

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: P931463

Luminaire Tested: DFN2DS-TR4F0-050DS835-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P931463
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-TR4F0-050DS835-FLL
Description: 4 foot, Triangle Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

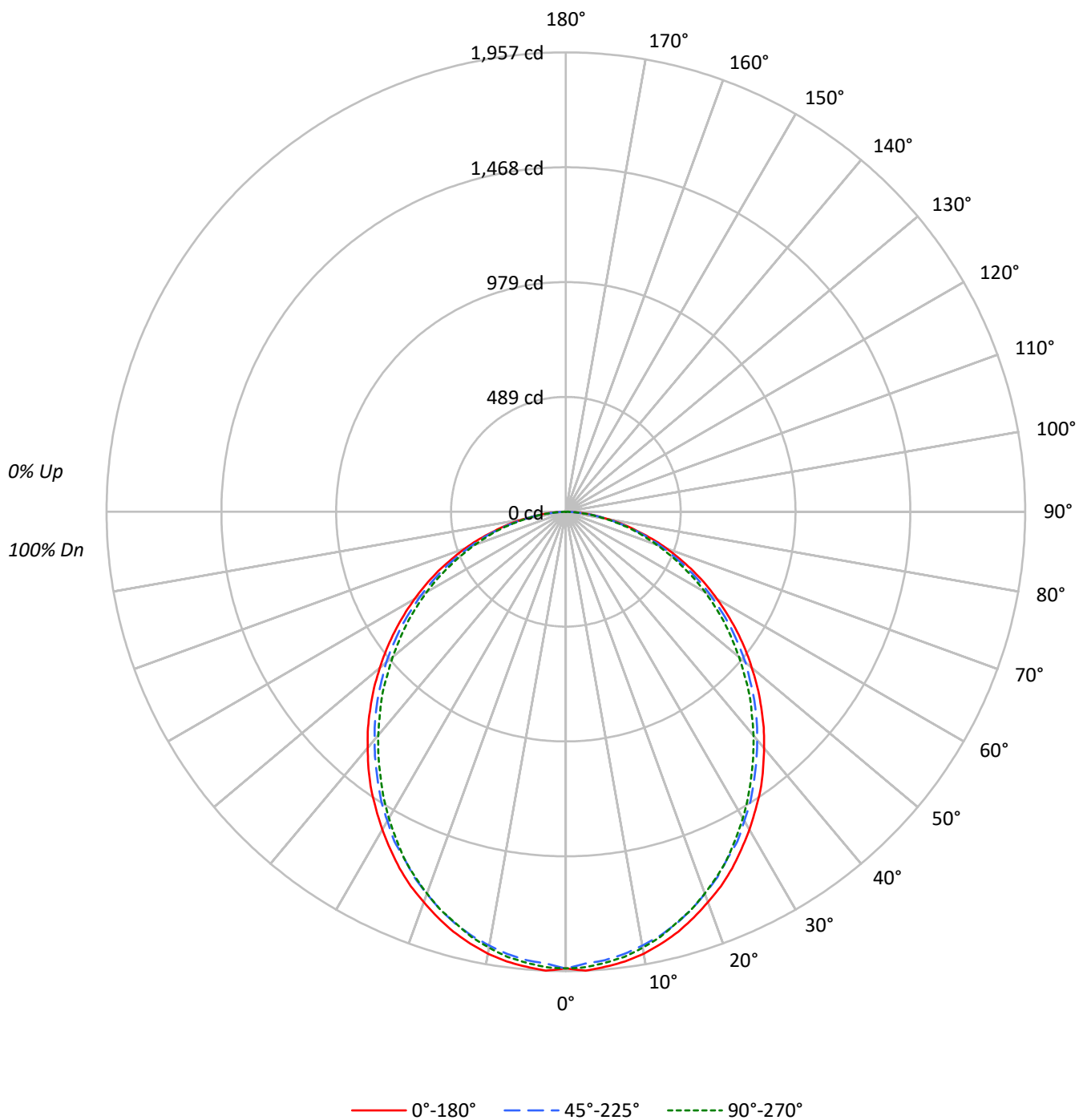
Lumens per Lamp: N/A
Luminaire Lumens: 4950.0 lumens
Efficiency: N/A
Efficacy: 102.7 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 3.96' x L: 3.43' x H: 0')
CIE Type: Direct

Input Watts (W): 48.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.996
Total Harmonic Distortion (THDi): 0.064
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°	1546	1546	1546
5°	1551	1529	1538
10°	1542	1514	1521
15°	1523	1494	1493
20°	1496	1465	1463
25°	1469	1428	1428
30°	1435	1395	1383
35°	1402	1355	1335
40°	1362	1315	1290
45°	1322	1276	1244
50°	1279	1235	1191
55°	1234	1187	1143
60°	1183	1130	1088
65°	1129	1073	1023
70°	1060	1004	956
75°	964	924	902
80°	856	830	787
85°	698	665	597

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 1322 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	183.1	3.7
10°-20°	515.2	10.4
20°-30°	757.2	15.3
30°-40°	879.4	17.8
40°-50°	878.3	17.7
50°-60°	765.8	15.5
60°-70°	566.1	11.4
70°-80°	320.3	6.5
80°-90°	84.5	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°	1455.5	29.4
0°-40°	2334.9	47.2
0°-60°	3979.0	80.4
0°-90°	4950.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4950.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1946	1946	1946	1946	1946	
5°	1946	1938	1918	1932	1929	185
15°	1852	1841	1816	1824	1815	522
25°	1676	1661	1630	1633	1630	771
35°	1446	1428	1398	1386	1377	903
45°	1177	1164	1136	1115	1108	908
55°	891	879	857	834	825	796
65°	601	589	571	554	544	594
75°	314	311	301	290	294	335
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°	1945.5	1945.5	1945.5	1945.5	1945.5
2.5°	1956.8	1947.5	1926.9	1945.5	1942.0
5°	1945.5	1938.2	1917.5	1932.4	1928.9
7.5°	1932.4	1921.3	1900.7	1915.8	1912.0
10°	1912.0	1898.9	1876.5	1891.3	1885.8
12.5°	1883.8	1872.7	1850.3	1859.6	1855.8
15°	1852.0	1840.9	1816.5	1824.1	1814.7
17.5°	1812.7	1801.6	1777.2	1786.5	1777.2
20°	1769.7	1758.6	1732.4	1737.9	1730.6
22.5°	1726.8	1709.9	1685.5	1685.5	1681.7
25°	1676.2	1661.3	1629.5	1633.1	1629.5
27.5°	1620.0	1606.9	1582.7	1577.1	1567.8
30°	1564.0	1549.0	1521.0	1515.4	1507.9
32.5°	1504.1	1493.0	1463.0	1451.7	1444.2
35°	1446.1	1427.5	1397.5	1386.2	1376.9
37.5°	1380.6	1363.8	1333.8	1320.7	1311.4
40°	1313.4	1298.3	1268.3	1251.6	1244.1
42.5°	1247.9	1232.8	1203.0	1184.1	1173.0
45°	1176.8	1163.7	1135.5	1115.1	1107.5
47.5°	1107.5	1094.4	1064.5	1043.8	1032.7
50°	1034.5	1025.2	999.0	972.8	963.4
52.5°	963.4	950.3	926.1	905.5	892.4
55°	890.6	879.3	856.8	834.4	825.1
57.5°	817.5	808.2	783.8	761.4	753.8
60°	744.5	737.2	711.0	690.3	684.8
62.5°	673.5	660.4	641.7	623.0	615.5
65°	600.6	589.3	570.6	553.8	544.4
67.5°	525.8	516.3	499.6	486.5	478.9
70°	456.5	449.0	432.1	419.0	411.7
72.5°	385.5	377.9	368.6	355.5	349.9
75°	314.2	310.6	301.1	290.0	293.8
77.5°	250.7	243.1	239.4	233.8	228.3
80°	187.2	185.2	181.4	175.9	172.1
82.5°	127.2	127.2	125.4	117.9	117.9
85°	76.6	74.8	73.0	67.3	65.5
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	12.80	14.41	13.16	14.72	15.03	12.35	13.96	12.72	14.28	14.59
	3H	14.55	16.00	14.92	16.33	16.69	14.05	15.51	14.43	15.84	16.20
	4H	15.19	16.56	15.59	16.91	17.28	14.70	16.07	15.10	16.41	16.79
	6H	15.66	16.93	16.07	17.29	17.69	15.16	16.43	15.57	16.79	17.18
	8H	15.80	17.01	16.23	17.40	17.80	15.30	16.51	15.73	16.90	17.30
	12H	15.89	17.05	16.32	17.44	17.86	15.38	16.54	15.81	16.92	17.35
4H	2H	13.36	14.72	13.75	15.07	15.45	13.00	14.37	13.40	14.72	15.10
	3H	15.33	16.48	15.74	16.87	17.27	14.92	16.07	15.33	16.47	16.87
	4H	16.11	17.14	16.54	17.56	17.99	15.68	16.72	16.12	17.13	17.57
	6H	16.70	17.61	17.16	18.05	18.51	16.27	17.18	16.73	17.62	18.07
	8H	16.89	17.74	17.35	18.18	18.65	16.46	17.30	16.92	17.74	18.21
	12H	17.03	17.79	17.51	18.26	18.73	16.57	17.33	17.05	17.81	18.28
8H	4H	16.38	17.23	16.84	17.67	18.14	16.01	16.85	16.47	17.30	17.76
	6H	17.10	17.80	17.59	18.29	18.76	16.71	17.42	17.21	17.91	18.38
	8H	17.35	17.98	17.86	18.49	18.98	16.96	17.59	17.47	18.10	18.59
	12H	17.55	18.11	18.06	18.60	19.16	17.14	17.70	17.65	18.19	18.75
12H	4H	16.41	17.17	16.89	17.64	18.11	16.04	16.80	16.52	17.28	17.75
	6H	17.14	17.77	17.65	18.28	18.77	16.77	17.40	17.28	17.91	18.40
	8H	17.45	18.01	17.96	18.50	19.06	17.08	17.63	17.58	18.12	18.69