

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: P930515

Luminaire Tested: DFN2DS-PN3F0-030DS927-FLL

Issue Date: 11/20/2024

**Test Information**

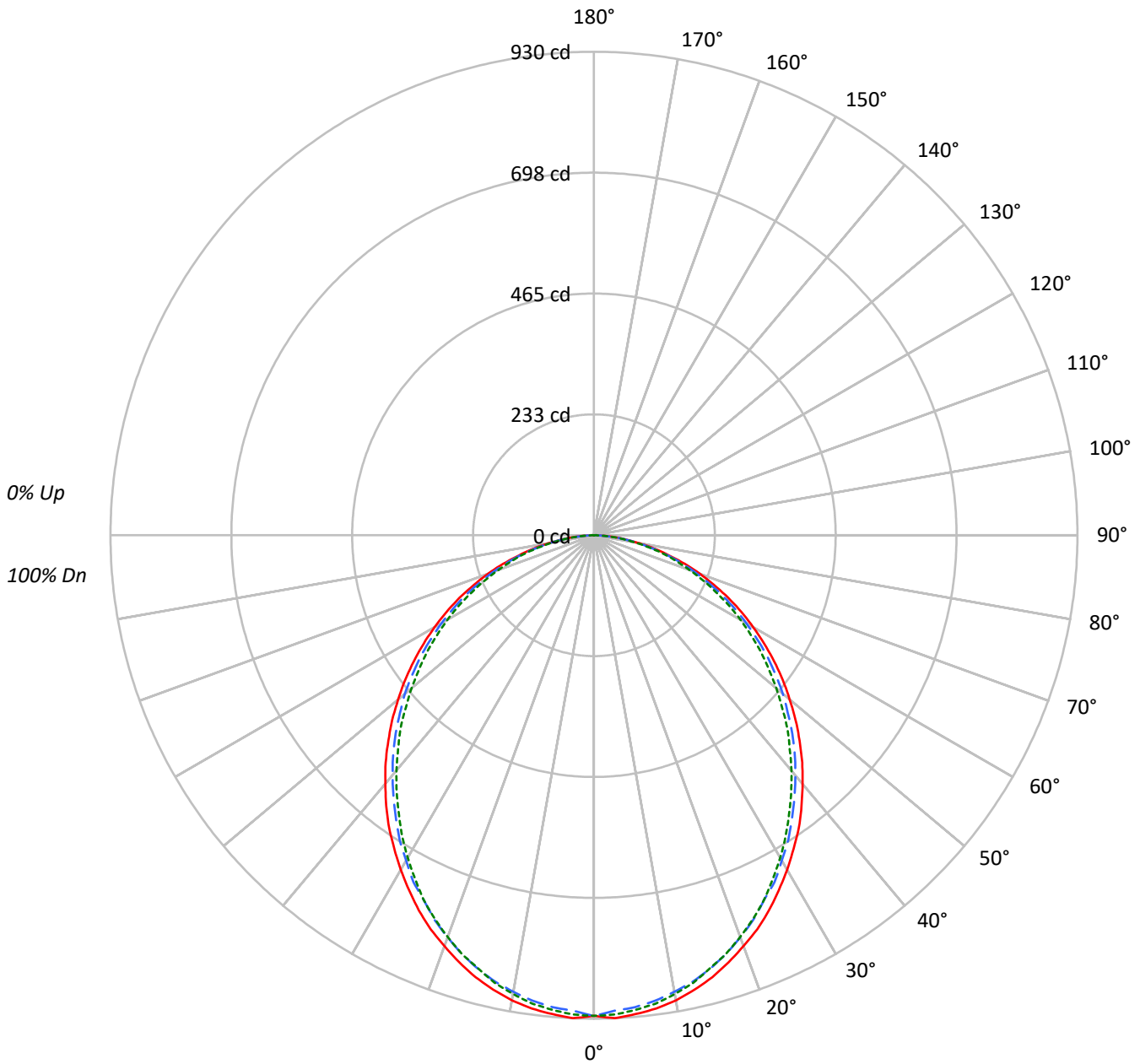
Test Method: LM-79-2019  
Report Number: P930515  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P333812)  
Test Lab: INNOVATION CENTER  
Issue Date: 11/20/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: DFN2DS-PN3F0-030DS927-FLL  
Description: 3 foot, Pentagon Define Geo, with Direct Frosted Lens  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2352.3 lumens  
Efficiency: N/A  
Efficacy: 83.7 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29  
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



— 0°-180°    - - 45°-225°    - - - 90°-270°



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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	50	30	10	0
RCR																					
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	102	102	102	100
1	109	104	100	96	106	102	98	95	98	95	92	94	91	89	90	88	86	86	86	86	84
2	99	91	85	79	97	89	83	78	86	81	76	83	78	74	80	76	73	73	73	73	71
3	91	80	72	66	88	79	71	65	76	69	64	73	68	63	71	66	62	62	62	62	60
4	83	71	63	56	81	70	62	56	68	61	55	65	59	54	63	58	54	54	54	54	51
5	77	64	55	49	75	63	55	48	61	53	48	59	52	47	57	51	47	47	47	47	45
6	71	58	49	43	69	57	48	42	55	48	42	53	47	42	52	46	41	41	41	41	39
7	66	52	44	38	64	52	43	38	50	43	37	49	42	37	47	41	37	37	37	37	35
8	61	48	40	34	60	47	39	34	46	39	33	45	38	33	44	38	33	33	33	33	31
9	57	44	36	30	56	43	36	30	42	35	30	41	35	30	40	34	30	30	30	30	28
10	54	41	33	28	53	40	33	28	39	32	27	38	32	27	37	32	27	27	27	27	26

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	1081	1081	1081
5°	1085	1069	1076
10°	1079	1058	1064
15°	1065	1045	1044
20°	1046	1024	1023
25°	1027	999	999
30°	1003	976	967
35°	981	948	934
40°	952	920	902
45°	924	892	870
50°	894	863	833
55°	863	830	799
60°	827	790	761
65°	789	750	716
70°	741	702	669
75°	674	646	631
80°	598	580	551
85°	488	465	417

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 924 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	87.0	3.7
10°-20°	244.8	10.4
20°-30°	359.8	15.3
30°-40°	417.9	17.8
40°-50°	417.4	17.7
50°-60°	363.9	15.5
60°-70°	269.0	11.4
70°-80°	152.2	6.5
80°-90°	40.2	1.7
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°	691.6	29.4
0°-40°	1109.5	47.2
0°-60°	1890.8	80.4
0°-90°	2352.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2352.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	924	924	924	924	924	
5°	924	921	911	918	917	88
15°	880	875	863	867	862	248
25°	796	790	774	776	774	367
35°	687	678	664	659	654	429
45°	559	553	540	530	526	432
55°	423	418	407	397	392	378
65°	285	280	271	263	259	282
75°	149	148	143	138	140	159
85°	36	36	35	32	31	43
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	924.5	924.5	924.5	924.5	924.5
2.5°	929.9	925.5	915.6	924.5	922.8
5°	924.5	921.0	911.2	918.3	916.6
7.5°	918.3	913.0	903.2	910.4	908.6
10°	908.6	902.3	891.7	898.8	896.1
12.5°	895.2	889.9	879.3	883.6	881.9
15°	880.1	874.8	863.2	866.8	862.3
17.5°	861.4	856.2	844.5	848.9	844.5
20°	840.9	835.6	823.2	825.8	822.3
22.5°	820.6	812.6	800.9	800.9	799.1
25°	796.5	789.5	774.3	776.1	774.3
27.5°	769.8	763.6	752.1	749.5	745.0
30°	743.2	736.1	722.8	720.1	716.5
32.5°	714.8	709.5	695.2	689.8	686.3
35°	687.2	678.3	664.1	658.7	654.3
37.5°	656.1	648.1	633.8	627.6	623.1
40°	624.1	617.0	602.7	594.8	591.2
42.5°	593.0	585.8	571.7	562.7	557.4
45°	559.2	553.0	539.6	529.8	526.3
47.5°	526.3	520.1	505.9	496.0	490.7
50°	491.6	487.2	474.7	462.3	457.9
52.5°	457.9	451.6	440.1	430.3	424.0
55°	423.2	417.9	407.2	396.6	392.1
57.5°	388.5	384.0	372.5	361.8	358.2
60°	353.8	350.3	337.9	328.0	325.4
62.5°	320.0	313.8	304.9	296.0	292.5
65°	285.4	280.1	271.2	263.2	258.7
67.5°	249.9	245.4	237.4	231.2	227.6
70°	216.9	213.4	205.4	199.1	195.6
72.5°	183.2	179.5	175.1	168.9	166.3
75°	149.3	147.6	143.1	137.8	139.6
77.5°	119.1	115.6	113.7	111.1	108.5
80°	88.9	88.0	86.2	83.6	81.8
82.5°	60.4	60.4	59.6	56.0	56.0
85°	36.4	35.6	34.7	32.0	31.1
87.5°	16.0	14.3	12.4	9.8	8.9
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	11.55	13.16	11.92	13.48	13.79	11.11	12.72	11.47	13.03	13.35
	3H	13.30	14.76	13.68	15.08	15.44	12.81	14.27	13.19	14.59	14.95
	4H	13.95	15.32	14.35	15.67	16.04	13.45	14.82	13.85	15.17	15.55
	6H	14.42	15.69	14.83	16.05	16.44	13.92	15.19	14.33	15.55	15.94
	8H	14.56	15.77	14.99	16.16	16.56	14.06	15.27	14.48	15.66	16.06
	12H	14.65	15.81	15.08	16.19	16.62	14.14	15.30	14.57	15.68	16.11
4H	2H	12.11	13.48	12.51	13.83	14.21	11.76	13.13	12.16	13.48	13.85
	3H	14.09	15.23	14.50	15.63	16.03	13.68	14.83	14.09	15.23	15.63
	4H	14.86	15.90	15.30	16.31	16.75	14.44	15.48	14.87	15.89	16.33
	6H	15.46	16.37	15.92	16.81	17.26	15.03	15.93	15.48	16.37	16.83
	8H	15.65	16.50	16.11	16.94	17.40	15.21	16.06	15.67	16.50	16.97
	12H	15.78	16.54	16.26	17.02	17.49	15.33	16.09	15.81	16.57	17.04
8H	4H	15.14	15.98	15.60	16.43	16.89	14.76	15.61	15.22	16.05	16.52
	6H	15.85	16.56	16.35	17.04	17.52	15.47	16.17	15.96	16.66	17.14
	8H	16.11	16.74	16.62	17.25	17.73	15.72	16.35	16.23	16.86	17.34
	12H	16.31	16.87	16.82	17.36	17.92	15.90	16.46	16.40	16.95	17.51
12H	4H	15.16	15.92	15.64	16.40	16.87	14.80	15.56	15.28	16.03	16.50
	6H	15.90	16.53	16.41	17.04	17.52	15.53	16.16	16.04	16.67	17.15
	8H	16.21	16.77	16.72	17.26	17.82	15.83	16.39	16.34	16.88	17.44