

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: P930520

Luminaire Tested: DFN2DS-PN3F0-030DS935-RLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930520
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-PN3F0-030DS935-RLL
Description: 3 foot, Pentagon Define Geo, with Direct 1in Regressed Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

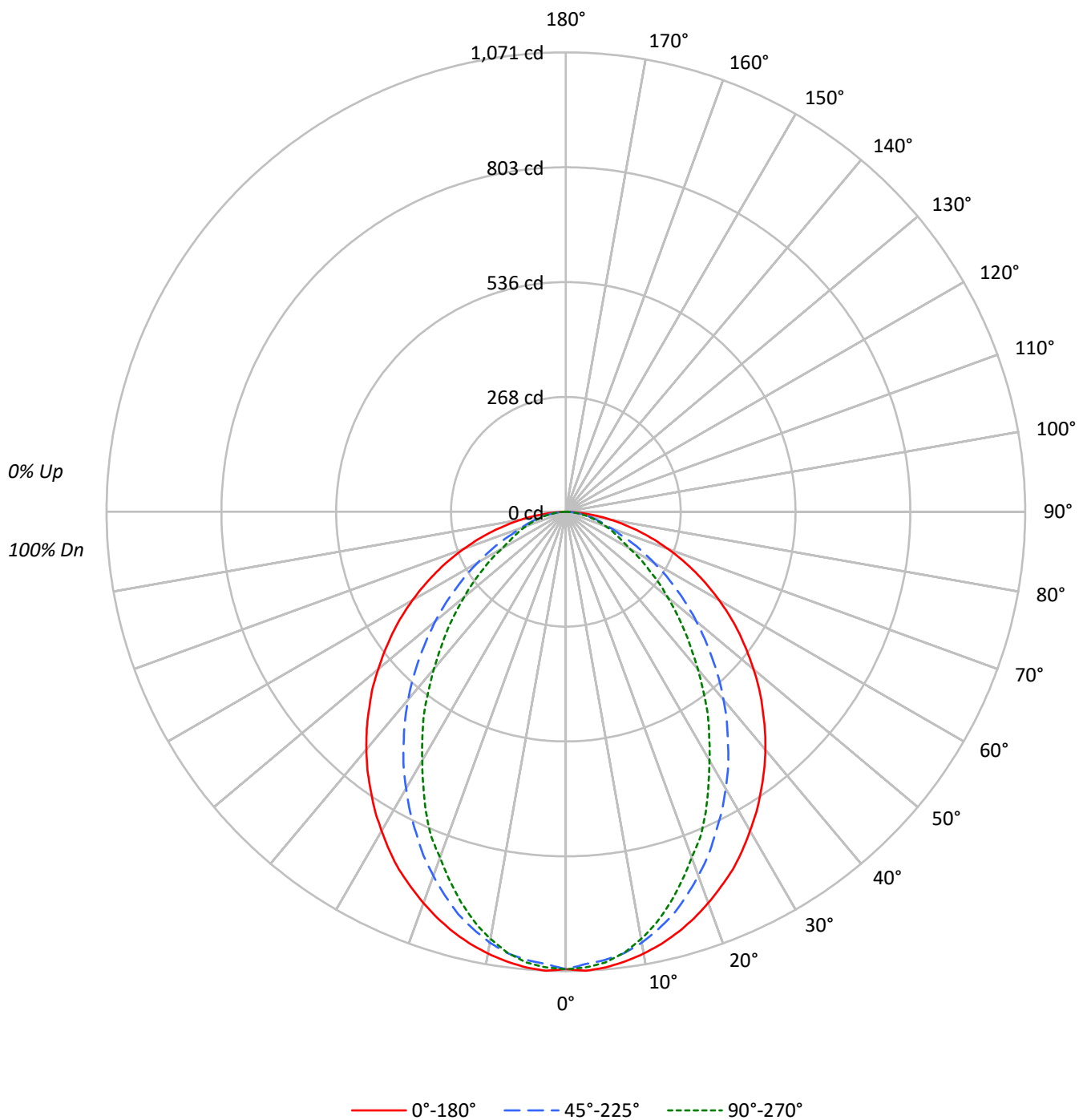
Lumens per Lamp: N/A
Luminaire Lumens: 2193.0 lumens
Efficiency: N/A
Efficacy: 78.0 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 3.11' x L: 2.96' x H: 0')
CIE Type: Direct

Input Watts (W): 28.1
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.099
Total Harmonic Distortion (THDi): 0.979
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
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°	1246	1246	1246
5°	1251	1231	1238
10°	1242	1211	1201
15°	1227	1175	1141
20°	1208	1124	1067
25°	1187	1065	996
30°	1159	1005	904
35°	1132	941	824
40°	1105	873	730
45°	1072	798	646
50°	1039	721	563
55°	1005	639	484
60°	966	553	402
65°	921	464	366
70°	867	382	336
75°	802	349	314
80°	708	312	286
85°	557	245	245

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 1072 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	99.9	4.6
10°-20°	274.3	12.5
20°-30°	385.2	17.6
30°-40°	419.9	19.1
40°-50°	385.9	17.6
50°-60°	303.1	13.8
60°-70°	197.3	9.0
70°-80°	101.5	4.6
80°-90°	25.9	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°	759.4	34.6
0°-40°	1179.3	53.8
0°-60°	1868.3	85.2
0°-90°	2193.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2193.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1066	1066	1066	1066	1066	
5°	1066	1062	1049	1058	1055	101
15°	1014	1004	971	952	943	286
25°	921	890	826	786	772	423
35°	793	744	659	598	577	497
45°	648	584	482	414	391	501
55°	493	418	314	256	237	441
65°	333	255	168	135	132	330
75°	178	110	77	70	70	188
85°	42	21	18	18	18	50
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1066.3	1066.3	1066.3	1066.3	1066.3
2.5°	1071.1	1066.3	1055.6	1065.4	1063.5
5°	1066.3	1061.5	1048.9	1057.6	1054.7
7.5°	1057.6	1051.9	1038.4	1042.1	1037.3
10°	1046.0	1039.3	1020.0	1017.0	1011.4
12.5°	1031.6	1022.9	996.8	991.1	980.4
15°	1014.2	1003.5	970.8	952.4	942.8
17.5°	993.9	978.5	937.9	916.8	901.3
20°	970.8	951.4	903.2	879.2	857.8
22.5°	945.7	923.5	867.5	834.7	820.3
25°	920.6	889.7	826.0	786.5	771.9
27.5°	890.7	857.8	787.4	742.1	719.8
30°	858.9	822.2	744.9	695.8	669.7
32.5°	827.9	783.5	704.5	646.5	622.4
35°	793.3	744.0	659.1	598.3	577.1
37.5°	759.5	706.3	616.6	550.0	526.0
40°	723.8	665.9	572.2	503.7	478.7
42.5°	687.1	625.4	527.9	456.4	432.3
45°	648.5	583.8	482.5	413.9	390.8
47.5°	611.8	543.3	439.1	370.5	349.3
50°	571.3	502.8	396.6	330.0	309.8
52.5°	531.7	459.3	356.1	292.4	274.1
55°	493.0	417.8	313.6	255.8	237.4
57.5°	453.6	376.3	276.1	222.0	206.5
60°	413.0	335.8	236.4	187.2	171.8
62.5°	373.5	296.3	202.6	156.3	148.7
65°	332.9	254.7	167.9	135.1	132.2
67.5°	294.4	216.1	135.1	118.7	115.8
70°	253.8	178.5	111.9	102.3	98.4
72.5°	215.2	143.7	93.6	85.9	83.9
75°	177.5	110.0	77.2	70.4	69.5
77.5°	139.9	78.1	60.8	56.9	55.0
80°	105.2	56.0	46.3	42.5	42.5
82.5°	73.3	37.7	31.8	29.9	29.9
85°	41.5	21.2	18.3	18.3	18.3
87.5°	15.5	7.7	7.7	6.8	6.8
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	12.00	13.52	12.36	13.83	14.15	7.96	9.48	8.33	9.80	10.11
	3H	13.77	15.13	14.14	15.46	15.82	9.23	10.59	9.60	10.92	11.28
	4H	14.43	15.71	14.83	16.06	16.44	9.73	11.01	10.13	11.36	11.74
	6H	14.92	16.10	15.33	16.47	16.86	10.11	11.29	10.52	11.66	12.05
	8H	15.09	16.21	15.51	16.60	17.00	10.23	11.36	10.66	11.75	12.15
	12H	15.19	16.27	15.62	16.65	17.08	10.31	11.39	10.75	11.77	12.20
4H	2H	12.10	13.38	12.50	13.73	14.11	8.66	9.94	9.06	10.29	10.66
	3H	14.04	15.10	14.45	15.50	15.90	10.10	11.16	10.51	11.56	11.96
	4H	14.79	15.74	15.22	16.16	16.60	10.70	11.66	11.13	12.07	12.51
	6H	15.38	16.21	15.84	16.65	17.11	11.19	12.02	11.64	12.46	12.92
	8H	15.59	16.37	16.06	16.81	17.28	11.35	12.13	11.81	12.57	13.04
	12H	15.75	16.44	16.23	16.92	17.39	11.47	12.16	11.95	12.64	13.11
8H	4H	14.81	15.59	15.27	16.03	16.50	11.05	11.83	11.52	12.27	12.74
	6H	15.45	16.09	15.95	16.58	17.06	11.64	12.28	12.14	12.77	13.25
	8H	15.70	16.28	16.21	16.79	17.27	11.86	12.44	12.37	12.95	13.44
	12H	15.90	16.41	16.41	16.91	17.47	12.04	12.55	12.55	13.04	13.61
12H	4H	14.80	15.49	15.28	15.97	16.44	11.10	11.79	11.58	12.27	12.74
	6H	15.43	16.01	15.94	16.52	17.00	11.70	12.28	12.22	12.79	13.28
	8H	15.71	16.22	16.22	16.72	17.28	11.98	12.49	12.49	12.98	13.54