

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: P930418

Luminaire Tested: DFN2DS-PN2F0-020DS830-RLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930418
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-PN2F0-020DS830-RLL
Description: 2 foot, Pentagon Define Geo, with Direct 1in Regressed Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

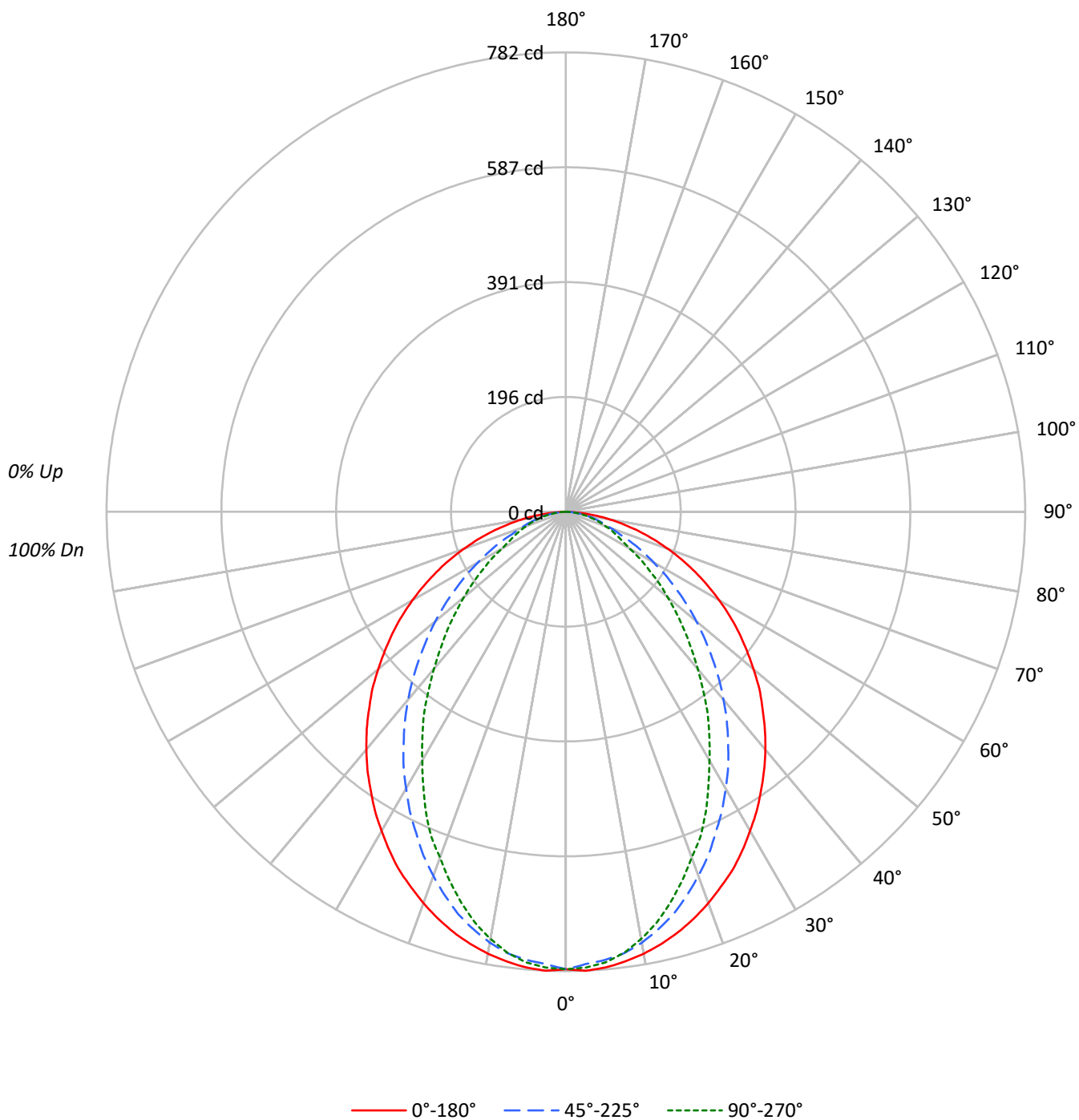
Lumens per Lamp: N/A
Luminaire Lumens: 1601.4 lumens
Efficiency: N/A
Efficacy: 83.0 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 2.29' x L: 2.17' x H: 0')
CIE Type: Direct

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°	1687	1687	1687
5°	1693	1665	1675
10°	1680	1638	1624
15°	1661	1590	1544
20°	1634	1520	1444
25°	1607	1442	1347
30°	1569	1361	1223
35°	1531	1273	1114
40°	1494	1182	988
45°	1450	1079	874
50°	1406	976	763
55°	1359	865	654
60°	1306	748	544
65°	1246	628	495
70°	1173	517	455
75°	1085	471	425
80°	958	422	387
85°	750	333	333

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 1450 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	73.0	4.6
10°-20°	200.3	12.5
20°-30°	281.3	17.6
30°-40°	306.6	19.1
40°-50°	281.8	17.6
50°-60°	221.3	13.8
60°-70°	144.1	9.0
70°-80°	74.1	4.6
80°-90°	18.9	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°	554.6	34.6
0°-40°	861.2	53.8
0°-60°	1364.3	85.2
0°-90°	1601.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1601.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	779	779	779	779	779	
5°	779	775	766	772	770	74
15°	741	733	709	696	688	209
25°	672	650	603	574	564	309
35°	579	543	481	437	421	363
45°	474	426	352	302	285	366
55°	360	305	229	187	173	322
65°	243	186	123	99	97	241
75°	130	80	56	51	51	137
85°	30	15	13	13	13	36
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	778.7	778.7	778.7	778.7	778.7
2.5°	782.1	778.7	770.8	778.0	776.6
5°	778.7	775.2	765.9	772.3	770.2
7.5°	772.3	768.1	758.2	761.0	757.5
10°	763.9	758.9	744.8	742.7	738.5
12.5°	753.3	746.9	727.9	723.7	715.9
15°	740.6	732.8	708.9	695.5	688.5
17.5°	725.8	714.5	684.9	669.4	658.2
20°	708.9	694.7	659.6	642.0	626.4
22.5°	690.6	674.4	633.5	609.6	599.0
25°	672.3	649.7	603.2	574.3	563.7
27.5°	650.5	626.4	575.0	541.8	525.6
30°	627.2	600.3	544.0	508.1	489.0
32.5°	604.6	572.2	514.4	472.1	454.5
35°	579.2	543.3	481.4	436.9	421.4
37.5°	554.6	515.7	450.3	401.7	384.1
40°	528.5	486.3	417.9	367.9	349.5
42.5°	501.7	456.7	385.5	333.3	315.8
45°	473.5	426.3	352.4	302.3	285.3
47.5°	446.8	396.8	320.7	270.5	255.1
50°	417.2	367.2	289.7	241.0	226.3
52.5°	388.2	335.4	260.0	213.6	200.2
55°	360.0	305.1	229.0	186.8	173.3
57.5°	331.2	274.8	201.6	162.1	150.8
60°	301.6	245.2	172.7	136.8	125.5
62.5°	272.7	216.4	148.0	114.2	108.5
65°	243.1	186.0	122.6	98.7	96.6
67.5°	215.0	157.8	98.7	86.7	84.6
70°	185.3	130.4	81.7	74.7	71.9
72.5°	157.1	104.9	68.3	62.7	61.3
75°	129.6	80.3	56.3	51.4	50.8
77.5°	102.2	57.1	44.4	41.5	40.1
80°	76.8	40.9	33.8	31.0	31.0
82.5°	53.5	27.5	23.3	21.9	21.9
85°	30.2	15.4	13.4	13.4	13.4
87.5°	11.3	5.7	5.7	4.9	4.9
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	13.05	14.57	13.41	14.89	15.20	9.01	10.53	9.38	10.85	11.16
	3H	14.82	16.18	15.19	16.51	16.87	10.28	11.64	10.66	11.97	12.33
	4H	15.48	16.76	15.88	17.11	17.49	10.78	12.06	11.18	12.41	12.79
	6H	15.97	17.15	16.38	17.52	17.91	11.16	12.34	11.57	12.71	13.10
	8H	16.14	17.26	16.56	17.65	18.05	11.28	12.41	11.71	12.80	13.20
	12H	16.24	17.32	16.67	17.70	18.13	11.37	12.44	11.80	12.83	13.26
4H	2H	13.15	14.43	13.55	14.78	15.16	9.71	10.99	10.11	11.34	11.71
	3H	15.09	16.15	15.50	16.55	16.95	11.15	12.21	11.56	12.61	13.01
	4H	15.84	16.79	16.27	17.21	17.65	11.75	12.71	12.18	13.12	13.56
	6H	16.43	17.26	16.89	17.70	18.16	12.24	13.07	12.69	13.51	13.97
	8H	16.64	17.42	17.11	17.86	18.33	12.40	13.18	12.86	13.62	14.09
	12H	16.80	17.49	17.28	17.97	18.44	12.52	13.21	13.00	13.69	14.16
8H	4H	15.86	16.64	16.32	17.08	17.55	12.10	12.88	12.57	13.32	13.79
	6H	16.50	17.14	17.00	17.63	18.11	12.69	13.33	13.19	13.82	14.30
	8H	16.75	17.33	17.26	17.84	18.32	12.91	13.49	13.42	14.00	14.49
	12H	16.95	17.46	17.46	17.95	18.52	13.09	13.60	13.60	14.09	14.66
12H	4H	15.85	16.54	16.33	17.02	17.49	12.15	12.84	12.63	13.32	13.79
	6H	16.48	17.06	16.99	17.57	18.05	12.75	13.33	13.27	13.84	14.33
	8H	16.76	17.27	17.27	17.77	18.33	13.03	13.54	13.54	14.03	14.59

END OF REPORT