

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: P930556

Luminaire Tested: DFN2DS-PN3F0-050DS935-RLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930556
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-PN3F0-050DS935-RLL
Description: 3 foot, Pentagon Define Geo, with Direct 1in Regressed Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

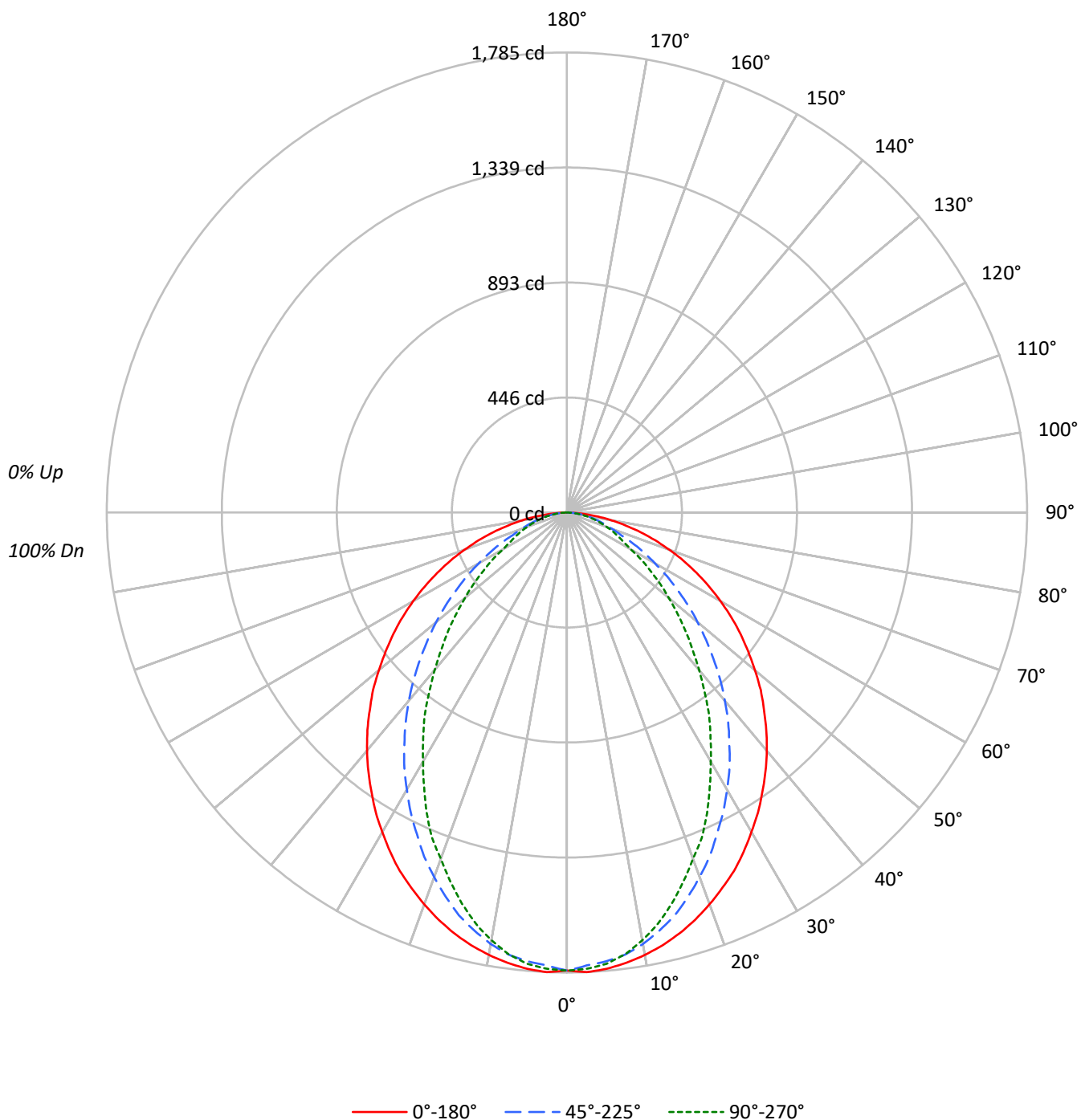
Lumens per Lamp: N/A
Luminaire Lumens: 3655.0 lumens
Efficiency: N/A
Efficacy: 74.3 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 3.11' x L: 2.96' x H: 0')
CIE Type: Direct

Input Watts (W): 49.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9613
Total Harmonic Distortion (THDi): 0.083
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

TEST NUMBER: P930556

CATALOG NUMBER: DFN2DS-PN3F0-050DS935-RLL

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°	2078	2078	2078
5°	2085	2051	2063
10°	2069	2018	2001
15°	2046	1958	1902
20°	2013	1873	1779
25°	1979	1776	1659
30°	1932	1676	1507
35°	1887	1568	1372
40°	1841	1455	1217
45°	1787	1329	1077
50°	1732	1202	939
55°	1675	1065	806
60°	1609	921	669
65°	1535	774	609
70°	1446	637	561
75°	1336	581	523
80°	1180	519	477
85°	927	409	409

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 1787 cd/sqm

TEST NUMBER: P930556

CATALOG NUMBER: DFN2DS-PN3F0-050DS935-RLL

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	166.6	4.6
10°-20°	457.2	12.5
20°-30°	641.9	17.6
30°-40°	699.8	19.1
40°-50°	643.2	17.6
50°-60°	505.1	13.8
60°-70°	328.8	9.0
70°-80°	169.3	4.6
80°-90°	43.2	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°	1265.8	34.6
0°-40°	1965.5	53.8
0°-60°	3113.8	85.2
0°-90°	3655.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3655.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1777	1777	1777	1777	1777	
5°	1777	1769	1748	1763	1758	169
15°	1690	1673	1618	1588	1571	476
25°	1534	1483	1377	1311	1287	706
35°	1322	1240	1099	997	962	827
45°	1081	973	804	690	651	835
55°	822	696	523	426	396	734
65°	555	425	280	225	220	550
75°	296	183	129	117	116	313
85°	69	35	30	30	30	83
90°	0	0	0	0	0	

TEST NUMBER: P930556

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1777.2	1777.2	1777.2	1777.2	1777.2
2.5°	1785.2	1777.2	1759.5	1775.6	1772.4
5°	1777.2	1769.2	1748.2	1762.7	1757.9
7.5°	1762.7	1753.1	1730.6	1736.9	1728.9
10°	1743.4	1732.1	1700.0	1695.1	1685.5
12.5°	1719.3	1704.9	1661.3	1651.8	1634.0
15°	1690.3	1672.6	1618.0	1587.5	1571.4
17.5°	1656.5	1630.8	1563.2	1527.9	1502.1
20°	1618.0	1585.8	1505.3	1465.3	1429.8
22.5°	1576.2	1539.1	1445.8	1391.2	1367.1
25°	1534.3	1482.8	1376.7	1310.8	1286.6
27.5°	1484.5	1429.8	1312.4	1236.8	1199.8
30°	1431.5	1370.2	1241.6	1159.6	1116.1
32.5°	1380.0	1305.9	1174.2	1077.6	1037.3
35°	1322.1	1240.0	1098.6	997.2	961.7
37.5°	1265.7	1177.3	1027.8	916.7	876.6
40°	1206.2	1109.8	953.7	839.5	797.7
42.5°	1145.2	1042.2	879.8	760.7	720.6
45°	1080.8	973.0	804.2	689.9	651.3
47.5°	1019.7	905.6	731.9	617.6	582.2
50°	952.2	838.0	661.1	550.0	516.3
52.5°	886.1	765.5	593.5	487.4	456.8
55°	821.8	696.3	522.6	426.2	395.7
57.5°	755.9	627.3	460.0	370.0	344.2
60°	688.3	559.7	394.0	312.1	286.3
62.5°	622.5	493.8	337.7	260.6	247.8
65°	554.9	424.6	279.8	225.2	220.3
67.5°	490.5	360.3	225.2	197.8	193.0
70°	423.0	297.6	186.5	170.5	164.0
72.5°	358.7	239.6	156.0	143.2	139.9
75°	295.9	183.3	128.7	117.4	115.8
77.5°	233.2	130.2	101.4	94.9	91.6
80°	175.3	93.3	77.1	70.8	70.8
82.5°	122.2	62.8	53.1	49.8	49.8
85°	69.1	35.3	30.5	30.5	30.5
87.5°	25.8	12.8	12.8	11.3	11.3
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	13.78	15.30	14.14	15.61	15.93	9.74	11.26	10.10	11.57	11.89
	3H	15.54	16.91	15.92	17.23	17.60	11.00	12.37	11.38	12.69	13.06
	4H	16.21	17.49	16.61	17.84	18.21	11.50	12.78	11.90	13.13	13.51
	6H	16.70	17.88	17.11	18.25	18.64	11.88	13.07	12.30	13.43	13.83
	8H	16.86	17.99	17.29	18.38	18.78	12.01	13.13	12.43	13.52	13.93
	12H	16.96	18.04	17.39	18.42	18.85	12.09	13.17	12.52	13.55	13.98
4H	2H	13.88	15.16	14.28	15.51	15.89	10.43	11.71	10.83	12.06	12.44
	3H	15.81	16.88	16.22	17.28	17.68	11.87	12.94	12.29	13.34	13.74
	4H	16.56	17.52	16.99	17.93	18.37	12.47	13.43	12.91	13.85	14.28
	6H	17.15	17.99	17.61	18.43	18.89	12.96	13.79	13.42	14.24	14.70
	8H	17.37	18.15	17.83	18.59	19.06	13.12	13.90	13.59	14.35	14.81
	12H	17.52	18.22	18.00	18.69	19.17	13.24	13.94	13.72	14.41	14.88
8H	4H	16.59	17.36	17.05	17.81	18.27	12.83	13.61	13.29	14.05	14.52
	6H	17.22	17.87	17.72	18.36	18.83	13.41	14.06	13.91	14.55	15.03
	8H	17.47	18.05	17.99	18.56	19.05	13.64	14.21	14.15	14.72	15.21
	12H	17.68	18.19	18.19	18.68	19.24	13.81	14.32	14.32	14.82	15.38
12H	4H	16.57	17.27	17.05	17.74	18.21	12.87	13.57	13.35	14.04	14.52
	6H	17.20	17.78	17.72	18.29	18.78	13.48	14.06	13.99	14.56	15.05
	8H	17.49	18.00	18.00	18.49	19.06	13.75	14.26	14.26	14.75	15.32