057.2	13.8
60°-70°	688.1	9.0
70°-80°	354.2	4.6
80°-90°	90.4	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°	2649.2	34.6
0°-40°	4113.9	53.8
0°-60°	6517.2	85.2
0°-90°	7650.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7650.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3720	3720	3720	3720	3720	
5°	3720	3703	3659	3689	3679	353
15°	3538	3501	3386	3322	3289	997
25°	3212	3104	2882	2744	2693	1477
35°	2767	2595	2299	2087	2013	1732
45°	2262	2036	1683	1444	1363	1747
55°	1720	1458	1094	892	828	1537
65°	1161	889	586	471	461	1151
75°	619	384	269	246	242	655
85°	145	74	64	64	64	173
90°	0	0	0	0	0	

TEST NUMBER: P930618

CATALOG NUMBER: DFN2DS-PN3F0-090DS835-RLL

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3719.7	3719.7	3719.7	3719.7	3719.7
2.5°	3736.5	3719.7	3682.5	3716.5	3709.7
5°	3719.7	3702.9	3659.0	3689.3	3679.3
7.5°	3689.3	3669.3	3622.2	3635.4	3618.6
10°	3649.0	3625.4	3558.3	3547.9	3527.9
12.5°	3598.6	3568.3	3477.2	3457.2	3420.0
15°	3537.9	3500.8	3386.5	3322.5	3289.0
17.5°	3467.2	3413.3	3271.8	3197.9	3144.0
20°	3386.5	3319.0	3150.7	3066.8	2992.5
22.5°	3299.0	3221.5	3026.1	2911.8	2861.5
25°	3211.5	3103.6	2881.5	2743.6	2692.9
27.5°	3107.2	2992.5	2746.8	2588.6	2511.1
30°	2996.1	2867.9	2598.6	2427.2	2336.1
32.5°	2888.2	2733.2	2457.5	2255.4	2171.1
35°	2767.2	2595.4	2299.3	2087.2	2012.9
37.5°	2649.3	2464.0	2151.1	1918.6	1834.7
40°	2524.7	2322.9	1996.1	1757.2	1669.7
42.5°	2396.8	2181.5	1841.4	1592.2	1508.2
45°	2262.2	2036.5	1683.2	1443.9	1363.2
47.5°	2134.3	1895.4	1531.8	1292.5	1218.6
50°	1992.9	1753.9	1383.6	1151.1	1080.7
52.5°	1854.7	1602.2	1242.2	1020.0	956.1
55°	1720.0	1457.5	1093.9	892.2	828.2
57.5°	1582.2	1312.9	962.9	774.3	720.4
60°	1440.7	1171.4	824.7	653.2	599.3
62.5°	1302.9	1033.6	706.8	545.4	518.6
65°	1161.4	888.6	585.7	471.4	461.1
67.5°	1026.8	753.9	471.4	413.9	403.9
70°	885.4	622.9	390.4	356.8	343.2
72.5°	750.7	501.4	326.4	299.6	292.9
75°	619.3	383.6	269.3	245.7	242.5
77.5°	488.2	272.5	212.1	198.6	191.8
80°	366.8	195.4	161.4	148.2	148.2
82.5°	255.7	131.4	111.1	104.3	104.3
85°	144.6	73.9	63.9	63.9	63.9
87.5°	53.9	26.8	26.8	23.6	23.6
90°	0.0	0.0	0.0	0.0	0.0

TEST NUMBER: P930618

CATALOG NUMBER: DFN2DS-PN3F0-090DS835-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	16.34	17.86	16.71	18.18	18.49	12.30	13.82	12.67	14.14	14.45
	3H	18.11	19.47	18.48	19.80	20.16	13.57	14.93	13.94	15.26	15.62
	4H	18.77	20.05	19.17	20.40	20.78	14.07	15.35	14.47	15.70	16.08
	6H	19.26	20.44	19.67	20.81	21.20	14.45	15.63	14.86	16.00	16.39
	8H	19.43	20.55	19.85	20.94	21.34	14.57	15.70	15.00	16.09	16.49
	12H	19.53	20.61	19.96	20.99	21.42	14.66	15.73	15.09	16.12	16.54
4H	2H	16.45	17.73	16.85	18.07	18.45	13.00	14.28	13.40	14.63	15.01
	3H	18.38	19.44	18.79	19.84	20.24	14.44	15.50	14.85	15.90	16.30
	4H	19.13	20.08	19.56	20.50	20.94	15.04	16.00	15.47	16.41	16.85
	6H	19.72	20.55	20.18	20.99	21.45	15.53	16.36	15.99	16.80	17.26
	8H	19.93	20.71	20.40	21.16	21.62	15.69	16.47	16.15	16.91	17.38
	12H	20.09	20.78	20.57	21.26	21.73	15.81	16.50	16.29	16.98	17.45
8H	4H	19.15	19.93	19.62	20.37	20.84	15.39	16.17	15.86	16.61	17.08
	6H	19.79	20.43	20.29	20.92	21.40	15.98	16.62	16.48	17.11	17.59
	8H	20.04	20.62	20.55	21.13	21.61	16.20	16.78	16.72	17.29	17.78
	12H	20.24	20.75	20.75	21.25	21.81	16.38	16.89	16.89	17.38	17.95
12H	4H	19.14	19.83	19.62	20.31	20.78	15.44	16.13	15.92	16.61	17.08
	6H	19.77	20.35	20.28	20.86	21.35	16.04	16.62	16.56	17.13	17.62
	8H	20.05	20.56	20.56	21.06	21.62	16.32	16.83	16.83	17.32	17.88