

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: P930430

Luminaire Tested: DFN2DS-PN2F0-020DS935-RLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930430
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-PN2F0-020DS935-RLL
Description: 2 foot, Pentagon Define Geo, with Direct 1in Regressed Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

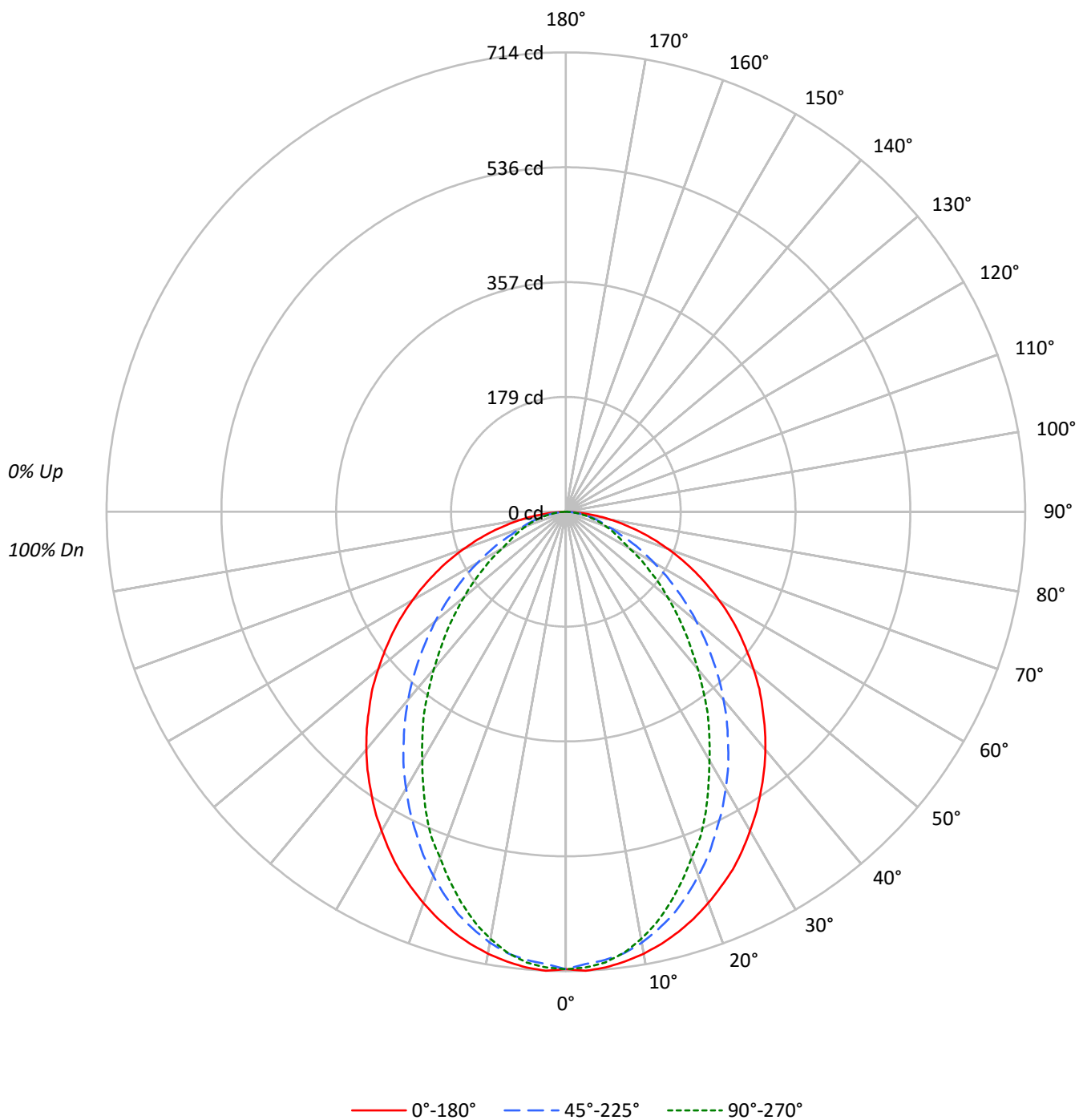
Lumens per Lamp: N/A
Luminaire Lumens: 1462.0 lumens
Efficiency: N/A
Efficacy: 75.8 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 2.29' x L: 2.17' x H: 0')
CIE Type: Direct

Input Watts (W): 19.3
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°	1540	1540	1540
5°	1546	1520	1529
10°	1534	1496	1483
15°	1516	1451	1409
20°	1492	1388	1318
25°	1467	1316	1230
30°	1432	1242	1116
35°	1398	1162	1017
40°	1364	1079	902
45°	1324	985	798
50°	1283	891	696
55°	1241	790	597
60°	1193	683	496
65°	1138	574	452
70°	1071	472	415
75°	990	430	388
80°	874	385	353
85°	686	303	303

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 1324 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	66.6	4.6
10°-20°	182.9	12.5
20°-30°	256.8	17.6
30°-40°	279.9	19.1
40°-50°	257.3	17.6
50°-60°	202.1	13.8
60°-70°	131.5	9.0
70°-80°	67.7	4.6
80°-90°	17.3	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°	506.3	34.6
0°-40°	786.2	53.8
0°-60°	1245.5	85.2
0°-90°	1462.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1462.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	711	711	711	711	711	
5°	711	708	699	705	703	67
15°	676	669	647	635	629	191
25°	614	593	551	524	515	282
35°	529	496	440	399	385	331
45°	432	389	322	276	260	334
55°	329	279	209	170	158	294
65°	222	170	112	90	88	220
75°	118	73	51	47	46	125
85°	28	14	12	12	12	33
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	710.9	710.9	710.9	710.9	710.9
2.5°	714.1	710.9	703.7	710.3	709.0
5°	710.9	707.7	699.3	705.1	703.1
7.5°	705.1	701.2	692.2	694.8	691.5
10°	697.4	692.8	680.0	678.0	674.2
12.5°	687.7	681.9	664.5	660.7	653.6
15°	676.1	669.0	647.2	634.9	628.6
17.5°	662.6	652.3	625.3	611.1	600.9
20°	647.2	634.2	602.2	586.1	571.9
22.5°	630.5	615.7	578.4	556.5	546.9
25°	613.8	593.1	550.7	524.3	514.6
27.5°	593.8	571.9	524.9	494.7	479.9
30°	572.6	548.1	496.6	463.9	446.4
32.5°	551.9	522.4	469.6	431.0	415.0
35°	528.8	496.0	439.5	398.9	384.7
37.5°	506.3	470.8	411.1	366.7	350.6
40°	482.5	443.9	381.5	335.8	319.1
42.5°	458.0	416.9	351.9	304.3	288.3
45°	432.3	389.2	321.7	276.0	260.5
47.5°	407.9	362.2	292.7	247.0	232.9
50°	380.9	335.2	264.4	220.0	206.6
52.5°	354.4	306.2	237.4	195.0	182.8
55°	328.7	278.6	209.1	170.5	158.2
57.5°	302.4	250.9	184.0	148.0	137.7
60°	275.4	223.9	157.6	124.9	114.6
62.5°	249.0	197.5	135.1	104.2	99.1
65°	222.0	169.8	112.0	90.1	88.2
67.5°	196.3	144.0	90.1	79.1	77.2
70°	169.2	119.0	74.6	68.2	65.6
72.5°	143.4	95.8	62.4	57.3	56.0
75°	118.3	73.3	51.4	47.0	46.4
77.5°	93.3	52.1	40.5	37.9	36.6
80°	70.1	37.3	30.9	28.3	28.3
82.5°	48.8	25.1	21.2	20.0	20.0
85°	27.6	14.1	12.2	12.2	12.2
87.5°	10.3	5.2	5.2	4.5	4.5
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	12.73	14.26	13.10	14.57	14.88	8.70	10.22	9.06	10.53	10.85
	3H	14.50	15.86	14.88	16.19	16.55	9.96	11.33	10.34	11.65	12.02
	4H	15.16	16.45	15.56	16.79	17.17	10.46	11.74	10.86	12.09	12.47
	6H	15.65	16.84	16.07	17.20	17.60	10.84	12.03	11.26	12.39	12.78
	8H	15.82	16.95	16.25	17.34	17.74	10.97	12.09	11.39	12.48	12.89
	12H	15.92	17.00	16.35	17.38	17.81	11.05	12.13	11.48	12.51	12.94
4H	2H	12.84	14.12	13.24	14.47	14.85	9.39	10.67	9.79	11.02	11.40
	3H	14.77	15.83	15.18	16.23	16.64	10.83	11.90	11.25	12.30	12.70
	4H	15.52	16.48	15.95	16.89	17.33	11.43	12.39	11.87	12.81	13.25
	6H	16.11	16.94	16.57	17.39	17.85	11.92	12.75	12.38	13.20	13.66
	8H	16.33	17.10	16.79	17.55	18.01	12.08	12.86	12.55	13.31	13.77
	12H	16.48	17.17	16.96	17.65	18.12	12.20	12.90	12.68	13.37	13.85
8H	4H	15.54	16.32	16.01	16.77	17.23	11.79	12.57	12.25	13.01	13.48
	6H	16.18	16.82	16.68	17.32	17.79	12.37	13.02	12.87	13.51	13.98
	8H	16.43	17.01	16.95	17.52	18.01	12.60	13.17	13.11	13.68	14.17
	12H	16.64	17.15	17.14	17.64	18.20	12.77	13.28	13.28	13.78	14.34
12H	4H	15.53	16.22	16.01	16.70	17.17	11.83	12.53	12.31	13.00	13.48
	6H	16.16	16.74	16.68	17.25	17.74	12.44	13.01	12.95	13.52	14.01
	8H	16.45	16.96	16.96	17.45	18.01	12.71	13.22	13.22	13.71	14.28