

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: P930655

Luminaire Tested: DFN2DS-PN4F0-050DS840-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930655
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-PN4F0-050DS840-FLL
Description: 4 foot, Pentagon Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

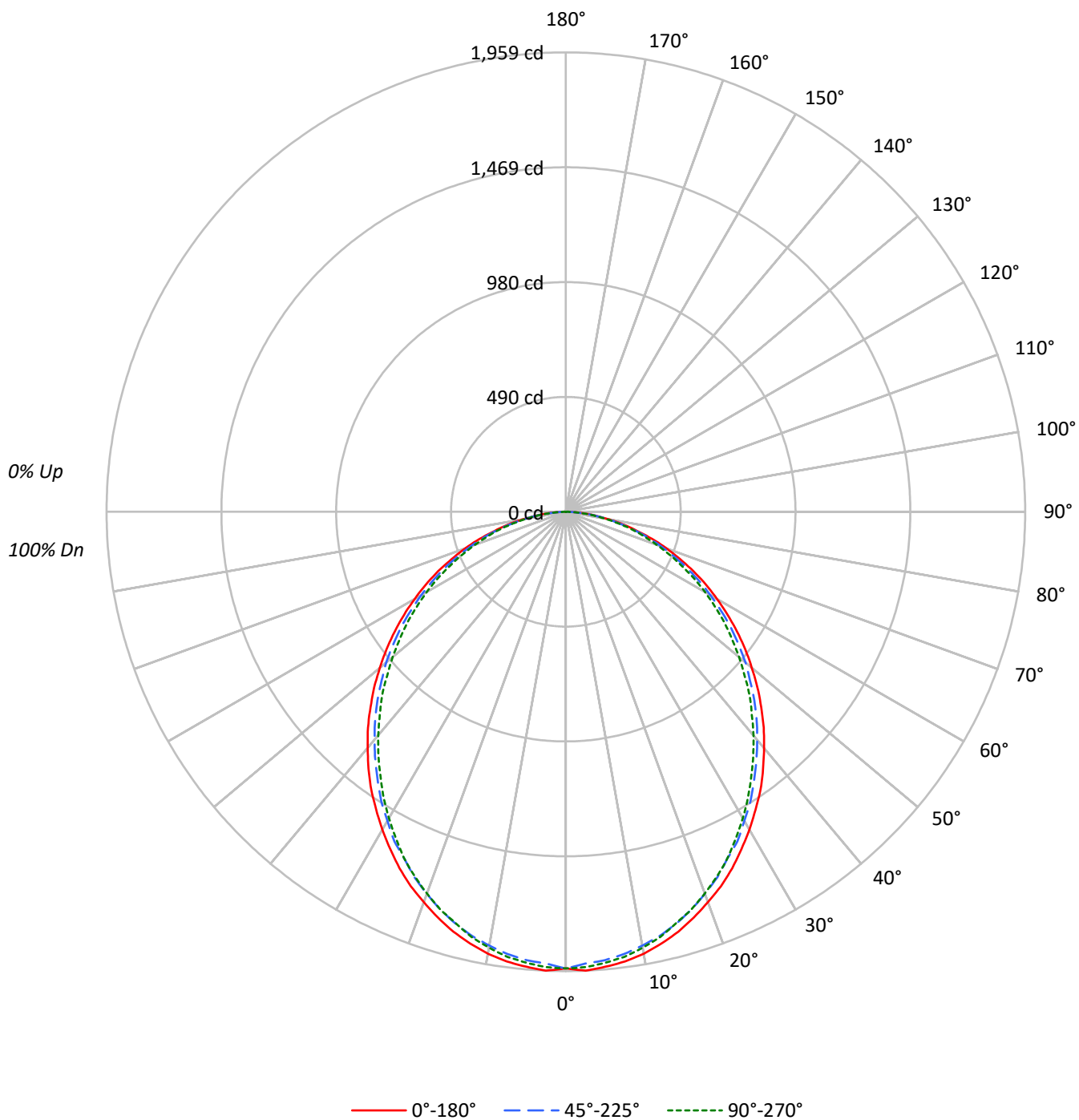
Lumens per Lamp: N/A
Luminaire Lumens: 4955.0 lumens
Efficiency: N/A
Efficacy: 101.5 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 3.94' x L: 3.74' x H: 0')
CIE Type: Direct

Input Watts (W): 48.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9951
Total Harmonic Distortion (THDi): 0.07
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°	1422	1422	1422
5°	1427	1406	1415
10°	1419	1392	1399
15°	1401	1374	1373
20°	1376	1347	1346
25°	1351	1314	1314
30°	1320	1283	1272
35°	1290	1247	1228
40°	1253	1210	1187
45°	1216	1173	1144
50°	1176	1136	1095
55°	1135	1092	1051
60°	1088	1039	1001
65°	1038	987	941
70°	975	923	880
75°	887	850	829
80°	788	763	724
85°	642	612	549

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
Vertical Angle: 45°
Luminance: 1216 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	183.3	3.7
10°-20°	515.7	10.4
20°-30°	757.9	15.3
30°-40°	880.3	17.8
40°-50°	879.2	17.7
50°-60°	766.6	15.5
60°-70°	566.7	11.4
70°-80°	320.6	6.5
80°-90°	84.6	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°	1456.9	29.4
0°-40°	2337.2	47.2
0°-60°	3983.0	80.4
0°-90°	4955.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4955.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1947	1947	1947	1947	1947	
5°	1947	1940	1919	1934	1931	185
15°	1854	1843	1818	1826	1816	522
25°	1678	1663	1631	1635	1631	772
35°	1448	1429	1399	1388	1378	904
45°	1178	1165	1137	1116	1109	909
55°	892	880	858	835	826	797
65°	601	590	571	554	545	594
75°	314	311	301	290	294	336
85°	77	75	73	67	66	90
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1947.4	1947.4	1947.4	1947.4	1947.4
2.5°	1958.8	1949.4	1928.8	1947.4	1943.9
5°	1947.4	1940.1	1919.4	1934.3	1930.8
7.5°	1934.3	1923.2	1902.6	1917.7	1913.9
10°	1913.9	1900.8	1878.4	1893.2	1887.7
12.5°	1885.7	1874.6	1852.2	1861.5	1857.7
15°	1853.9	1842.7	1818.3	1825.9	1816.5
17.5°	1814.5	1803.4	1779.0	1788.3	1779.0
20°	1771.5	1760.4	1734.1	1739.6	1732.3
22.5°	1728.5	1711.6	1687.2	1687.2	1683.4
25°	1677.9	1663.0	1631.1	1634.7	1631.1
27.5°	1621.6	1608.5	1584.3	1578.7	1569.4
30°	1565.6	1550.5	1522.5	1516.9	1509.4
32.5°	1505.6	1494.5	1464.5	1453.2	1445.6
35°	1447.5	1428.9	1398.9	1387.6	1378.3
37.5°	1382.0	1365.2	1335.1	1322.0	1312.7
40°	1314.7	1299.6	1269.6	1252.9	1245.3
42.5°	1249.1	1234.0	1204.2	1185.3	1174.2
45°	1178.0	1164.9	1136.6	1116.2	1108.6
47.5°	1108.6	1095.5	1065.6	1044.8	1033.7
50°	1035.5	1026.2	1000.0	973.8	964.4
52.5°	964.4	951.3	927.0	906.4	893.3
55°	891.5	880.2	857.7	835.2	825.9
57.5°	818.3	809.0	784.6	762.2	754.6
60°	745.2	737.9	711.7	691.0	685.5
62.5°	674.2	661.1	642.3	623.6	616.1
65°	601.2	589.9	571.2	554.4	544.9
67.5°	526.3	516.8	500.1	487.0	479.4
70°	457.0	449.4	432.5	419.4	412.1
72.5°	385.9	378.3	369.0	355.9	350.2
75°	314.5	310.9	301.4	290.3	294.1
77.5°	251.0	243.3	239.6	234.0	228.5
80°	187.4	185.4	181.6	176.1	172.3
82.5°	127.3	127.3	125.5	118.0	118.0
85°	76.7	74.9	73.1	67.4	65.6
87.5°	33.7	30.0	26.2	20.6	18.7
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	12.50	14.12	12.87	14.43	14.74	12.06	13.67	12.43	13.99	14.30
	3H	14.25	15.71	14.63	16.04	16.40	13.76	15.22	14.14	15.55	15.91
	4H	14.90	16.27	15.30	16.62	16.99	14.41	15.78	14.80	16.12	16.50
	6H	15.37	16.64	15.78	17.00	17.39	14.87	16.14	15.28	16.50	16.89
	8H	15.51	16.72	15.94	17.11	17.51	15.01	16.22	15.44	16.61	17.01
	12H	15.60	16.76	16.03	17.15	17.57	15.09	16.25	15.52	16.63	17.06
4H	2H	13.06	14.43	13.46	14.78	15.16	12.71	14.08	13.11	14.43	14.81
	3H	15.04	16.19	15.45	16.58	16.98	14.63	15.78	15.04	16.18	16.58
	4H	15.82	16.85	16.25	17.27	17.70	15.39	16.43	15.82	16.84	17.28
	6H	16.41	17.32	16.87	17.76	18.21	15.98	16.89	16.44	17.33	17.78
	8H	16.60	17.45	17.06	17.89	18.36	16.17	17.01	16.63	17.45	17.92
	12H	16.73	17.49	17.21	17.97	18.44	16.28	17.04	16.76	17.52	17.99
8H	4H	16.09	16.94	16.55	17.38	17.84	15.72	16.56	16.18	17.01	17.47
	6H	16.80	17.51	17.30	18.00	18.47	16.42	17.13	16.92	17.61	18.09
	8H	17.06	17.69	17.57	18.20	18.69	16.67	17.30	17.18	17.81	18.30
	12H	17.26	17.82	17.77	18.31	18.87	16.85	17.41	17.36	17.90	18.46
12H	4H	16.12	16.88	16.60	17.35	17.82	15.75	16.51	16.23	16.99	17.46
	6H	16.85	17.48	17.36	17.99	18.47	16.48	17.11	16.99	17.62	18.11
	8H	17.16	17.72	17.67	18.21	18.77	16.79	17.34	17.29	17.83	18.40