

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: P931529

Luminaire Tested: DFN2DS-TR4F0-080DS940-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P931529
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-TR4F0-080DS940-FLL
Description: 4 foot, Triangle Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

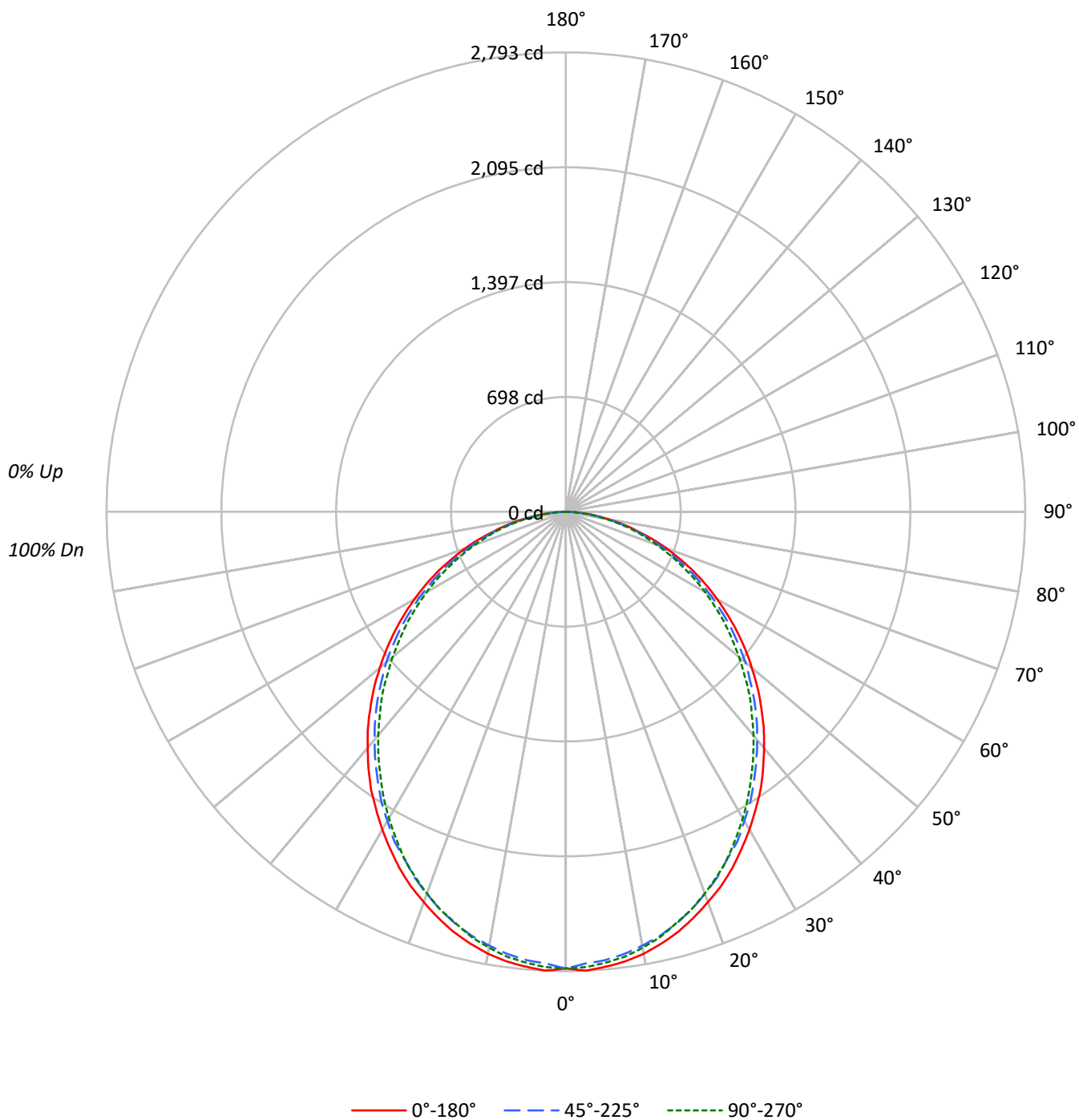
Lumens per Lamp: N/A
Luminaire Lumens: 7064.6 lumens
Efficiency: N/A
Efficacy: 86.9 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 3.96' x L: 3.43' x H: 0')
CIE Type: Direct

Input Watts (W): 81.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9957
Total Harmonic Distortion (THDi): 0.049
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°	2206	2206	2206
5°	2214	2182	2195
10°	2201	2160	2171
15°	2174	2132	2130
20°	2135	2090	2088
25°	2097	2039	2039
30°	2048	1991	1974
35°	2002	1934	1906
40°	1944	1877	1841
45°	1887	1821	1776
50°	1825	1762	1699
55°	1760	1694	1631
60°	1688	1612	1553
65°	1611	1531	1461
70°	1513	1432	1365
75°	1376	1319	1287
80°	1222	1184	1124
85°	997	951	852

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 1887 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	261.3	3.7
10°-20°	735.3	10.4
20°-30°	1080.6	15.3
30°-40°	1255.1	17.8
40°-50°	1253.5	17.7
50°-60°	1093.0	15.5
60°-70°	808.0	11.4
70°-80°	457.1	6.5
80°-90°	120.7	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°	2077.3	29.4
0°-40°	3332.3	47.2
0°-60°	5678.8	80.4
0°-90°	7064.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7064.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2777	2777	2777	2777	2777	
5°	2777	2766	2737	2758	2753	264
15°	2643	2627	2592	2603	2590	744
25°	2392	2371	2326	2331	2326	1101
35°	2064	2037	1994	1978	1965	1289
45°	1680	1661	1621	1591	1581	1296
55°	1271	1255	1223	1191	1178	1136
65°	857	841	814	790	777	847
75°	448	443	430	414	419	479
85°	109	107	104	96	94	129
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2776.6	2776.6	2776.6	2776.6	2776.6
2.5°	2792.8	2779.5	2750.0	2776.6	2771.5
5°	2776.6	2766.2	2736.7	2758.0	2752.9
7.5°	2758.0	2742.1	2712.7	2734.2	2728.8
10°	2728.8	2710.1	2678.1	2699.3	2691.4
12.5°	2688.6	2672.7	2640.7	2654.0	2648.6
15°	2643.3	2627.4	2592.5	2603.3	2590.0
17.5°	2587.2	2571.3	2536.4	2549.8	2536.4
20°	2525.7	2509.8	2472.4	2480.4	2469.9
22.5°	2464.5	2440.4	2405.5	2405.5	2400.2
25°	2392.3	2371.0	2325.7	2330.8	2325.7
27.5°	2312.1	2293.4	2258.8	2250.9	2237.6
30°	2232.2	2210.6	2170.8	2162.8	2152.0
32.5°	2146.7	2130.8	2088.0	2071.8	2061.1
35°	2063.9	2037.3	1994.5	1978.4	1965.1
37.5°	1970.4	1946.3	1903.6	1884.9	1871.6
40°	1874.4	1852.9	1810.1	1786.3	1775.5
42.5°	1781.0	1759.4	1716.9	1690.0	1674.2
45°	1679.5	1660.8	1620.6	1591.4	1580.7
47.5°	1580.7	1562.0	1519.2	1489.7	1473.9
50°	1476.4	1463.1	1425.7	1388.3	1375.0
52.5°	1375.0	1356.3	1321.8	1292.3	1273.6
55°	1271.0	1254.9	1222.9	1190.9	1177.5
57.5°	1166.8	1153.5	1118.7	1086.6	1075.8
60°	1062.6	1052.1	1014.6	985.2	977.3
62.5°	961.1	942.5	915.8	889.2	878.4
65°	857.2	841.1	814.4	790.3	777.0
67.5°	750.4	736.8	713.0	694.3	683.5
70°	651.5	640.7	616.7	598.0	587.5
72.5°	550.1	539.4	526.0	507.4	499.4
75°	448.4	443.3	429.8	413.9	419.2
77.5°	357.8	347.0	341.6	333.7	325.8
80°	267.2	264.3	258.9	251.0	245.6
82.5°	181.6	181.6	179.0	168.2	168.2
85°	109.4	106.8	104.3	96.1	93.5
87.5°	48.2	42.8	37.4	29.4	26.7
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	14.03	15.64	14.40	15.96	16.27	13.59	15.20	13.95	15.51	15.83
	3H	15.78	17.24	16.16	17.56	17.92	15.29	16.74	15.67	17.07	17.43
	4H	16.43	17.80	16.83	18.14	18.52	15.93	17.30	16.33	17.65	18.03
	6H	16.90	18.17	17.31	18.53	18.92	16.40	17.66	16.81	18.03	18.42
	8H	17.04	18.25	17.46	18.64	19.04	16.54	17.75	16.96	18.14	18.54
	12H	17.13	18.29	17.56	18.67	19.10	16.62	17.78	17.05	18.16	18.59
4H	2H	14.59	15.96	14.99	16.31	16.68	14.24	15.61	14.64	15.96	16.33
	3H	16.57	17.71	16.98	18.11	18.51	16.16	17.31	16.57	17.70	18.10
	4H	17.34	18.38	17.77	18.79	19.23	16.92	17.96	17.35	18.37	18.81
	6H	17.94	18.84	18.39	19.29	19.74	17.51	18.41	17.96	18.85	19.31
	8H	18.13	18.98	18.59	19.42	19.88	17.69	18.54	18.15	18.98	19.45
	12H	18.26	19.02	18.74	19.50	19.97	17.81	18.57	18.29	19.04	19.51
8H	4H	17.62	18.46	18.08	18.91	19.37	17.24	18.09	17.70	18.53	19.00
	6H	18.33	19.03	18.82	19.52	20.00	17.95	18.65	18.44	19.14	19.62
	8H	18.59	19.22	19.10	19.73	20.21	18.20	18.83	18.71	19.34	19.82
	12H	18.79	19.35	19.30	19.84	20.40	18.38	18.93	18.88	19.43	19.99
12H	4H	17.64	18.40	18.12	18.88	19.35	17.28	18.04	17.76	18.51	18.98
	6H	18.38	19.01	18.89	19.51	20.00	18.01	18.64	18.52	19.15	19.63
	8H	18.69	19.25	19.20	19.74	20.30	18.31	18.87	18.82	19.36	19.92

END OF REPORT