

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: P930731

Luminaire Tested: DFN2DS-PN4F0-090DS927-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930731
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-PN4F0-090DS927-FLL
Description: 4 foot, Pentagon Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

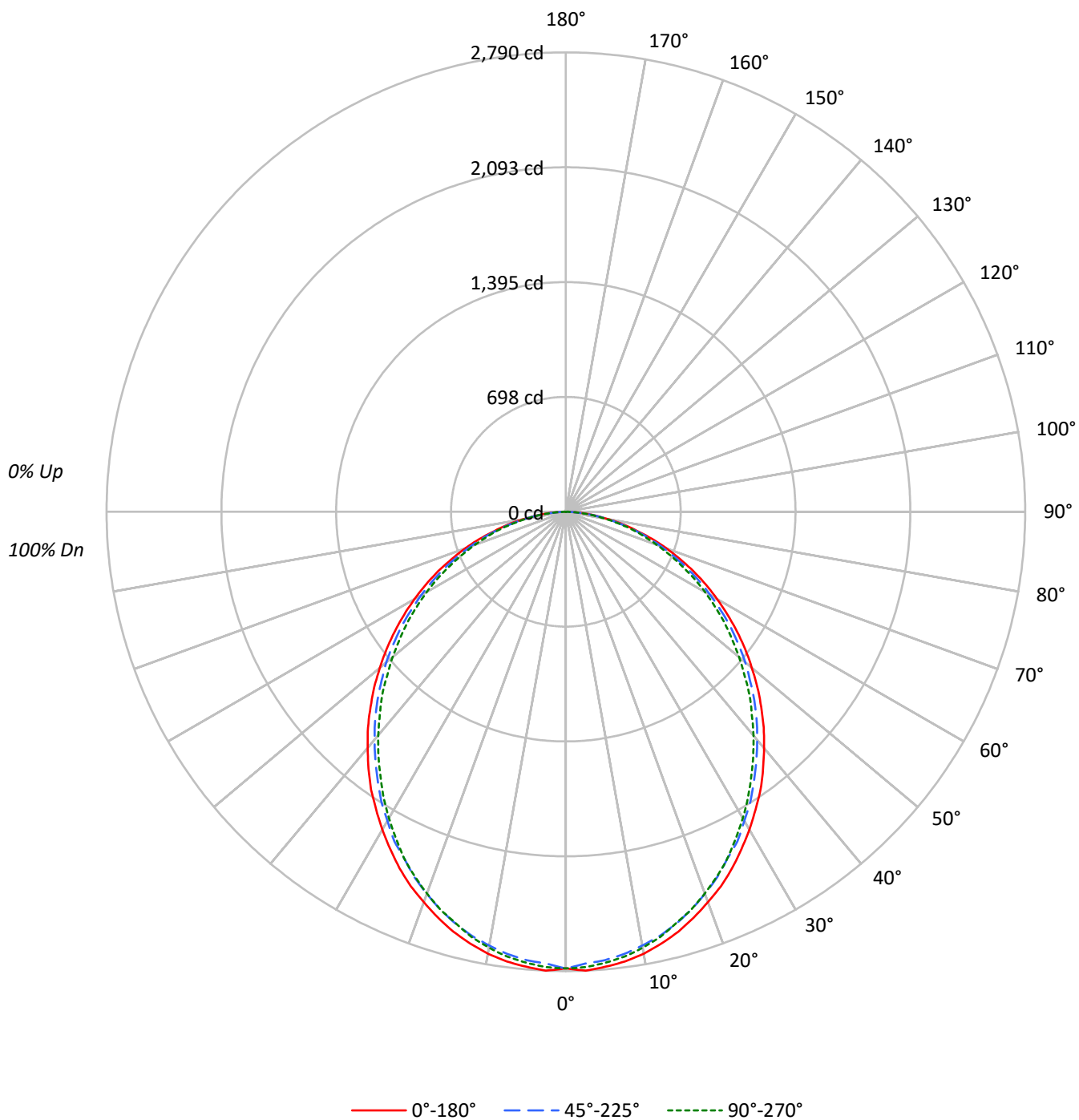
Lumens per Lamp: N/A
Luminaire Lumens: 7056.8 lumens
Efficiency: N/A
Efficacy: 75.8 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 3.94' x L: 3.74' x H: 0')
CIE Type: Direct

Input Watts (W): 93.1
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9963
Total Harmonic Distortion (THDi): 0.065
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	109	104	100	96	106	102	98	95	98	95	92		94	91	89		90
2	99	91	85	79	97	89	83	78	86	81	76		83	78	74		80
3	91	80	72	66	88	79	71	65	76	69	64		73	68	63		71
4	83	71	63	56	81	70	62	56	68	61	55		65	59	54		63
5	77	64	55	49	75	63	55	48	61	53	48		59	52	47		57
6	71	58	49	43	69	57	48	42	55	48	42		53	47	42		52
7	66	52	44	38	64	52	43	38	50	43	37		49	42	37		47
8	61	48	40	34	60	47	39	34	46	39	33		45	38	33		44
9	57	44	36	30	56	43	36	30	42	35	30		41	35	30		40
10	54	41	33	28	53	40	33	28	39	32	27		38	32	27		37

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2025	2025	2025
5°	2032	2003	2015
10°	2020	1983	1993
15°	1995	1957	1955
20°	1960	1918	1916
25°	1925	1871	1871
30°	1879	1828	1812
35°	1837	1775	1749
40°	1784	1723	1690
45°	1732	1671	1630
50°	1675	1617	1560
55°	1616	1555	1497
60°	1550	1480	1425
65°	1479	1405	1341
70°	1389	1315	1253
75°	1264	1211	1181
80°	1122	1087	1032
85°	915	872	782

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 1732 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	261.0	3.7
10°-20°	734.5	10.4
20°-30°	1079.4	15.3
30°-40°	1253.7	17.8
40°-50°	1252.1	17.7
50°-60°	1091.8	15.5
60°-70°	807.1	11.4
70°-80°	456.6	6.5
80°-90°	120.5	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°	2074.9	29.4
0°-40°	3328.6	47.2
0°-60°	5672.5	80.4
0°-90°	7056.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7056.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2774	2774	2774	2774	2774	
5°	2774	2763	2734	2755	2750	263
15°	2640	2624	2590	2600	2587	744
25°	2390	2368	2323	2328	2323	1100
35°	2062	2035	1992	1976	1963	1287
45°	1678	1659	1619	1590	1579	1295
55°	1270	1254	1222	1190	1176	1135
65°	856	840	814	790	776	847
75°	448	443	429	413	419	478
85°	109	107	104	96	93	128
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2773.5	2773.5	2773.5	2773.5	2773.5
2.5°	2789.7	2776.4	2747.0	2773.5	2768.4
5°	2773.5	2763.1	2733.7	2754.9	2749.7
7.5°	2754.9	2739.1	2709.6	2731.1	2725.7
10°	2725.7	2707.1	2675.1	2696.3	2688.4
12.5°	2685.5	2669.7	2637.8	2651.0	2645.7
15°	2640.3	2624.5	2589.6	2600.4	2587.1
17.5°	2584.2	2568.4	2533.6	2546.9	2533.6
20°	2522.8	2507.0	2469.6	2477.5	2467.1
22.5°	2461.7	2437.7	2402.8	2402.8	2397.5
25°	2389.5	2368.3	2323.1	2328.2	2323.1
27.5°	2309.5	2290.8	2256.3	2248.4	2235.1
30°	2229.7	2208.2	2168.3	2160.3	2149.6
32.5°	2144.3	2128.4	2085.7	2069.6	2058.8
35°	2061.7	2035.0	1992.3	1976.2	1962.9
37.5°	1968.3	1944.2	1901.4	1882.8	1869.5
40°	1872.3	1850.8	1808.1	1784.3	1773.6
42.5°	1778.9	1757.4	1715.0	1688.1	1672.3
45°	1677.6	1659.0	1618.8	1589.6	1578.9
47.5°	1578.9	1560.2	1517.5	1488.1	1472.2
50°	1474.8	1461.5	1424.1	1386.8	1373.5
52.5°	1373.5	1354.8	1320.3	1290.9	1272.2
55°	1269.7	1253.5	1221.5	1189.6	1176.3
57.5°	1165.5	1152.2	1117.4	1085.4	1074.7
60°	1061.4	1050.9	1013.5	984.1	976.2
62.5°	960.1	941.4	914.8	888.2	877.5
65°	856.2	840.1	813.5	789.5	776.2
67.5°	749.5	736.0	712.2	693.6	682.8
70°	650.8	640.0	616.0	597.3	586.9
72.5°	549.5	538.7	525.4	506.8	498.9
75°	448.0	442.8	429.3	413.4	418.8
77.5°	357.4	346.7	341.3	333.4	325.4
80°	266.8	264.0	258.6	250.7	245.4
82.5°	181.4	181.4	178.8	168.1	168.1
85°	109.2	106.7	104.1	95.9	93.4
87.5°	48.1	42.7	37.4	29.5	26.6
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	13.73	15.34	14.10	15.66	15.97	13.29	14.90	13.65	15.21	15.53
	3H	15.48	16.94	15.86	17.26	17.62	14.99	16.45	15.37	16.77	17.13
	4H	16.13	17.50	16.53	17.85	18.22	15.63	17.00	16.03	17.35	17.73
	6H	16.60	17.87	17.01	18.23	18.62	16.10	17.37	16.51	17.73	18.12
	8H	16.74	17.95	17.17	18.34	18.74	16.24	17.45	16.66	17.84	18.24
	12H	16.83	17.99	17.26	18.37	18.80	16.32	17.48	16.75	17.86	18.29
4H	2H	14.29	15.66	14.69	16.01	16.39	13.94	15.31	14.34	15.66	16.03
	3H	16.27	17.41	16.68	17.81	18.21	15.86	17.01	16.27	17.41	17.81
	4H	17.05	18.08	17.48	18.49	18.93	16.62	17.66	17.05	18.07	18.51
	6H	17.64	18.55	18.10	18.99	19.44	17.21	18.11	17.66	18.56	19.01
	8H	17.83	18.68	18.29	19.12	19.59	17.39	18.24	17.85	18.68	19.15
	12H	17.96	18.72	18.44	19.20	19.67	17.51	18.27	17.99	18.75	19.22
8H	4H	17.32	18.17	17.78	18.61	19.07	16.94	17.79	17.41	18.23	18.70
	6H	18.03	18.74	18.53	19.22	19.70	17.65	18.35	18.15	18.84	19.32
	8H	18.29	18.92	18.80	19.43	19.92	17.90	18.53	18.41	19.04	19.52
	12H	18.49	19.05	19.00	19.54	20.10	18.08	18.64	18.59	19.13	19.69
12H	4H	17.34	18.10	17.82	18.58	19.05	16.98	17.74	17.46	18.22	18.69
	6H	18.08	18.71	18.59	19.22	19.70	17.71	18.34	18.22	18.85	19.33
	8H	18.39	18.95	18.90	19.44	20.00	18.01	18.57	18.52	19.06	19.62

END OF REPORT

FIELD PERFORMANCE MAY DIFFER FROM LABORATORY PERFORMANCE

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